Prepared according to Global Harmonized System (GHS) standards

SECTION 1 CHEMICAL PRODUCT IDENTIFICATION

BRP Recreational Products Inc.
565 de la montagne
Valcourt, Qc JOE 2LO
Tel: 819-566-3366

Product Trade Name: **BRP XPS Mineral 2 Stroke Oil**

CAS Number:	Mixture
Synonyms/Other:	BRP Mineral 2 Cycle Oil, BRP MINERAL INJECTION OIL, BRP-XPS MIN 2-CYCLE INJ OIL
Part Number(s):	N/A
Recommended Use:	2 Stroke Engine Oil
Restrictions on Use:	Not Determined
Created Date:	5/27/2015
Preparation/Revision Date:	5/27/2015
Emergency Phone Number:	1-800-424-9300 (CHEMTREC)
SDS CODE:	2225

SECTION 2 HAZARD IDENTIFICATION

Appearance:	Amber/brown liquid
Odor:	Mild Petroleum
Classification:	Sensitization - skin category 1 Flammable liquid category 4
Target Organs:	Skin
Pictogram(s):	
Signal Word:	WARNING
Hazard Statement:	H227 - Combustible liquid H317 - May cause an allergic skin reaction
Other Hazards:	Not determined.
Prevention:	P210 - Keep away from heat/sparks/open flames/hot surfaces – No smoking P261 - Avoid breathing dust/fume/gas/mist/vapours/spray P272 - Contaminated work clothing should not be allowed out of the workplace P280 - Wear protective gloves/protective clothing/eye protection/face protection P285 - In case of inadequate ventilation wear respiratory protection
Response:	P363 - Wash contaminated clothing before reuse P302+P352 - IF ON SKIN: Wash with soap and water P333+P313 - If skin irritation or a rash occurs: Get medical advice/attention P370+P378 -In case of fire: Use dry chemical, alcohol foam, all purpose AFFF or carbon dioxide for extinction
Storage Procedures:	P403+P235 - Store in a well ventilated place. Keep cool
Disposal:	P501 - Dispose of contents and container in accordance with federal, state, and local regulations
Other:	See section 11 for complete health hazard information.

SECTION 3 COMPOSITION OF INGREDIENTS

Component	CAS Number	Percentage (by weight)
Distillates, Hydrotreated Light	64742-47-8	25 - 30%
Proprietary Two-Cycle Engine Oil Additive	Trade Secret	5-10%

The balance of components do not contribute to the overall classification of the fluid, according to the GHS Standard.

SECTION 4 FIRST AID MEASURES

Eye Contact: If irritation occurs, cautiously rinse eyes with lukewarm, gently flowing water for 5 minutes, while holding the eyelids open. If eye irritation persists: Get medical advice/attention.

Skin Contact: Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash skin with lukewarm, gently flowing water and mild soap until product is removed. Call a doctor if you feel unwell. If skin irritation or rash occurs: Get medical advice/attention. Discard contaminated clothing. Store contaminated clothing under water and wash before re-use or discard.

Inhalation: Remove source of exposure or move person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by the doctor

Ingestion: If you feel unwell or concerned: Get medical advice/attention. Rinse mouth. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.

Other: No additional information

SECTION 5 FIRE FIGHTING MEASURES

Flash Point: 71℃ by Cleveland Open Cup Tester.

Flammable limits: Not determined.

Extinguishing media: Use dry chemical, alcohol foam, all purpose AFFF or carbon dioxide to extinguish fire.

Special firefighting procedures: DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

Unusual fire & explosion hazards: Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. High temperatures may create heavy flammable vapors that may settle along ground level and low spots to create an invisible fire hazard.

Byproducts of combustion: Fires involving this product may release oxides of carbon, phosphorus, nitrogen and sulfur; reactive hydrocarbons and irritating vapors.

Autoignition temperature: Not determined.

Explosion data: Not determined. Care should always be exercised in dust/mist areas.

Other: Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill control procedures (land): Immediately turn off or isolate any source of ignition (pilot lights, electrical equipment, flames, heaters, etc.). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Cover spill with the fire-fighting material prescribed in Section 5. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. Clean up residue with an appropriate solvent. If a large spill occurs notify appropriate authorities. In case of road spill or accident contact Chem-Trec (800-424-9300).

Spill control procedures (water): Try to contain large spills with floating booms to prevent spill from spreading. Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard at 800-424-8802).

Waste disposal method: Do not empty into drains. All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded may be a regulated waste. Refer to state and local regulations. Department of Transportation (DOT) regulations may apply for transporting this material when spilled. See Section 14.

Other: CAUTION - If spilled material is cleaned up using a regulated solvent, the resulting waste mixture will be regulated.

SECTION 7 HANDLING AND STORAGE

Handling procedures: Keep containers closed when not in use. Do not transfer to unmarked containers. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld, or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.
Handling temperatures should not exceed 60℃ (140℉) to min imize danger of burns. Open containers carefully in a well ventilated area or use appropriate respiratory protection. Wash thoroughly after handling.

Storage procedures: Store containers away from heat, sparks, open flame, or oxidizing materials. Extended storage at excessive temperatures may produce odorous and toxic fumes from product decomposition.

Additional information: No additional information.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product:

	OSHA TWA	OSHA STEL	ACGIH TWA
Contains highly refined petroleum oil	*5 mg/m³	*10 mg/m³	*5 mg/m³

* Exposure limits not defined. Limits used are for, "oil mist".

TWA – Time Weighted Average is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.
STEL – Short Term Exposure Limit is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during a work day unless another time limit is specified.

All base oils, including additive carriers, contain <3.0% DMSO extractable material.

Personal protection: Applicable mainly to persons in repeated contact situations such as packaging of product, service/maintenance, and cleanup/spill control personnel.

Respiratory protection: None required if ventilation is adequate. Otherwise a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. Where misting may occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form dust/mist air purifying respirator.

Eye protection: Eye protection is strongly recommended. Wear safety glasses with side shields or vented/splash proof goggles (ANSI Z87.1 or approved equivalent).

Hand protection: Impervious, chemically resistant gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.

Other protection: Use of an apron and overboots of chemically impervious materials such as neoprene or nitrile rubber is recommended based on level of activity and exposure. If handling hot material use insulated protective equipment. Launder soiled clothes. Properly dispose of contaminated leather articles and other materials which cannot be decontaminated.

Local control measures: Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as fume hoods or area fans may be used to reduce localized vapor/mist areas. If vapor or mist is generated when the material handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure. Eyewash stations and showers should be available in areas where this material is used and stored.

Other: Consumption of food and drink should be avoided in work areas where product is present. Always wash hands and face with soap and water before eating, drinking or smoking.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Amber/brown liquid
Odor:	Mild Petroleum
Odor threshold:	Not determined.
pH:	Not applicable.
Melting/Freezing point:	Not determined.
Initial boiling point:	Not determined.
Boiling range:	Not determined.
Flash point:	71℃.
Evaporation rate:	Not determined.
Flammability:	Not determined.
Upper flammable limit:	Not determined.
Lower flammable limit:	Not determined.
Vapor pressure:	Not determined.
Vapor density:	Not determined.
Relative density:	0.856 @ 15.6℃
Solubility:	Not determined.
Partition Coefficient:	Not determined.
Auto-ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Viscosity:	34 cSt at 40℃.
Other	Not applicable.

SECTION 10 STABILITY AND REACTIVITY

Reactivity

Chemical stability:	Material is chemically stable at room temperatures and pressure.
Hazardous polymerization:	Will not occur.
Conditions to avoid:	Avoid high temperatures and product contamination.
Incompatibility with other materials:	Avoid contact with acids and strong oxidizing materials.
Decomposition products:	Smoke, carbon monoxide, carbon dioxide, and other aldehydes of incomplete combustion. Oxides of carbon, nitrogen, and sulfur; reactive hydrocarbons and irritating vapors.
Other:	Not applicable.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity (LD50) *See note at the bottom of the section

Oral:	>5000 mg/kg
Dermal:	>5000 mg/kg
Inhalation:	>20.0 mg/l
Skin irritation:	Non-irritant
Eye irritation:	Non-irritant
Dermal sensitization:	May cause an allergic skin reaction
Respiratory sensitization:	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Aspiration Hazard:	Not applicable

Chronic Toxicity

Mutagenicity:	Not suspected of causing genetic defects
Carcinogenicity:	Not suspected of causing cancer.
Reproductive toxicity:	Not expected to have adverse effects on reproduction.
STOT-single exposure:	Not expected to have adverse effects.
STOT-repeated exposure:	Not expected to have long term adverse effects.
Other:	*All data in this section is based off calculations from Part 3 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) utilizing information from the constituent components.

SECTION 12 ECOLOGICAL INFORMATION

Environmental toxicity

Fish:	> 100 mg/l.
Invertebrates:	> 100 mg/l.
Aquatic plants:	> 100 mg/l.
Microorganism:	> 100 mg/l.
Persistence/Degradability:	This product is not expected to be readily biodegradable.
Bioaccumulation:	Not determined.
Mobility in soil:	Not determined.
Other:	All classifications are based on calculations in Part 4 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) utilizing information from the constituent components.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste disposal: This product unadulterated by other materials can be classified as a non-hazardous waste. Depending on use, used product may be regulated. Dispose of in a licensed facility. Do not discharge product in to sewer system. Dispose of containers by crushing or puncturing, so as to prevent unauthorized use of used containers. Waste management should be in full compliance with federal, state, and local laws.

Other The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate.

SECTION 14 TRANSPORT INFORMATION

Land Transport (DOT): NA1993
Proper Shipping Name: Combustible liquid, n.o.s. (light petroleum distillates),3,PG III
Land Transport (TDG): Not regulated for land transport.
Proper Shipping Name: Not applicable.
Sea Transport (IMDG): Not regulated for sea transport.
Proper Shipping Name: Not applicable.
Air Transport (IATA): Not regulated for air transport.
Proper Shipping Name: Not applicable.
Other: Not DOT regulated in packages less than 119 gallons when offered for shipment by ground.
See 49 CFR for additional requirements for descriptions, allowed modes of transport, and packaging. For more information concerning spills during transport, consult latest DOT Emergency Response Guidebook for Hazardous Materials Incidents, DOT P 5800.3.

SECTION 15 REGULATORY INFORMATION

Federal Regulation

Clean water act/oil: Under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Control Act of 1990, this material is considered an oil. Any spill or discharges that produce a visible sheen or film on surface of water, or in waterways, ditches, or sewers leading to surface water must be reported. Contact the National Response Center at 800-424-8802.

TSCA: All components of this material are listed in the U.S. TSCA Inventory.
Other TSCA: Not applicable.
SARA title III: Section 302/304 extremely hazardous substances:
None.
Section 311, 312 hazard categorization:

Acute (immediate health effects):	NO
Chronic (delayed health effects):	YES
Fire (hazard):	YES
Reactivity (hazard):	NO
Pressure (sudden release hazard):	NO

Section 313 toxic chemicals:
No components present are at or greater than the de minimis (minimum reportable) concentration requirements for reporting.

CERCLA: For stationary/moving sources – reportable quantity (due to): Not hazardous due to the petroleum exclusion.

State Regulations

Right-to-know Not determined.

Other: A release of this product, as supplied, is exempt from reporting under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). However, releases may be reportable to the Nation Response Center under the Clean Water Act, 33 U.S.C. 1321(b)(3) and (5) - see head of Section 15. Failure to report may result in substantial civil and criminal penalties.

Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.

SECTION 16 OTHER INFORMATION

	NFPA 704	NPCA-HMIS	KEY
HEALTH:	1	1	0 = Minimal
FIRE:	2	2	1 = Slight
REACTIVITY:	0	0	2 = Moderate
SPECIFIC HAZARD:	None	N/A	3 = Serious
PROTECTION INDEX:	N/A	B	4 = Severe

Version: I

Revisions / Comments: Converted to GHS SDS on 5/27/2015

SAFETY DATA SHEET

1. Identification

Material name: ACCELGUARD 90 - BULK GALLONS
Material: 019A 99

Recommended use and restriction on use

Recommended use: Additive
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Acute toxicity (Oral)	Category 4

Unknown toxicity - Health

Acute toxicity, oral	2.05 %
Acute toxicity, dermal	2.05 %
Acute toxicity, inhalation, vapor	54.23 %
Acute toxicity, inhalation, dust or mist	54.23 %

Label Elements

Hazard Symbol:

Signal Word: Warning

Hazard Statement: Harmful if swallowed.

Precautionary Statements

Prevention: Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Response: IF SWALLOWED: Call a POISON CENTRE/doctor/ if you feel unwell. Rinse mouth.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Calcium nitrate	10124-37-5	25 - <50%
Sodium thiocyanate	540-72-7	10 - <25%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTRE/doctor/ if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: Wash skin thoroughly with soap and water. Get medical attention if symptoms occur.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical:	During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	No data available.
Methods and material for containment and cleaning up:	Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Notification Procedures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:	Do not taste or swallow. Wash hands thoroughly after handling. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities:	Store away from incompatible materials. Store in original tightly closed container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

None of the components have assigned exposure limits.

Appropriate Engineering Controls Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: Wear suitable protective clothing.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices. Do not eat, drink or smoke when using the product. Wash hands after handling.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Amber
Odor:	Mild
Odor threshold:	No data available.
pH:	5.5 - 7.5
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	No data available.
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.

Relative density:	1.354 - 1.432
Solubility(ies)	
Solubility in water:	Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Strong acids. Strong bases.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	May be harmful in contact with skin.
Eye contact:	Eye contact is possible and should be avoided.
Ingestion:	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 681.41 mg/kg

Dermal
Product: ATEmix: 3,833 mg/kg

Inhalation
Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):

Calcium nitrate	in vivo (Rabbit): Not irritant Read-across from supporting substance (structural analogue or surrogate), Key study
Sodium thiocyanate	In vitro Not irritant Experimental result, Key study

Serious Eye Damage/Eye Irritation
Product: No data available.
Specified substance(s):

Calcium nitrate	Rabbit, 24 - 72 hrs: Category 1
Sodium thiocyanate	Not severe irritant or corrosive

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Calcium nitrate LC 50 (Bluegill (Lepomis macrochirus), 96 h): 2,400 mg/l Mortality

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):

Sodium thiocyanate	NOAEL (Cyprinus carpio, 7 d): 20 mg/l Experimental result, Supporting study LOAEL (Pimephales promelas, 124 d): 12.2 mg/l Read-across based on grouping of substances (category approach), Key study LOAEL (Oncorhynchus mykiss, 16 Weeks): 115 mg/l Read-across based on grouping of substances (category approach), Supporting study NOAEL (Pimephales promelas, 124 d): 1.84 mg/l Read-across based on grouping of substances (category approach), Key study NOAEL (Oncorhynchus mykiss, 16 Weeks): 77 mg/l Read-across based on grouping of substances (category approach), Supporting study

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate (Acute) Health Hazards
Acute toxicity

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Calcium nitrate	10000 lbs
Sodium thiocyanate	10000 lbs

SARA 313 (TRI Reporting)

Chemical Identity
Calcium nitrate

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
Chemical Identity
Calcium nitrate

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol
not applicable

Stockholm convention
not applicable

Rotterdam convention
not applicable

Kyoto protocol
not applicable

VOC:

Regulatory VOC (less water and exempt solvent)	:	0 g/l
VOC Method 310	:	0.00 %

Inventory Status:

Australia AICS:	All components in this product are listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	All components in this product are listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	08/23/2017
Version #:	2.0
Further Information:	No data available.

Disclaimer: For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: CERAMAR®
Part Number: 1503480
Manufacturer: W. R. MEADOWS, INC.
Address: 300 Industrial Drive
Hampshire, Illinois 60140
Telephone: (847) 214-2100
In case of emergency, dial (800) 424-9300 (CHEMTREC)
Revision Date: 2/29/2016
Product Use: Expansion Joint in Concrete Construction

SECTION 2: HAZARDS IDENTIFICATION/EXPOSURE LIMITS

HMIS	
|Health|	|0|
|Flammability|	|0|
|Reactivity|	|0|
|Personal Protection|	| |

Product is classified as non-hazardous per OSHA 1910.1200. Ceramar is defined by OSHA as an "article." A manufactured item that is formed to a specific shape or design during manufacture that does not release or result in exposure to a hazardous chemical under normal use conditions.

SECTION 3: HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20°C)	LEL (@24°C)
1. None					

Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 (SARA) and 40 CFR Part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313."

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush eyes with water to remove particles.
SKIN CONTACT: Flush with water to remove particles. Wash affected areas with soap and water if available.
INHALATION: Not expected to be an exposure route.
INGESTION: Not expected to be an exposure source.

SECTION 5: FIRE AND EXPLOSIVES HAZARDS

FLASHPOINT: Not applicable.
EXTINGUISHING MEDIA: Water fog, foam, dry chemical.
CHEMICAL/COMBUSTION HAZARDS: Combustion may produce a dense, black smoke potentially containing toxic components.
PRECAUTIONS/PERSONAL PROTECTIVE EQUIPMENT: Avoid smoke inhalation. Use appropriate respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Not applicable. Product is a solid.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES: No special requirements.
SAFE STORAGE: None.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

	OSHA				ACGIH			
Chemical Name:	PEL	PEL/CEILING	PEL/STEL	SKIN	TLV	TLV/CEILING	TLV/STEL	SKIN
1. None								

ENGINEERING CONTROLS: None required under normal use conditions.
PERSONAL PROTECTIVE EQUIPMENT: None required under normal conditions of use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A
VAPOR DENSITY: N/A
% VOLATILE BY VOLUME: N/A
EVAPORATION RATE: N/A
pH LEVEL: N/A
% VOLATILE BY WEIGHT: N/A
WEIGHT PER GALLON: N/A
PRODUCT APPEARANCE: Gray solid
VOC CONTENT: N/A

SECTION 10: STABILITY/REACTIVITY

STABILITY: Stable.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS AND MATERIALS TO AVOID: None recognized.
HAZARDOUS DECOMPOSITION PRODUCTS: None recognized.

SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: Direct contact may cause mechanical irritation.
SKIN CONTACT: Direct contact may cause slight mechanical skin irritation.
INHALATION: Not anticipated to be an exposure route.
INGESTION: Not anticipated to be an exposure route.
SIGNS AND SYMPTOMS: Symptoms of eye irritation include tearing, reddening, and swelling. Symptoms of skin irritation include redness and swelling. Gastrointestinal irritation symptoms include nausea, vomiting, and abdominal discomfort.

SAFETY DATA SHEET

Section 11 continued

AGGRAVATED MEDICAL CONDITIONS: None recognized.
OTHER HEALTH EFFECTS: None recognized.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: N/E **DEGRADABILITY:** N/E **BIOACCUMULATIVE POTENTIAL:** N/E
SOIL MOBILITY: N/E **OTHER ADVERSE EFFECTS:** None Recognized

SECTION 13: WASTE DISPOSAL INFORMATION

WASTE DISPOSAL INFORMATION: Product is classified as a non-hazardous waste.

SECTION 14: TRANSPORTATION INFORMATION

HAZARDOUS/NON-HAZARDOUS MATERIAL: Not regulated by DOT.
UN NUMBER: None. **HAZARD CLASS:** N/A **PACKING GROUP:** N/A
UN PROPER SHIPPING NAME: N/A
ENVIRONMENTAL HAZARDS: None recognized.
BULK TRANSPORTATION INFORMATION: None.
SPECIAL PRECAUTIONS: None.

SECTION 15: REGULATORY INFORMATION

OTHER REGULATORY CONSIDERATIONS: None recognized.

SECTION 16: OTHER INFORMATION

PREPARATION DATE: 2/29/2016
PREPARED BY: Dave Carey

SAFETY DATA SHEET

Issue Date: June 8, 2017 **Revision Date: June 8, 2017** **Version 2017**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Chemisil Plus

Other Means of Identification
SDS #: F4220

Recommended Use: Chemical Floor Hardener for Concrete
Restrictions on Use: No Data

Supplier of the Safety Data Sheet including Address:
ChemMasters Inc.
300 Edwards Street
Madison, OH 44057

Telephone Numbers
Company Phone Number Phone: 800-486-7866, 440-428-2105
Fax: 440-428-7091

Emergency Telephone: ChemTrec 800-424-9300 (United States & Canada), International Call: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Causes serious eye damage, causes severe skin burns and eye damage, harmful if swallowed.

GHS Classification:
Eye damage/irritation – Category 1
Skin Corrosion/Irritation – Category 1
Acute Toxicity – Oral – Category 5

Label Elements, including precautionary statements

Pictograms: 

Signal Word: Danger

Hazard Statements:
H302 **Harmful if swallowed.**
H314 **Causes severe skin burns and eye damage**
H318 **Causes serious eye damage.**

Precautionary Statement(s)

Prevention:

P260	**Do not breathe dust/fume/gas/mist/vapours/spray.**
P264	**Wash hands and skin thoroughly after handling.**
P270	**Do not eat, drink or smoke when using this product.**
P280	**Wear protective gloves/protective clothing/eye protection/face protection.**

Response:

P305+P351+P338	**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
P310	**Immediately Call a POISON CENTER/doctor.**
P301+P330+P331	**IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.**
P310	**Immediately Call a POISON CENTER/doctor.**
P303+P361+P353	**IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with plenty of soap and water or shower.**
P310	**Immediately Call a POISON CENTER/doctor.**
P363	**Wash contaminated clothing before reuse.**
P304+P340+P310	**IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately Call a POISON CENTER/doctor.**

Storage: P405 **Store Locked Up**

Disposal: P501 Dispose of contents/container in accordance with local/regional/national regulations.

Hazards Not Otherwise Classified: Spilled material is slippery.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component

Water	CAS No. 7732-18-5	80-85%
Silicic acid, sodium salt	CAS No. 1344-09-8	10-15%
Potassium Methylsilanetriolate	CAS No. 31795-24-1	1-5%

Ingredients not listed on this safety data sheet are considered to be non-hazardous according to OSHA 1910.1200 or are not present above their cutoff levels. Where a range is displayed, the exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: Mist may cause respiratory irritation. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes (A minimum of 15 minutes is recommended). Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Ingestion: IF SWALLOWED: Do NOT induce vomiting. Rinse mouth with water. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor if you feel unwell.

Skin Contact: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. If skin irritation occurs: Get medical advice or attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide

Specific Hazards Arising from the Chemical
Not Applicable. Product is an aqueous non-combustible solution.

Hazardous Combustion Products
Carbon Oxides, Metal oxides, Silicon dioxide, Formaldehyde

Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus and full protective gear for firefighting.

Further Information
Compatible with all standard fire-fighting techniques

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
Use personal protective equipment including protective clothing, eye and face protection. Spillage may be slippery.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains, soil or vegetation.

Methods and Material for Containment and Cleaning Up
Contain spillage with sand, earth or a suitable adsorbent and transfer to a container for disposal according to local regulations.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid contact with skin and eyes. Use with adequate ventilation. Do not breathe mist.

Conditions for Safe Storage, Including any Incompatibilities
Keep at a temperature not exceeding 38 Degrees C (100 Degrees F). Do not allow material to freeze. Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Do not store with acids.

Unsuitable Containers: Aluminum

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Component Exposure Limits
No occupational exposure limit has been assigned to Silicic acid, Sodium Salt. An exposure limit of 2 mg/m3 (15 min. TWA) is recommended by analogy with sodium hydroxide (UK EH40).

Appropriate Engineering Controls
Local Ventilation: Recommended
General Ventilation: Recommended

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: Use proper protection – Safety Glasses as a minimum

Skin and Body Protection: Wash at mealtime and end of shift. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.

Respiratory Protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH or MSHA approved respirators.

General Hygiene Considerations: Handle in accordance with good industrial hygiene and safety practice. Wash hands before & after breaks and work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State: Liquid
Appearance: Clear
Color: Colourless

Odor: Odorless
Odor threshold: No Data

Property	Value	Remarks – Method
Vapor Pressure	Not Available	
Vapor Density	Not Available	
Relative Density	Not Available	
pH:	11.6	
Melting/Freezing Point	Not Available	
Solubility	Soluble in water	
Evaporation Rate	Not Available	
Flash Point	Not Relevant	
Flammability Limits	Not Relevant	
Flammability (Solid, gas)	Not Relevant	
Auto Ignition Temperature	Not Relevant	
Initial Boiling Point/Boiling Range	100 Degrees C	
Decomposition Temperature	Not Available	
Viscosity	Not Available	
Specific Gravity	1.15 at 25 Degrees C	9.6 lbs./gallon

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Possibility of Hazardous Reactions: When arc welding vessels containing aqueous solutions of this material, take care to control any explosion risk from hydrogen evolved by electrolysis. Aqueous solutions will react with aluminum, zinc, tin and their alloys evolving hydrogen gas which can form an explosive mixture with air. Material can react violently if in contact with acids. Material can react with sugar residues to form carbon monoxide.

Conditions to Avoid: See note above.

Incompatible Materials: See note above.

Hazardous Decomposition Products: Carbon Oxides, Metal oxides, Silicon dioxide, Formaldehyde

11. TOXICOLOGICAL INFORMATION

Potential Health Effects – Acute Toxicity

Ingestion	All symptoms of acute toxicity are due to high alkalinity. Material will cause irritation. Oral LD50 (rat) 3400 mg/kg bw.
Inhalation	Mist is an irritant to the respiratory tract. All symptoms of acute toxicity are due to high alkalinity. Inhalation LC50 (rat) >2.06 g/m3.
Skin	Causes severe skin burns and eye damage.
Eyes	Causes serious eye damage.

Information on Physical, Chemical and Toxicological Effects:
See Acute Toxicity above

Delayed - Chronic Effects from Long-Term Exposure
None Known

Carcinogenicity: IARC, ACGIH, NTP, OSHA
None Known

12. ECOLOGICAL INFORMATION

Ecotoxicity:
Fish (Brachydanio rerio) LC50 (96 hrs.) 1108 mg/l
Aquatic invertebrates: (Daphnia magna) EC50 (48 hrs.) 1700 mg/l

Persistence and Degradability: Inorganic. Soluble silicates, upon dilution, rapidly depolymerize into molecular species indistinguishable from natural dissolved silica.

Bioaccumulation: Inorganic. The substance has no potential for bioaccumulation.

Mobility: Not Applicable

Other Adverse Effects: The alkalinity of this material will have a local effect on ecosystems sensitive to changes in pH.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes: This material is classified as hazardous waste under EC Directive 2008/98/EC and England and Wales Regulations SI 2005 No. 894. Offer surplus and non-recyclable solutions to a licensed disposal company. Disposal should be in accordance with local, state or national regulation.

Contaminated Packaging: Dispose of as unused product.

14. TRANSPORT INFORMATION

D.O.T.:
Not classified as a Dangerous Good

I.A.T.A.:
Not classified as a Dangerous Good

I.M.D.G.:
Not classified as a Dangerous Good
Marine Pollutant: No

15. REGULATORY INFORMATION

International Inventories
TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

US Federal Regulations
SARA 302: None
SARA 311/312 Hazard Categories: Acute: Yes
SARA 313 Hazard Categories: None

CWA (Clean Water Act): None

Supplemental State Compliance Information:
California:
Warning: This product may contain trace amounts of a chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.
Methyl Alcohol, <0.1% CAS# 67-56-1

New Jersey Right To Know:

CAS Number	Component Name
31795-24-1	Potassium Methylsilanetriolate

Pennsylvania Right To Know:

CAS Number	Component Name
31795-24-1	Potassium Methylsilanetriolate

U.S. EPA Label Information: No Data

16. OTHER INFORMATION

HMIS Classification:

Health hazard:	2
Flammability:	0
Physical Hazards:	0

NFPA Rating:

Health hazard:	2
Fire:	0
Reactivity Hazard:	0

Issuance Date: June 8, 2017
Revision Date: June 8, 2017
Revision Note: Update Section 2, Hazards
Date of Previous Version: February 2, 2016

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

Safety Data Sheet & Warranty

BUILDING TRUST

L. M. Scofield Company - A SIKA COMPANY

CHROMIX® 1200 (P) Admixtures for Color-Conditioned® Concrete, SCOFIELD® Integral Color SG 7200, and SCOFIELD® Integral Color Utility Grade 7100

SDS according to GHS OSHA 29 CFR 1910.1200 and 1272/2008/EC (CLP) amending 1907/2006/EC (REACH)

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

1.1 GHS Product Identifier

Commercial Product Name: CHROMIX® 1200 Admixtures for Color-Conditioned® Concrete; SCOFIELD® Integral Color SG 7200; and SCOFIELD® Integral Color Utility Grade 7100

Chemical Name: Mixtures of pigments (iron oxides and/or titanium dioxide and/or chromium III oxide) with pozzolans and admixtures.

1.2 Relevant identified uses of product

CHROMIX® Admixtures for Color-Conditioned Concrete 1200, SCOFIELD® Integral Color SG 7200, SCOFIELD® Integral Color Utility Grade 7100 are designed to permanently color concrete and other cementitious materials.

SCOFIELD products are intended for use only by professionals. **KEEP OUT OF THE REACH OF CHILDREN.**

1.3 Details of the supplier of the safety data sheet:

L. M. SCOFIELD Company, A SIKA COMPANY **Scofield Phone: (800) 800-9900** www.scofield.com

6533 Bandini Blvd, Los Angeles, CA 90040 Information Phone Number (323) 720-3000 M-F 8AM-5PM

4155 Scofield Road, Douglasville, GA 30134 Information Phone Number (770) 920-6000 M-F 8AM-5PM

1.4 Transportation Emergency Telephone Number: CHEMTREC (800) 424-9300

2 HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture:

GHS-US Hazard Classification

Product may contain respirable silica. Properly fitted dust type respirators can control respirable silica exposure.

Skin irritant, STOT, SE, H313, category 5

Eye irritant, STOT, SE, H320, category 2B

Respiratory irritant, STOT, H335, category 3

GHS Category Key
1 = most hazardous
5 = least hazardous

Carcinogenicity, Inhalation, RE, STOT, lungs, H350, category 1A,1B

Carcinogenicity, Inhalation, RE, STOT, lungs, H351, category 2B

Human Health, Product can damage eyes by mechanical irritation. Avoid getting product into eyes.

Environment: Product is not considered to be harmful to the environment.

2.2 Label elements:

GHS Hazard (H) Statements GHS Signal Word: **WARNING**

Acute toxicity

H313--May be harmful in contact with skin.

H320--Causes eye irritation.

H335--May cause respiratory irritation.

GHS Pictogram

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Chronic Toxicity

H350--May cause cancer, STOT, lungs, RE, category 1A

H351--Suspected of causing cancer, IARC lists titanium dioxide as a category 2B possible carcinogen.

GHS Precautionary (P) Statements

P264--Wash after handling.

Prevention precautionary statements

P102--Keep out of the reach of children.

P202--Do not handle until all safety precautions have been read and understood.

P280--Wear eye protection and face protection.

P284--In case of inadequate ventilation, wear respiratory protection.

Response precautionary statements

P302+P352--**IF ON SKIN**: Wash with plenty of water.

P305+P351+P338--**IF IN EYES**: Rinse cautiously with water for 15 minutes. Remove contacts if easy to do. Continue rinsing.

P337+P313--**IF EYE IRRITATION PERSISTS:** get medical advice/attention.

P304+P340--**IF INHALED**: Move person to fresh air and keep comfortable for breathing.

Disposal precautionary statements

P501--Dispose of contents/container in accordance with applicable local/state/regional/federal regulations.

2.3 Other hazards: No other hazards are known.

Refer to Section 16 for wording of terms.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Main Constituent: Various metal oxide pigments

3.2 Mixture

Components of Mixture, Formulas	CAS #	EINECS	Weight % range	Hazardous material statement
Iron oxide pigment, black, Fe_3O_4	1317-61-9	215-277-5	0 - 90%	classified as non-hazardous, no specific data
Iron oxide pigment, red, Fe_2O_3	1309-37-1	215-168-2	0 - 90%	classified as non-hazardous, no specific data
Iron oxide pigment, yellow, FeO(OH)	51274-00-1	257-098-5	0 - 90%	classified as non-hazardous, no specific data
Titanium Dioxide, TiO_2	13463-67-7	236-675-5	0 - 90%	Titanium dioxide is an IARC Class 2B carcinogen.
Chromium III Oxide, Cr_2O_3	1308-38-9	215-160-9	0 - 90%	No known significant effects or critical hazards.
Flyash, Coal Combustion Residuals	68131-74-8	931-322-8	5-50%	No known significant effects or critical hazards.
Crystalline silica from flyash	14808-60-7	238-878-4	<1% respirable silica	Wear a dust filter type respirator to control dust.

The exact percentages in this composition and the components have been withheld as confidential business information.

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CHROMIX® 1200 (P) Admixtures for Color-Conditioned® Concrete, SCOFIELD® Integral Color SG 7200, and SCOFIELD® Integral Color Utility Grade 7100

4 FIRST AID MEASURES

4.1 Description of first aid measures:

Eye Contact: Quickly flush with plenty of clean water for 15 minutes. Remove contact lenses if easy to do. Open eyelids widely during flushing. If irritation persists, take person to emergency room/hospital and bring these instructions for doctor. Continue flushing during transport to emergency room/hospital.

Provide easy access to eye wash stations in work area.

Inhalation: Move person to fresh air, make comfortable for breathing. Get medical attention if condition worsens.

Skin contact: May result in skin irritation. Remove contaminated clothing. Wash skin with soap and water.

Ingestion: If swallowed, call 911 or a Poison Center 1 (800) 222-1222 for instructions on first aid treatment.

4.2 Most important symptoms and effects both acute and delayed:

Eye contact with product can cause irritation. If irritation persists after rinsing eye(s), take person to emergency room.

Repeated inhalation of respirable silica over long periods of time increases the risk of developing lung disease (silicosis).

4.3 Indication of any immediate medical attention and special treatment needed:

Primary routes of entry include: Inhalation (dust), Eye Contact, Skin Contact. Eye contact requires immediate first aid.

Refer to SECTION 11 for more detailed information on health effects and symptoms.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media: Use fire extinguishing media appropriate for surrounding fire.

5.2 Special Hazards arising from the substance or mixture:

Fire Hazard: Not flammable under normal conditions.

Explosion Hazard: Product is not combustible.

Reactivity: Hazardous reactions will not occur.

5.3 Advice for fire-fighting: Use normal fire-fighting protective equipment.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions :

General measures: Use personal protective equipment. Provide adequate ventilation. Refer to Section 8 for more information

Protective equipment: Wear suitable eye protection and if ventilation is not adequate wear a particulate respirator.

6.2 Environmental precautions:

Avoid discharge into waterways, sewers and soil. If product enters water, contact local authorities.

6.3 Methods and material containment and cleaning up:

Method of cleaning up: Avoid generating dust. Use a vacuum with a HEPA filtered exhaust or clean up with broom & shovel.

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CHROMIX® 1200 (P) Admixtures for Color-Conditioned® Concrete, SCOFIELD® Integral Color SG 7200, and SCOFIELD® Integral Color Utility Grade 7100

7 HANDLING AND STORAGE

7.1 Precautions for safe handling:

Do not breathe dust. Avoid creating or spreading dust. Handle in accordance with good industrial hygiene procedures. Always wash hands immediately after handling product. Do not eat or drink in area where product is being used.

7.2 Conditions for safe storage including any incompatibilities:

Store product in a dry shaded area.

7.3 Specific end uses:

This product is intended for use only by professionals to provide integral and permanent color for new concrete.

8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control Parameters	Exposure Limits in Air		
Components of Mixture, Formulas	ACGIH TLV 8hr	OSHA PEL 8 hour PEL TWA	NIOSH REL (TWA)
Iron oxide pigment, black, Fe_3O_4	not known	No exposure limit value is known	not known
Iron oxide pigment, red, Fe_2O_3	not known	No exposure limit value is known	not known
Iron oxide pigment, yellow, FeO(OH)	not known	No exposure limit value is known	not known
Titanium Dioxide, TiO_2	10 mg/m^3	5 mg/m^{3}respirable dust, 15 mg/m^{3}total	2.4 mg/m^3 (fine)
Chromium III Oxide, Cr_2O_3	0.5 mg/m^{3}as Cr	0.5 mg/m^3 as Cr	not listed
Flyash, Coal Combustion Residuals	not applicable	not applicable	not applicable
Crystalline silica from flyash (respirable only)	0.025 mg/kg	50 µg/m^3 8 hours	0.05 mg/m^3

8.2 Exposure controls:

Engineering measures: Use only with adequate ventilation. Use local exhaust ventilation or other engineering controls to keep exposure to airborne particulates below recommended limits.

Personal Protective Equipment

Respirator selection, particulate, N95,P100

8.3 Individual protective measures:

Eye protection: Wear tight fitting goggles or safety glasses with side-shields to protect eyes.

Skin protection: Wear rubber gloves and clothing to protect skin.

Respiratory Protection: If dust level exceeds the OSHA PEL or other limit, wear a proper particulate respirator, N95 or P100.

Hygiene measures: Wash hands after exposure, Remove contaminated clothing, shower and wash with plenty of soap and water. Wash contaminated clothing prior to reuse.

Environmental exposure controls: Provide eye wash stations and emergency showers near work area.

SCOFIELD BUILDING TRUST

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CHROMIX® 1200 (P) Admixtures for Color-Conditioned® Concrete, SCOFIELD® Integral Color SG 7200, and SCOFIELD® Integral Color Utility Grade 7100

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information of basic physical and chemical properties

	Property-Test	Value/Result
a)	pH	not applicable
b)	Color	variable
c)	Flash Point	will not flash
d)	Auto ignition Temperature	will not autoignite
e)	Solubility in water	low water solubility
f)	VOC	0.0 g/L (0.0 lb./gal)
g)	Specific Gravity, water = 1.0	2.8 to 4.5

9.2 Other information: No other information is available

10 STABILITY AND REACTIVITY

10.1 Reactivity: Not reactive

10.2 Chemical stability: Product is stable under most common conditions

10.3 Possibility of hazardous reactions: Hazardous reactions do not normally occur.

10.4 Conditions to avoid: Avoid dust formation. No other conditions to avoid are known.

10.5 Incompatible materials: Avoid strong oxidizers/acids. No other incompatible materials are known.

10.6 Hazardous decomposition products: No hazardous decomposition products are known.

Black iron oxide can start to decompose at 176 °F(80 °C) producing heat.

11 TOXICOLOGICAL INFORMATION

Toxicological results of testing:

Chemical Name	LD_{50} rat oral	LC_{50} Inhalation or water test (fish)	LC_{50} Other Exposure Route
Iron oxide pigment, black, Fe_3O_4	>5,000 mg/kg	Rat Male>185.6 mg/m^3 2 weeks 6hr/day	no data available
Iron oxide pigment, red, Fe_2O_3	>5,000 mg/kg	Rat Inhalation >210 mg/m^3 2 weeks	Acute EC_0 >10,000 mg/l fresh water Danio rerio
Iron oxide pigment, yellow, FeO(OH)	>10,000 mg/kg	Rat Inhalation >195 mg/m^3 2weeks	Acute EC_{50} >100 mg/l fresh water Daphnia magna
Titanium Dioxide, TiO_2	12,000 mg/kg	10,000 mg/kg rabbit dermal	>6.82 mg/L 4 hour rat inhalation
Chromium III Oxide, Cr_2O_3	5,000 mg/kg	>5.41 mg/l 4 hours rat	10,000 mg/L Danio rerio 96 hours
Flyash, Coal Combustion Residuals	>2000 mg/kg	>2.2 mg/L, 1 hours rat	no data available
Crystalline silica from flyash, <1% respirable	22,500 mg/kg	no data available	no data available

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CHROMIX® 1200 (P) Admixtures for Color-Conditioned® Concrete, SCOFIELD® Integral Color SG 7200, and SCOFIELD® Integral Color Utility Grade 7100

Toxicity:

a) acute toxicity,	Not classified as an acutely toxic material.
b) skin corrosion/irritation,	Some product mixtures can cause skin irritation.
c) eye damage/irritation,	Product can cause eye damage (as a mechanical irritant, do not rub eyes).
d) respiratory or skin sensitization,	Not classified as a respiratory sensitizer or skin sensitizer.
e) germ cell mutagenicity	Product does not cause germ cell mutagenicity.
f) carcinogenicity by agency:	National Toxicity Program (NTP) status: Crystalline silica is a known human carcinogen. IARC lists Titanium Dioxide as a class 2B carcinogen. OSHA lists respirable silica as a carcinogen. New maximum allowed PEL is 50 µg/m^3 .
g) reproductive toxicity,	Product does not cause or contribute to reproductive toxicity.
h) STOT-single exposure,	Product can cause eye damage due to abrasion and irritation.
i) STOT-repeated exposure,	Product dust can cause silicosis (lung injury) after repeated exposures if not protected.
J) aspiration hazard,	Product is not an aspiration hazard.

11.1 Inhalation: Acute: Product dust can irritate throat and respiratory system and cause coughing.
Chronic: Product contains <1% respirable silica. Repeated exposure without respiratory protection can cause cancer (silicosis)

11.2 Skin contact: Product may have an irritating effect on skin.

11.3 Eye contact: Product can cause serious eye damage. Immediate first aid is required for eye contact.

11.4 Ingestion: Product ingestion may cause irritation of the mouth, esophagus and gastrointestinal tract.

11.5 Specific effects: Frequent inhalation of dust over a long period of time increases the risk of developing lung disease.

12 ECOLOGICAL INFORMATION

	Aquatic toxicity fish			Aquatic toxicity invertebrates		
Components of Mixture	LC_{50} or *LC_0	Species	Duration	EC_{50} or *EC_0	Species	Duration
Iron Oxide Pigments, black	*LC_0 >10,000mg/l	Danio rerio	96 hours	>10,000 mg/L	Daphnia magna	48 hours
Iron Oxide Pigments, red	*LC_0 >50,000 mg/l	Danio rerio	96 hours	>100 mg/L	Daphnia magna	48 hours
Iron Oxide Pigments, yellow	*LC_0>10,000 mg/l	Danio rerio	96 hours	>100 mg/L	Daphnia magna	48 hours
Titanium Dioxide Pigment	>1,000 mg/L	Pimphales prom.	96 hours	>1000 mg/L	Daphnia magna	48 hours
Chromium III Oxide Pigment	>10,000 mg/L	rat inhalation	96 hr.	No data available	No data avail.	No data avail.
Flyash, Coal Combustion Residuals	*5,000 mg/kg	Danio rerio	96 hours	2000 mg/L	Daphnia magna	24 hours
Crystalline silica from flyash, <1% respirable	500 mg/kg	no data available	no data available	No data available	No data avail.	No data avail.

CHROMIX® 1200 (P) Admixtures for Color-Conditioned® Concrete, SCOFIELD® Integral Color SG 7200, and SCOFIELD® Integral Color Utility Grade 7100

12.1 Ecotoxicity These products are not expected to be hazardous to the aquatic environment.

12.2 Persistence and degradability:

Degradability: These products are inorganic and are not degradable or biodegradable

12.3 Bio accumulative Potential:

Bio accumulative Potential No information is available on bio accumulative potential.

12.4 Mobility in soil:

Mobility: No information is available on mobility in soil.

Results of PBT and vPvB assessment: Mixture is mostly inorganic and is not relevant for PBT or vPvB assessment

Other adverse affects: No other adverse effects are known.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

GHS P501-Dispose of contents/container according to local/state/regional/federal regulations.

14 TRANSPORT INFORMATION

This product is not covered by international regulation of the transport of dangerous goods (IMDG, IATA, ADR, RID)

DOT: Not regulated

14.1 UN Number: Not regulated

14.2 UN proper shipping name: Not classified as dangerous goods under DOT and UN regulations.

14.3 Transport hazard class(es): Not regulated

14.4 Packing group: Not regulated

Packaging group: Not regulated

14.5 Environmental hazards

Marine pollutant: Not regulated

Environmentally hazardous substance: Not applicable

14.6 Special precautions for user: None are known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code: Not regulated

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture:

OSHA HazCom 2012, 29 CFR 1910.1200 and regulation (EC) No. 1272/2008 CLP of the European Parliament

15.2 Chemical Safety Assessment: Not required

For information on labeling refer to section 2.

There are no TSCA 12b chemicals in this product.

L. M. Scofield Company - A SIKA COMPANY

CHROMIX® 1200 (P) Admixtures for Color-Conditioned® Concrete, SCOFIELD® Integral Color SG 7200, and SCOFIELD® Integral Color Utility Grade 7100

16 OTHER INFORMATION

Wording of terms:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service, unique identification code for chemicals
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CLP	Classification, Labeling and Packaging, EC 1272/2008
EC_0	Highest effective concentration that has no mortality of population
EC_{50}	Effective Concentration that causes 50% mortality of population
EINECS	European Inventory of Existing Commercial Chemical Substances
GHS	Global Harmonization System, worldwide chemical safety program.
IARC	International Agency for Research on Cancer
HazCom	Hazard Communication, US OSHA GHS 29 CFR 1910.1200
LC_0	Highest Concentration with no mortality of population
LC_{50}	Lethal Concentration that causes 50% mortality of pop
LD_{50}	Lethal Dose for a chemical that causes 50% mortality of population
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Prevention Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bio accumulative and Toxic
PEL	Permissible Exposure Level
RCRA	Resource Conservation and Recovery Act
RE	Repeated Exposure
REACH	Registration, Evaluation, Authorization and Restrictions of Chemicals, EC/1907/2006
REL	Recommended Exposure Limit
SDS	Safety Data Sheet (GHS replacement for MSDS)
SE	Single Exposure
STOT	Specific Target Organ Toxicity
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
VOC	Volatile Organic Compound
vPvB	Very Persistent and Very Bioaccumulative
WHMIS	Workplace Hazardous Materials Information System (Canada)

Hazardous Material Information	
Health Hazard	1
Flammability Hazard	0
Physical Hazard	0
Personal Protective Equipment	See sec. 8 PPE

0=minimal hazard. 4 = extreme hazard

NFPA 704 Fire

Health Reactivity

NFPA: 0=low hazard, 4=high hazard

California Prop 65 Warning: This product contains one or more chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

WHMIS Signal Word: WARNING

WHMIS Classification: D2A

L. M. Scofield Company - A SIKA COMPANY

CHROMIX® 1200 (P) Admixtures for Color-Conditioned® Concrete, SCOFIELD® Integral Color SG 7200, and SCOFIELD® Integral Color Utility Grade 7100

The details in this document are based on our current knowledge and experience and are only for this product and only in regard to safety requirements.
Before using read the applicable SCOFIELD® Tech-Data Bulletin for: CHROMIX®(P) Admixtures for Color-Conditioned Concrete TD-1200; or SCOFIELD Integral Color, SG 7200; or SCOFIELD Integral Color Utility Grade, 7100, and this complete SDS.
SCOFIELD Tech-Data Bulletins and this SDS are available at: www.scofield.com
SDS Issue date: January 15, 2015. Updated to include new GHS limit on respirable silica and SIKA trademark, Nov. 28, 2016.

END OF SDS

LIMITED WARRANTY
L. M. Scofield Company (Scofield) represents and warrants only that its products are of consistent quality and within manufacturing tolerances. NO OTHER ORAL OR WRITTEN REPRESENTATION OR STATEMENT OF ANY KIND, EXPRESS OR IMPLIED, NOW OR HEREAFTER MADE IS AUTHORIZED OR WARRANTED BY SCOFIELD, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Liability for breach of contract, negligence, or on any other legal basis is limited to the lesser of refund or replacement of defective materials. SCOFIELD WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING FOR DELAYS OR LOST PROFITS. Communication of this warranty and its limitations to end users is not the responsibility of Scofield, but should be communicated by those in direct contract with the end user. Any claim regarding product defect must be received in writing within one year from the date of manufacture.
No claim will be considered without such written notice or after the specified time interval. The end user shall determine the suitability of the products for the intended use and assumes all risks and liability in connection therewith.

SAFETY DATA SHEET

Issue Date: March 27, 2017 **Revision Date: March 27, 2017** **Version: 2017**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Cretelox

Other Means of Identification
SDS #: F3400

Recommended Use: High Solids Acrylic Latex Bonding Agent and Admixture
Restrictions on Use: No Data

Supplier of the Safety Data Sheet including Address:
ChemMasters Inc.
300 Edwards Street
Madison, OH 44057

Telephone Numbers
Company Phone Number Phone: 800-486-7866, 440-428-2105
Fax: 440-428-7091

Emergency Telephone: ChemTrec 800-424-9300 (United States & Canada), International Call: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards:
Causes eye irritation, may be harmful if swallowed, may cause an allergic skin reaction, may cause skin irritation.

GHS Classification:
Eye damage/irritation – Category 2B
Acute Toxicity – Oral – Category 5
Sensitization – Skin – Category 1A

Label Elements, including precautionary statements

Pictograms: 

Signal Word: Warning

Hazard Statements:

H303	**May be harmful if swallowed.**
H320	**Causes eye irritation.**
H317	**May cause an allergic skin reaction.**
H335	**May cause respiratory irritation.**

Precautionary Statement(s)

Prevention:

P261	**Avoid breathing dust/fume/gas/mist/vapours/spray.**
P264	**Wash hands and skin thoroughly after handling.**
P271	**Use only outdoors or in a well-ventilated area.**
P272	**Contaminated work clothing should not be allowed out of the workplace.**
P280	**Wear protective gloves/protective clothing/eye protection/face protection.**

Response:

P312	**Call a POISON CENTER/doctor if swallowed and you feel unwell.**
P304+P340+P312	**IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.**
P305+P351+P338	**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
P337+P313	**If eye irritation persists: Get medical advice or attention.**
P302+P352	**IF ON SKIN: Wash with plenty of soap and water.**
P333+P313	**If skin irritation or rash occurs: Get medical advice or attention.**
P362+P364	**Take off contaminated clothing and wash it before reuse.**

Storage:

P403+P233	**Store in a well-ventilated place. Keep container tightly closed.**
P405	**Store locked up.**

Disposal:

P501	**Dispose of contents/container in accordance with local/regional/national regulations.**

Hazards not otherwise classified: May cause skin irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component

Water	CAS#: 7732-18-5	70-75%
Latex Resin – Non Hazardous	CAS#: Not Available	20-25%
S-Triazine-1,3,5(2H,4H,6H)-Triethanol	CAS#: 4719-04-4	≤ 0.3%
Surfactant Blend	Proprietary	≤ 0.2%

Ingredients not listed on this safety data sheet are considered to be non-hazardous according to OSHA 1910.1200 or are not present above their cutoff levels. Where a range is displayed, the exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: IF INHALED: Call a POISON CENTER/doctor if you feel unwell.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Ingestion: IF SWALLOWED: Not expected to be harmful under normal conditions of use. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a POISON CENTER/doctor if you feel unwell.

Skin Contact: Wash off with plenty of soap and water. If skin irritation or rash occurs: Get medical advice or attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Material is not combustible. Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide for the surrounding fire.
Specific Hazards Arising from the Chemical
No specific data available.

Hazardous Combustion Products
No specific data available.

Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus and full protective gear for firefighting.

Further Information
See Section 7 for safe handling and storage.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
In case of spill wear appropriate personal protective equipment during any cleanup and response activities. Avoid skin contact and inhalation.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Material for Containment and Cleaning Up
Dike and contain spill with inert absorbent materials. Soak up with inert material and keep in suitable, closed containers for disposal. Dispose of in accordance with specified local/regional/national/international regulations for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for Safe Storage, Including any Incompatibilities
General information: Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat. Keep from freezing. Store this product above 50 degrees F/10 degrees C and below 95 degrees F/35 degrees C.

Safe Storage: Store locked up.

Incompatibilities: None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Component Exposure Limits
No Data Available

Appropriate Engineering Controls
Local Ventilation: Recommended
General Ventilation: Recommended

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: Use proper protection – Safety Glasses as a minimum

Skin and Body Protection: Wash at mealtime and end of shift. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.
Respiratory Protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Wash hands before & after breaks and work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State
Appearance: Liquid
Color: White (Dries Clear)
Odor: Mild
Odor threshold: No Data

Property	Value	Remarks – Method
Vapor Pressure	Not Available	
Vapor Density	Not Available	
Relative Density	Not Available	
pH:	9	
Melting/Freezing Point	32 Degrees F (0 Degrees C)	
Solubility	Not Available	
Evaporation Rate	Not Available	
Flash Point	>212 Degrees F (>100 Degrees C)	Closed Cup
Flammability Limits	Not Relevant	
Flammability (Solid, gas)	Not Relevant	
Auto Ignition Temperature	Not Available	
Initial Boiling Point/Boiling Range	≥212 Degrees F (>100 Degrees C)	
Decomposition Temperature	Not Available	
Viscosity	Not Available	
Specific Gravity	1.03	Density: 8.61 lb./gal. +/- 0.02

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Possibility of Hazardous Reactions: None Known

Conditions to Avoid: Keep from Freezing

Incompatible Materials: None Known

Hazardous Decomposition Products: Oxides of Carbon, Sulphur and Nitrogen

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Skin Contact, Eye Contact
(Ingestion is not a likely route of exposure under normal conditions of use.)

Symptoms of Exposure:

Allergic skin reaction, skin and eye irritation, stomach or intestinal upset

Numerical measures of toxicity:

No Data Available

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Product may be harmful if swallowed. Product may cause allergic skin reaction, skin and eye irritation

Carcinogenicity: No ingredient has been characterized as a potential carcinogen by either IARC, NTP or OSHA.

12. ECOLOGICAL INFORMATION

Eco toxicity: No Known significant effects or critical hazards.

Persistence and Degradability: No Data Available

Bioaccumulation: No Data Available

Mobility: No Data Available

Other Adverse Effects: No Known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes: This product is a not a hazardous waste under RCRA. Dispose of in conformance with all federal, state and local regulations.

Contaminated Packaging: Dispose of as unused material.

14. TRANSPORT INFORMATION

D.O.T.: Not Regulated

I.M.D.G.: Not Regulated
Marine Pollutant: No

I.A.T.A.: Not Regulated

15. REGULATORY INFORMATION

International Inventories
TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

US Federal Regulations
SARA 302: None Known
SARA 311/312 Hazard Categories: Acute Health Hazard
SARA 313 Hazard Categories: None Known
CWA (Clean Water Act): None Known

Supplemental State Compliance Information

California:
This product does not contain any chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

U.S. EPA Label Information: No Data

16. OTHER INFORMATION

HMIS Classification:

Health hazard:	**1**
Flammability:	**0**
Physical Hazards:	**0**

NFPA Rating:

Health hazard:	**1**
Fire:	**0**
Reactivity Hazard:	**0**

Issuance Date: March 27, 2017
Revision Date: March 27, 2017
Revision Note: Reviewed and Updated
Date of Previous Version: July 25, 2014

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

PSI CRIMPED STEEL FIBER

Steel Macro-Fiber

EUCLID CHEMICAL

Description

PSI CRIMPED STEEL FIBER are low carbon, cold drawn steel wire fibers designed to provide concrete with temperature and shrinkage crack control, enhanced flexural reinforcement, improved shear strength and increase the crack resistance of concrete. PSI Crimped Steel Fiber complies with ASTM C1116, Standard Specification for Fiber Reinforced Concrete and Shotcrete and ASTM A820, Type I, Standard Specification for Steel Fibers for Fiber Reinforced Concrete. These steel macro-fibers will also improve impact, shatter, fatigue and abrasion resistance while increasing toughness of concrete. Dosage rates will vary depending upon the reinforcing requirements and can range from 25 to 100 lbs/yd^3 (15 to 60 kg/m^3).

Primary Applications

- Commercial and industrial slabs on ground
- Bridge decks, overlays and pavements
- Precast concrete applications
- Shotcrete, tunnel linings and slope stabilization
- Mass concrete and composite deck construction

Features/Benefits

- Increases impact, shatter and abrasion resistance of concrete
- Reduces segregation, plastic settlement, and shrinkage cracking of concrete
- Provides three-dimensional reinforcement against macro-cracking
- Increases overall durability, fatigue resistance and flexural toughness
- Reduction of in-place cost versus wire mesh for temperature / shrinkage crack control
- Easily added to concrete mixture at any time prior to placement

Technical Information

Typical Engineering Data

Material	low carbon cold drawn steel wire
Deformation	continuously deformed circular segment
Typical Dosage Rates	25 - 100 lb/yd^3 (15 - 60 kg/m^3)
Available Lengths	1 ½" (38 mm), 2" (50 mm)
Apect Ratio	34, 45
Tensile Strength	140 - 180 ksi (966 - 1242 MPa)
Appearance	bright, clean wire

Packaging

PSI Crimped Steel Fibers are packaged in 55 lb (25 kg) bags; 2200 net lbs (1000 kg) per pallet.

Shelf Life

3 years in original, unopened package.

19215 Redwood Road • Cleveland, OH 44110
800-321-7628 t • 216-531-9596 f
www.euclidchemical.com

Directions for Use

PSI Crimped Steel fibers can be added to the concrete mixture at any time prior to placement of the concrete. It is generally recommended to add any fiber material at the ready-mix concrete plant during batching. The actual dosage rate will vary depending upon the application and performance requirements for each project. Fibers must be mixed with concrete for a minimum of four (4) to five (5) minutes at maximum mixing speed, depending on the mixer type, to ensure complete dispersion and uniformity. The addition of PSI Crimped Steel Fiber, at provided dosage rates, will decrease the measured slump of concrete; however, additional water should not be added. The use of water reducers and/or superplasticizers, such as Eucon 1037, Eucon MRX or the Plastol series of admixtures may be necessary to maintain desired workability.

Add other admixtures independently from fiber addition. When used properly, and placed in a concrete mix of sufficient workability, the fibers will not adversely alter the compressive or flexural strength of concrete or shotcrete.

Clean-up

Loose fiber material may be disposed in proper receptacles for refuse. Finishing equipment with fibers embedded in concrete should be thoroughly cleaned.

Precautions/Limitations

- Use of fibers may cause an apparent loss in measured slump of concrete. This may be offset with the use of a water reducing admixture if necessary.
- Fibers should never be added to a “zero-slump” concrete. Ensure a minimum concrete slump of 3” (80 mm) prior to addition of any fiber material. Fibers may also be added in loose form to aggregate charging devices.
- In all cases, consult the Safety Data Sheet before use.

Rev. 04.16

Safety Data Sheet

Material Name: Diesel Fuel, All Types

SDS No. 9909
US GHS

Synonyms: Ultra Low Sulfur Diesel; Low Sulfur Diesel; No. 2 Diesel; Motor Vehicle Diesel Fuel; Non-Road Diesel Fuel; Locomotive/Marine Diesel Fuel

* * * Section 1 - Product and Company Identification * * *

Manufacturer Information

Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

Phone: 732-750-6000 Corporate EHS
Emergency # 800-424-9300 CHEMTREC
www.hess.com (Environment, Health, Safety Internet Website)

* * * Section 2 - Hazards Identification * * *

GHS Classification:

Flammable Liquids - Category 3
Skin Corrosion/Irritation – Category 2
Germ Cell Mutagenicity – Category 2
Carcinogenicity - Category 2
Specific Target Organ Toxicity (Single Exposure) - Category 3 (respiratory irritation, narcosis)
Aspiration Hazard – Category 1
Hazardous to the Aquatic Environment, Acute Hazard – Category 3

GHS LABEL ELEMENTS

Symbol(s)

Signal Word

DANGER

Hazard Statements

Flammable liquid and vapor.
Causes skin irritation.
Suspected of causing genetic defects.
Suspected of causing cancer.
May cause respiratory irritation.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

Precautionary Statements

Prevention

Keep away from heat/sparks/open flames/hot surfaces. No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and forearms thoroughly after handling.
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing fume/mist/vapours/spray.

Response
In case of fire: Use water spray, fog or foam to extinguish.
IF ON SKIN (or hair): Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical advice/attention.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell.
If swallowed: Immediately call a poison center or doctor. Do NOT induce vomiting.
IF exposed or concerned: Get medical advice/attention.

Storage
Store in a well-ventilated place. Keep cool.
Keep container tightly closed.
Store locked up.

Disposal
Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 3 - Composition / Information on Ingredients * * *

CAS #	Component	Percent
68476-34-6	Fuels, diesel, no. 2	100
91-20-3	Naphthalene	<0.1

A complex mixture of hydrocarbons with carbon numbers in the range C9 and higher.

* * * Section 4 - First Aid Measures * * *

First Aid: Eyes
In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

First Aid: Skin
Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or with waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

First Aid: Ingestion
DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

First Aid: Inhalation

Remove person to fresh air. If person is not breathing, provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

Hazardous Combustion Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Extinguishing Media

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, and other gaseous agents.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

Unsuitable Extinguishing Media

None

Fire Fighting Equipment/Instructions

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment. Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing. Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

* * * Section 6 - Accidental Release Measures * * *

Recovery and Neutralization

Carefully contain and stop the source of the spill, if safe to do so.

Materials and Methods for Clean-Up

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Caution, flammable vapors may accumulate in closed containers.

Emergency Measures

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Spills may infiltrate subsurface soil and groundwater; professional assistance may be necessary to determine the extent of subsurface impact.

Personal Precautions and Protective Equipment

Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental Precautions

Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors. The proper use of water spray may effectively disperse product vapors or the liquid itself, preventing contact with ignition sources or areas/equipment that require protection.

Prevention of Secondary Hazards

None

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Handle as a combustible liquid. Keep away from heat, sparks, excessive temperatures and open flame! No smoking or open flame in storage, use or handling areas. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil) is loaded into tanks previously containing low flash point products (such as this product) - see API Publication 2003, "Protection Against Ignitions Arising Out Of Static, Lightning and Stray Currents."

Storage Procedures

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks."

Incompatibilities

Keep away from strong oxidizers.

* * * Section 8 - Exposure Controls / Personal Protection * * *

Component Exposure Limits

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: 100 mg/m3 TWA (inhalable fraction and vapor, as total hydrocarbons, listed under Diesel fuel)
Skin - potential significant contribution to overall exposure by the cutaneous route (listed under Diesel fuel)

Naphthalene (91-20-3)

ACGIH:	10 ppm TWA
	15 ppm STEL
	Skin - potential significant contribution to overall exposure by the cutaneous route
OSHA:	10 ppm TWA; 50 mg/m3 TWA
NIOSH:	10 ppm TWA; 50 mg/m3 TWA
	15 ppm STEL; 75 mg/m3 STEL

Engineering Measures

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

Personal Protective Equipment: Respiratory

A NIOSH/MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Personal Protective Equipment: Hands

Gloves constructed of nitrile, neoprene, or PVC are recommended.

Personal Protective Equipment: Eyes

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying.

Personal Protective Equipment: Skin and Body

Chemical protective clothing such as of E.I. DuPont TyChem®, Saranex® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information.

* * * Section 9 - Physical & Chemical Properties * * *

Appearance:	Clear, straw-yellow.	**Odor:**	Mild, petroleum distillate odor
Physical State:	Liquid	**pH:**	ND
Vapor Pressure:	0.009 psia @ 70 °F (21 °C)	**Vapor Density:**	>1.0
Boiling Point:	320 to 690 °F (160 to 366 °C)	**Melting Point:**	ND
Solubility (H2O):	Negligible	**Specific Gravity:**	0.83-0.876 @ 60°F (16°C)
Evaporation Rate:	Slow; varies with conditions	**VOC:**	ND
Percent Volatile:	100%	**Octanol/H2O Coeff.:**	ND
Flash Point:	>125 °F (>52 °C) minimum	**Flash Point Method:**	PMCC
Upper Flammability Limit (UFL):	7.5	**Lower Flammability Limit (LFL):**	0.6
Burning Rate:	ND	**Auto Ignition:**	494°F (257°C)

* * * Section 10 - Chemical Stability & Reactivity Information * * *

Chemical Stability

This is a stable material.

Hazardous Reaction Potential

Will not occur.

Conditions to Avoid

Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources.

Incompatible Products

Keep away from strong oxidizers.

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

* * * Section 11 - Toxicological Information * * *

Acute Toxicity

A: General Product Information

Harmful if swallowed.

B: Component Analysis - LD50/LC50

Naphthalene (91-20-3)

Inhalation LC50 Rat >340 mg/m3 1 h; Oral LD50 Rat 490 mg/kg; Dermal LD50 Rat >2500 mg/kg; Dermal LD50 Rabbit >20 g/kg

Potential Health Effects: Skin Corrosion Property/Stimulativeness

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are repeatedly exposed.

Potential Health Effects: Eye Critical Damage/ Stimulativeness

Contact with eyes may cause mild irritation.

Potential Health Effects: Ingestion

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

Potential Health Effects: Inhalation

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: the burning of any hydrocarbon as a fuel in an area without adequate ventilation may result in hazardous levels of combustion products, including carbon monoxide, and inadequate oxygen levels, which may cause unconsciousness, suffocation, and death.

Respiratory Organs Sensitization/Skin Sensitization

This product is not reported to have any skin sensitization effects.

Generative Cell Mutagenicity

This material has been positive in a mutagenicity study.

Carcinogenicity

A: General Product Information

Suspected of causing cancer.

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

B: Component Carcinogenicity

Fuels, diesel, no. 2 (68476-34-6)

ACGIH: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans (listed under Diesel fuel)

Naphthalene (91-20-3)

ACGIH: A4 - Not Classifiable as a Human Carcinogen
NTP: Reasonably Anticipated To Be A Human Carcinogen (Possible Select Carcinogen)
IARC: Monograph 82 [2002] (Group 2B (possibly carcinogenic to humans))

Reproductive Toxicity

This product is not reported to have any reproductive toxicity effects.

Specified Target Organ General Toxicity: Single Exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specified Target Organ General Toxicity: Repeated Exposure

This product is not reported to have any specific target organ general toxicity repeat exposure effects.

Aspiration Respiratory Organs Hazard

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

Keep out of sewers, drainage areas and waterways. Report spills and releases, as applicable, under Federal and State regulations.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Fuels, diesel, no. 2 (68476-34-6)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	35 mg/L [flow-through]	

Naphthalene (91-20-3)

Test & Species		Conditions
96 Hr LC50 Pimephales promelas	5.74-6.44 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	1.6 mg/L [flow-through]	
96 Hr LC50 Oncorhynchus mykiss	0.91-2.82 mg/L [static]	
96 Hr LC50 Pimephales promelas	1.99 mg/L [static]	

96 Hr LC50 Lepomis macrochirus	31.0265 mg/L [static]
72 Hr EC50 Skeletonema costatum	0.4 mg/L
48 Hr LC50 Daphnia magna	2.16 mg/L
48 Hr EC50 Daphnia magna	1.96 mg/L [Flow through]
48 Hr EC50 Daphnia magna	1.09 - 3.4 mg/L [Static]

Persistence/Degradability

No information available.

Bioaccumulation

No information available.

Mobility in Soil

No information available.

* * * Section 13 - Disposal Considerations * * *

Waste Disposal Instructions

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

Disposal of Contaminated Containers or Packaging

Dispose of contents/container in accordance with local/regional/national/international regulations.

* * * Section 14 - Transportation Information * * *

DOT Information

Shipping Name: Diesel Fuel

NA #: 1993 **Hazard Class:** 3 **Packing Group:** III

Placard:

* * * Section 15 - Regulatory Information * * *

Regulatory Information

Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Naphthalene (91-20-3)

CERCLA: 100 lb final RQ; 45.4 kg final RQ

SARA Section 311/312 – Hazard Classes

Acute Health	Chronic Health	Fire	Sudden Release of Pressure	Reactive
X	X	X	--	--

SARA SECTION 313 - SUPPLIER NOTIFICATION

This product may contain listed chemicals below the de minimis levels which therefore are not subject to the supplier notification requirements of Section 313 of the Emergency Planning and Community Right- To-Know Act (EPCRA) of 1986 and of 40 CFR 372. If you may be required to report releases of chemicals listed in 40 CFR 372.28, you may contact Hess Corporate Safety if you require additional information regarding this product.

State Regulations

Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Fuels, diesel, no. 2	68476-34-6	No	No	No	Yes	No	No
Naphthalene	91-20-3	Yes	Yes	Yes	Yes	Yes	No

The following statement(s) are provided under the California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):

WARNING! This product contains a chemical known to the state of California to cause cancer.

Component Analysis - WHMIS IDL

No components are listed in the WHMIS IDL.

Additional Regulatory Information

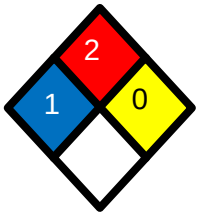
Component Analysis - Inventory

Component	CAS #	TSCA	CAN	EEC
Fuels, diesel, no. 2	68476-34-6	Yes	DSL	EINECS
Naphthalene	91-20-3	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

NFPA® Hazard Rating

Health	1
Fire	2
Reactivity	0



HMIS® Hazard Rating

Health	1*	Slight
Fire	2	Moderate
Physical	0	Minimal
		*Chronic

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADG = Australian Code for the Transport of Dangerous Goods by Road and Rail; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; AS = Standards Australia; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EU = European Union; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IMO = International Maritime Organization; IATA = International Air Transport Association; MAK = Maximum Concentration Value in the Workplace; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NOHSC = National Occupational Health & Safety Commission; NTP = National Toxicology Program; STEL = Short-term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average

Literature References

None

Other Information

Information presented herein has been compiled from sources considered to be dependable, and is accurate and reliable to the best of our knowledge and belief, but is not guaranteed to be so. Since conditions of use are beyond our control, we make no warranties, expressed or implied, except those that may be contained in our written contract of sale or acknowledgment.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material, even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in their use of the material.

End of Sheet

This is a kit that contains the following components:
DURALPREP AC KIT (1:1/36) PART A, DURALPREP AC PART A
DURALPREP AC PART B, DURALPREP AC PART B
DURALPREP AC PART C (BULK), DURALPREP AC PART C

SAFETY DATA SHEET

1. Identification

Product identifier: DURALPREP AC KIT (1:1/36) PART A, DURALPREP AC PART A
Product Code: TD2353899

Recommended use and restriction on use

Recommended use: Sealant
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Acute toxicity (Inhalation - vapor)	Category 4
Serious Eye Damage/Eye Irritation	Category 2B
Skin sensitizer	Category 1

Unknown toxicity - Health

Acute toxicity, oral	59.89 %
Acute toxicity, dermal	59.89 %
Acute toxicity, inhalation, vapor	98.58 %
Acute toxicity, inhalation, dust or mist	98.57 %

Unknown toxicity - Environment

Acute hazards to the aquatic environment	96.2 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:

Signal Word: Warning

Hazard Statement: May cause an allergic skin reaction.
Causes eye irritation.
Harmful if inhaled.

Precautionary Statements

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Call a POISON CENTER/doctor/ if you feel unwell. Specific treatment (see this label). Wash contaminated clothing before reuse.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Bisphenol A Polyglycidyl Ether Resin	25068-38-6	20 - <50%
Octylphenoxypolyethoxy ethanol	9036-19-5	1 - <5%
Benzyl alcohol	100-51-6	1 - <5%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTER/doctor/ if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

Eye contact: Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up: Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Avoid contact with eyes. Wash hands thoroughly after handling. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. Store in original tightly closed container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.
None of the components have assigned exposure limits.

Appropriate Engineering Controls Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. Supplementary local exhaust ventilation, closed systems, or respiratory and eye protection may be needed in special circumstances, such as poorly ventilated spaces, heating, evaporation of liquids from large surfaces, spraying of mists, mechanical generation of dusts, drying of solids, etc.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: Wear suitable protective clothing. Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	Amber
Odor:	Mild
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	> 93 °C > 200 °F(Setaflash Closed Cup)
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	0.99
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation: In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

Skin Contact: May be harmful in contact with skin. Causes mild skin irritation. May cause an allergic skin reaction.

Eye contact: Causes eye irritation.

Ingestion: May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 45,684.11 mg/kg

Dermal
Product: ATEmix: 3,371.29 mg/kg

Inhalation
Product: ATEmix: 11 mg/l

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin	in vivo (Rabbit): Slightly irritating Experimental result, Key study
Benzyl alcohol	in vivo (Rabbit): Not irritant Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin	Rabbit, 24 hrs: Slightly irritating

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity

Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard

Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish

Product:	No data available.
Specified substance(s):	
Bisphenol A Polyglycidyl Ether Resin	LC 50 (Oncorhynchus mykiss, 96 h): 2 mg/l Experimental result, Key study
Octylphenoxypolyethoxy ethanol	LC 50 (Rainbow trout,donaldson trout (Oncorhynchus mykiss), 96 h): 7.2 mg/l Mortality
Benzyl alcohol	LC 50 (Fathead minnow (Pimephales promelas), 96 h): 460 mg/l Mortality

Aquatic Invertebrates

Product:	No data available.
Specified substance(s):	
Bisphenol A Polyglycidyl Ether Resin	EC 50 (Daphnia magna, 48 h): 1.8 mg/l Experimental result, Key study
Octylphenoxypolyethoxy ethanol	LC 50 (Water flea (Daphnia magna), 48 h): 7.5 - 9.8 mg/l Mortality
Benzyl alcohol	EC 50 (Daphnia magna, 48 h): 230 mg/l Experimental result, Key study

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.

Aquatic Invertebrates

Product:	No data available.
Specified substance(s):	
Bisphenol A Polyglycidyl Ether Resin	NOEC (Daphnia magna, 21 d): 0.3 mg/l Experimental result, Key study

Toxicity to Aquatic Plants

Product:	No data available.

Persistence and Degradability

Biodegradation

Product:	No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin	Bioconcentration Factor (BCF): 31 Aquatic sediment QSAR, Key study

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Bisphenol A Polyglycidyl Ether Resin	Log Kow: 2.64 - 3.78 25 °C Yes Experimental result, Key study
Benzyl alcohol	Log Kow: 1.10

Mobility in soil: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate (Acute) Health Hazards

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Bisphenol A Polyglycidyl Ether Resin	10000 lbs
Octylphenoxypolyethoxy ethanol	10000 lbs
Benzyl alcohol	10000 lbs

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List

Chemical Identity
Benzyl alcohol

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Benzyl alcohol

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol

not applicable

Stockholm convention

not applicable

Rotterdam convention

not applicable

Kyoto protocol

not applicable

VOC: When appropriately mixed with the other part, product has a VOC less water and exempt solvent of: 15 g/l

Regulatory VOC (less water and exempt solvent)	:	27 g/l
VOC Method 310	:	1.42 %

Inventory Status:

Australia AICS:	All components in this product are listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	All components in this product are listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Mexico INSQ:	One or more components in this product are not listed on or exempt from the Inventory.
Ontario Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Taiwan Chemical Substance Inventory:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	10/31/2017
Version #:	2.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

1. Identification

Product identifier: DURALPREP AC PART B, DURALPREP AC PART B
Product Code: TD2353899

Recommended use and restriction on use

Recommended use: Sealant
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Serious Eye Damage/Eye Irritation	Category 2A
Skin sensitizer	Category 1

Unknown toxicity - Health

Acute toxicity, oral	45.06 %
Acute toxicity, dermal	46.71 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	99.99 %

Acute hazards to the aquatic environment	100 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:

Signal Word: Warning

Hazard Statement: May cause an allergic skin reaction.
Causes serious eye irritation.

Precautionary Statements

Prevention: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace.

Response: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Specific treatment (see this label). Wash contaminated clothing before reuse.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Trade Secret	Trade Secret	1 - <3%
Tetraethylene pentamine	112-57-2	1 - <5%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTER/doctor/ if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: If skin irritation occurs: Get medical advice/attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up: Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Avoid contact with eyes. Wash hands thoroughly after handling. Avoid contact with eyes, skin, and clothing. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. Store in original tightly closed container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.
None of the components have assigned exposure limits.

Appropriate Engineering Controls Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information: Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection: Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Avoid contact with eyes. Observe good industrial hygiene practices. Contaminated work clothing should not be allowed out of the workplace. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state: liquid
Form: liquid

Color:	Amber
Odor:	Mild
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	> 93 °C > 200 °F(Setaflash Closed Cup)
Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	0.99
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

Skin Contact: Causes mild skin irritation. May cause an allergic skin reaction.

Eye contact: Causes serious eye irritation.

Ingestion: May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation: No data available.

Skin Contact: No data available.

Eye contact: No data available.

Ingestion: No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 30,019.12 mg/kg

Dermal
Product: ATEmix: 57,815.62 mg/kg

Inhalation
Product: Not classified for acute toxicity based on available data.

Specified substance(s):
Trade Secret LC 50 (Rat): > 0.74 mg/l

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):
Trade Secret in vivo (Rabbit): severely irritant Experimental result, Supporting study

Serious Eye Damage/Eye Irritation
Product: No data available.
Specified substance(s):

Trade Secret Rabbit, 24 hrs: Corrosive

Respiratory or Skin Sensitization

Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Specified substance(s):

Tetraethylene pentamine	Log Kow: 1.503

Mobility in soil: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate (Acute) Health Hazards

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Trade Secret	10000 lbs
Tetraethylene pentamine	10000 lbs

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
Chemical Identity
Tetraethylene pentamine

US. Massachusetts RTK - Substance List
Chemical Identity
Tetraethylene pentamine

US. Pennsylvania RTK - Hazardous Substances
Chemical Identity
Tetraethylene pentamine

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol
not applicable

Stockholm convention
not applicable

Rotterdam convention
not applicable

Kyoto protocol
not applicable

VOC: When appropriately mixed with the other part, product has a VOC less water and exempt solvent of: 15 g/l

Regulatory VOC (less water and exempt solvent)	:	0 g/l
VOC Method 310	:	0.00 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Mexico INSQ:	One or more components in this product are not listed on or exempt from the Inventory.
Ontario Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Taiwan Chemical Substance Inventory:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	10/31/2017
Version #:	2.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

1. Identification

Product identifier: DURALPREP AC PART C (BULK), DURALPREP AC PART C
Product Code: TD2353899

Recommended use and restriction on use

Recommended use: Cement, Portland, chemicals
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1
Carcinogenicity	Category 1A
Specific Target Organ Toxicity - Single Exposure	Category 3[1.]
Specific Target Organ Toxicity - Repeated Exposure	Category 1[2.]

Target Organs

1. Respiratory tract irritation.
2. Lung

Unknown toxicity - Health

Acute toxicity, oral	93.57 %
Acute toxicity, dermal	94.72 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %
Acute hazards to the aquatic environment	98.85 %

Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement: Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
May cause cancer.
May cause respiratory irritation.
Causes damage to organs through prolonged or repeated exposure.

Precautionary Statements

Prevention: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing should not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of water/… If skin irritation or rash occurs: Get medical advice/attention. Immediately call a POISON CENTER/doctor/… Specific treatment (see this label). Wash contaminated clothing before reuse.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Portland cement	65997-15-1	50 - <100%
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	20 - <50%
Fumed silica	69012-64-2	1 - <5%
Calcium salt	7778-18-9	1 - <5%
Calcium Carbonate (Limestone)	1317-65-3	0.1 - <1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTER/doctor/ if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: Get medical attention. Destroy or thoroughly clean contaminated shoes. Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. If skin irritation or an allergic skin reaction develops, get medical attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up: Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not get in eyes. Wash hands thoroughly after handling. Avoid contact with skin. Avoid contact with eyes, skin, and clothing.

Conditions for safe storage, including any incompatibilities: Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Portland cement - Respirable fraction.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values (2011)
Portland cement - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Portland cement - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Portland cement	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Crystalline Silica (Quartz)/	TWA	0.025 mg/m3	US. ACGIH Threshold Limit Values (2011)

Silica Sand - Respirable fraction.			
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.05 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016)
	OSHA_ACT	0.025 mg/m3	US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (03 2016)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	PEL	0.05 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWA	2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.1 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Fumed silica	TWA	20 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.8 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Calcium salt - Total	REL	10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Calcium salt - Respirable.	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Calcium salt - Total dust.	TWA	15 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Calcium salt - Respirable fraction.	TWA	5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Calcium salt - Total dust.	TWA	15 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Calcium salt - Respirable fraction.	TWA	5 mg/m3	US. Tennessee. OELs. Occupational Exposure Limits, Table Z1A (06 2008)
Calcium salt	AN ESL	5 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
	ST ESL	50 µg/m3	US. Texas. Effects Screening Levels (Texas Commission on Environmental Quality) (03 2014)
Calcium salt - Inhalable fraction.	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2011)
Calcium salt - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium salt - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium Carbonate (Limestone) - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium Carbonate (Limestone) - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Chemical name	Type	Exposure Limit Values	Source
Portland cement - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Portland cement - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Portland cement - Respirable fraction.	TWA	1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Portland cement - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Portland cement - Respirable dust.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Fumed silica - Total fume.	TWA	4 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Fumed silica - Respirable fume.	TWA	1.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Fumed silica - Respirable fraction.	TWA	2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Fumed silica - Respirable dust and/or fume.	TWA	2 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Calcium salt	TWA	10 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Calcium salt - Inhalable	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium salt - Inhalable fraction.	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Calcium salt - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Calcium salt - Respirable dust.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Chemical name	Type	Exposure Limit Values	Source
Portland cement - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Portland cement - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Portland cement - Respirable fraction.	TWA	1 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Portland cement - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Portland cement - Respirable dust.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Fumed silica - Total fume.	TWA	4 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Fumed silica - Respirable fume.	TWA	1.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Fumed silica - Respirable fraction.	TWA	2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Fumed silica - Respirable dust and/or fume.	TWA	2 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Calcium salt	TWA	10 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Calcium salt - Inhalable	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium salt - Inhalable fraction.	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Calcium salt - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Calcium salt - Respirable dust.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Calcium Carbonate (Limestone) - Total dust.	STEL	20 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)

Calcium Carbonate (Limestone) - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium Carbonate (Limestone) - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Calcium oxide	TWA	2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium oxide	TWA	2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Calcium oxide	TWA	2 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Magnesium oxide - Respirable dust and/or fume. - as Mg	STEL	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Magnesium oxide - Inhalable fume.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Magnesium oxide - Respirable dust and/or fume. - as Mg	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Magnesium oxide - Inhalable fraction.	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Magnesium oxide - Fume. - as Mg	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Clay - Respirable.	TWA	2 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Clay - Respirable fraction.	TWA	2 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Clay - Respirable dust.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Amorphous silica - Total	TWA	4 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica - Respirable.	TWA	1.5 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Amorphous silica - Respirable dust.	TWA	6 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Appropriate Engineering Controls

Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

General information: Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection: Wear a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not get in eyes. Wash contaminated clothing before reuse. Avoid contact with skin. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state:	solid
Form:	Powder
Color:	Gray
Odor:	Odorless
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	3.5

Solubility(ies)

Solubility in water:	Miscible with water.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes skin irritation. May cause an allergic skin reaction.
Eye contact:	Causes serious eye damage.
Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix: 8,842.4 mg/kg

Dermal
Product: Not classified for acute toxicity based on available data.

Inhalation
Product:

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Crystalline Silica (Quartz)/ Silica Sand	Overall evaluation: Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Crystalline Silica (Quartz)/ Silica Sand	Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

Crystalline Silica (Quartz)/ Silica Sand	Cancer

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Target Organs
Specific Target Organ Toxicity - Single Exposure: Respiratory tract irritation.
Specific Target Organ Toxicity - Repeated Exposure: Lung

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in soil: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Chemical Identity	OSHA hazard(s)
Crystalline Silica (Quartz)/ Silica Sand	kidney effects lung effects immune system effects Cancer

CERCLA Hazardous Substance List (40 CFR 302.4):

None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

Skin Corrosion/Irritation
Serious Eye Damage/Eye Irritation
Skin sensitizer
Carcinogenicity
Specific Target Organ Toxicity - Single Exposure
Specific Target Organ Toxicity - Repeated Exposure

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Portland cement	10000 lbs
Crystalline Silica (Quartz)/ Silica Sand	10000 lbs
Fumed silica	10000 lbs
Calcium salt	10000 lbs
Calcium Carbonate (Limestone)	10000 lbs

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Crystalline Silica (Quartz)/ Silica Sand	Carcinogenic. 09 2011

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
Portland cement
Crystalline Silica (Quartz)/ Silica Sand
Fumed silica
Calcium salt

US. Massachusetts RTK - Substance List

Chemical Identity
Portland cement
Crystalline Silica (Quartz)/ Silica Sand
Fumed silica
Calcium salt

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Portland cement
Crystalline Silica (Quartz)/ Silica Sand
Fumed silica
Calcium salt

US. Rhode Island RTK

Chemical Identity
Portland cement
Crystalline Silica (Quartz)/ Silica Sand

International regulations

Montreal protocol
not applicable

Stockholm convention
not applicable

Rotterdam convention
not applicable

Kyoto protocol
not applicable

VOC:

Regulatory VOC (less water and exempt solvent)	:	0 g/l
VOC Method 310	:	0.00 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	10/31/2017
Version #:	2.0
Further Information:	No data available.

Disclaimer: For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

1. Identification

Material name: PSI FS M 150 3/4" - 1.0X30X36
Material: 2075000100 3036

Recommended use and restriction on use

Recommended use: Article
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol:	No symbol
Signal Word:	No signal word.
Hazard Statement:	not applicable
Precautionary Statement:	not applicable

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Composition Comments: The components are not hazardous or are below required disclosure limits.

4. First-aid measures

Ingestion: Rinse mouth thoroughly.

Inhalation: Move to fresh air.

Skin Contact: Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

Eye contact: Rinse immediately with plenty of water.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Get medical attention if symptoms occur.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: No data available.

Methods and material for containment and cleaning up: Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

7. Handling and storage

Precautions for safe handling: Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. Store in original tightly closed container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: Wear goggles/face shield.

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and chemical properties

Appearance

Physical state:	solid
Form:	No data available.
Color:	White
Odor:	Odorless
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	182 °C 360 °F
Initial boiling point and boiling range:	182 °C 360 °F

Flash Point:	316 °C 600 °F
Evaporation rate:	No data available.
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	0.92
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Moderately irritating to skin with prolonged exposure.
Eye contact:	Eye contact is possible and should be avoided.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Not listed.

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

None present or none present in regulated quantities.

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

Other Regulations:

Regulatory VOC (less water and exempt solvent):	0 g/l
VOC Method 310:	0.00 %

Inventory Status:

Australia AICS:	All components in this product are listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	All components in this product are listed on or exempt from the Inventory.

China Inv. Existing Chemical Substances:	All components in this product are listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	All components in this product are listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	08/14/2015
Version #:	1.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

1. Identification

Material name: DRY PACK GROUT
Material: 088B 50

Recommended use and restriction on use

Recommended use: Cement, Portland, chemicals
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Acute toxicity (Inhalation - dust and mist)	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 1
Skin sensitizer	Category 1B
Carcinogenicity	Category 1A
Specific Target Organ Toxicity - Single Exposure	Category 3

Unknown toxicity - Health

Acute toxicity, oral	86.87 %
Acute toxicity, dermal	88.27 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	97.2 %

Unknown toxicity - Environment

Acute hazards to the aquatic environment	98.6 %
Chronic hazards to the aquatic environment	100 %

Label Elements

Hazard Symbol:

Signal Word: Danger

Hazard Statement: Harmful if inhaled.
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
May cause cancer.
May cause respiratory irritation.

Precautionary Statement:

Prevention: Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Contaminated work clothing must not be allowed out of the workplace. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required.

Response: IF INHALED: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Immediately call a POISON CENTER/doctor. Specific treatment (see this label). Wash contaminated clothing before reuse.

Storage: Store locked up. Store in well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	40 - 70%
Portland cement	65997-15-1	15 - 40%
**	**	1 - 5%
Calcium salt	7778-18-9	1 - 5%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Trade secret information: ** A specific chemical identity and/or percentage of composition has been

withheld as a trade secret.

4. First-aid measures

Ingestion: Call a POISON CENTER/doctor/.../if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before reuse. Get medical attention.

Eye contact: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed

Symptoms: Prolonged or repeated contact with skin may cause redness, itching, irritation and eczema/chapping. Extreme irritation of eyes and mucous membranes, including burning and tearing. Respiratory tract irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: See Section 8 of the SDS for Personal Protective Equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away.

Methods and material for containment and cleaning up: Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling: Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not get in eyes. Wash hands thoroughly after handling. Avoid contact with skin. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.

Conditions for safe storage, including any incompatibilities: Store locked up.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	type	Exposure Limit Values	Source
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	US. ACGIH Threshold Limit Values (2011)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWA	2.4 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
	TWA	0.1 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Crystalline Silica (Quartz)/ Silica Sand - Total dust.	TWA	0.3 mg/m3	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Portland cement - Respirable fraction.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values (2011)
Portland cement - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Portland cement - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

			(02 2006)
Portland cement	TWA	50 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Calcium salt - Inhalable fraction.	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2011)
Calcium salt - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Calcium salt - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Chemical name	type	Exposure Limit Values	Source
Crystalline Silica (Quartz)/ Silica Sand - Respirable fraction.	TWA	0.025 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Crystalline Silica (Quartz)/ Silica Sand - Respirable.	TWAEV	0.10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Crystalline Silica (Quartz)/ Silica Sand - Respirable dust.	TWA	0.1 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Portland cement - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Portland cement - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Portland cement	TWAEV	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Portland cement - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Portland cement - Respirable dust.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Calcium salt - Inhalable	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Calcium salt - Inhalable fraction.	TWAEV	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Calcium salt - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Calcium salt - Respirable dust.	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)

Appropriate Engineering Controls Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

General information: Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection: Wear a full-face respirator, if needed. Wear safety glasses with side shields (or goggles) and a face shield.

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: Wear chemical-resistant gloves, footwear, and protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. Do not get in eyes. Wash contaminated clothing before reuse. Avoid contact with skin.

9. Physical and chemical properties

Appearance

Physical state:	solid
Form:	Powder
Color:	Gray
Odor:	Odorless
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.
Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.

Vapor density:	No data available.
Relative density:	3.05
Solubility(ies)	
Solubility in water:	Miscible with water.
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Causes skin irritation.
Eye contact:	Causes serious eye damage.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: ATEmix: 9,379.29 mg/kg

Dermal
Product: ATEmix: 8,379.29 mg/kg

Inhalation
Product: ATEmix: 1.9 mg/l

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Specified substance(s):
Calcium salt in vivo (Rabbit, 72 hrs): Not irritating

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Crystalline Silica (Quartz)/ Silica Sand	Overall evaluation: Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

Crystalline (Quartz)/ Sand	Silica Silica	Known To Be Human Carcinogen.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):
Calcium salt — LC 50 (Fathead minnow (Pimephales promelas), 96 h): > 1,970 mg/l Mortality

Aquatic Invertebrates
Product: No data available.

Specified substance(s):
Calcium salt — LC 50 (Water flea (Daphnia magna), 24 h): > 1,970 mg/l Mortality
LC 50 (Water flea (Ceriodaphnia dubia), 24 h): > 1,940 mg/l Mortality
LC 50 (Water flea (Ceriodaphnia dubia), 48 h): > 1,970 mg/l Mortality
LC 50 (Water flea (Ceriodaphnia dubia), 48 h): > 1,910 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Crystalline Silica (Quartz)/ Silica Sand	500 lbs
Portland cement	500 lbs
Fused calcium aluminate	500 lbs
Calcium salt	500 lbs

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
Crystalline Silica (Quartz)/ Silica Sand
Portland cement
Calcium salt

US. Massachusetts RTK - Substance List

Chemical Identity
Crystalline Silica (Quartz)/ Silica Sand
Portland cement
Calcium salt

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity
Crystalline Silica (Quartz)/ Silica Sand
Portland cement
Calcium salt

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

Other Regulations:

Regulatory VOC (less water and exempt solvent):	0 g/l
VOC Method 310:	0.00 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	07/29/2015
Version #:	1.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

1. Identification

Material name: EUCON MR - BULK GALLONS
Material: 026A 99

Recommended use and restriction on use

Recommended use: Additive
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Health Hazards

Acute toxicity (Oral)	Category 4

Unknown toxicity - Health

Acute toxicity, oral	19.59 %
Acute toxicity, dermal	19.97 %
Acute toxicity, inhalation, vapor	47.68 %
Acute toxicity, inhalation, dust or mist	47.67 %

Label Elements

Hazard Symbol:

Signal Word: Warning

Hazard Statement: Harmful if swallowed.

Precautionary Statements

Prevention: Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Response: IF SWALLOWED: Call a POISON CENTRE/doctor/ if you feel unwell. Rinse mouth.

Disposal: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Calcium nitrate	10124-37-5	25 - <50%
Sodium thiocyanate	540-72-7	1 - <5%
Sodium hydroxide	1310-73-2	0.1 - <1%

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion: Call a POISON CENTRE/doctor/ if you feel unwell. Rinse mouth.

Inhalation: Move to fresh air.

Skin Contact: Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

Eye contact: Rinse immediately with plenty of water.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Symptoms may be delayed.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media:	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media:	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical:	During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures:	No data available.
Special protective equipment for fire-fighters:	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures:	No data available.
Methods and material for containment and cleaning up:	Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.
Notification Procedures:	In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.
Environmental Precautions:	Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling:	Do not taste or swallow. Wash hands thoroughly after handling. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities:	Store away from incompatible materials. Store in original tightly closed container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source

Sodium hydroxide	Ceiling	2 mg/m3	US. ACGIH Threshold Limit Values (2011)
	PEL	2 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

None of the components have assigned exposure limits.

Appropriate Engineering Controls Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: Wear goggles/face shield.

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Do not eat, drink or smoke when using the product. Wash hands after handling.

9. Physical and chemical properties

Appearance

Physical state: liquid
Form: liquid
Color: Brown
Odor: Mild
Odor threshold: No data available.
pH: 6 - 8
Melting point/freezing point: No data available.
Initial boiling point and boiling range: No data available.
Flash Point: No data available.
Evaporation rate: Slower than Ether
Flammability (solid, gas): No
Upper/lower limit on flammability or explosive limits
Flammability limit - upper (%): No data available.
Flammability limit - lower (%): No data available.
Explosive limit - upper (%): No data available.
Explosive limit - lower (%): No data available.
Vapor pressure: No data available.
Vapor density: Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density: +/- 0.015 1.285
Solubility(ies)

Solubility in water:	Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	Strong acids. Strong bases.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Moderately irritating to skin with prolonged exposure.
Eye contact:	Eye contact is possible and should be avoided.
Ingestion:	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral

Product:	ATEmix: 893.86 mg/kg

Dermal
Product: ATEmix: 5,819.06 mg/kg

Inhalation
Product: Not classified for acute toxicity based on available data.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Specified substance(s):

Calcium nitrate	in vivo (Rabbit): Not irritant Read-across from supporting substance (structural analogue or surrogate), Key study
Sodium thiocyanate	In vitro Not irritant Experimental result, Key study
Sodium hydroxide	in vivo (Rabbit): Irritating Experimental result, Weight of Evidence study

Serious Eye Damage/Eye Irritation
Product: No data available.
Specified substance(s):

Calcium nitrate	Rabbit, 24 - 72 hrs: Category 1
Sodium thiocyanate	Not severe irritant or corrosive
Sodium hydroxide	Rabbit, 1 d: 10% Sodium Hydroxide- Category 1; 0.5% Sodium Hydroxide- Slightly irritating to eyes

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Specified substance(s):

Calcium nitrate	LC 50 (Bluegill (Lepomis macrochirus), 96 h): 2,400 mg/l Mortality
Sodium hydroxide	LC 50 (Western mosquitofish (Gambusia affinis), 96 h): 125 mg/l Mortality

Aquatic Invertebrates
Product: No data available.

Specified substance(s):

Sodium hydroxide	EC 50 (Water flea (Ceriodaphnia dubia), 48 h): 34.59 - 47.13 mg/l Intoxication

Chronic hazards to the aquatic environment:

Fish

Product: No data available.

Specified substance(s):

Sodium thiocyanate: NOAEL (Cyprinus carpio, 7 d): 20 mg/l Experimental result, Supporting study
LOAEL (Pimephales promelas, 124 d): 12.2 mg/l Read-across based on grouping of substances (category approach), Key study
LOAEL (Oncorhynchus mykiss, 16 Weeks): 115 mg/l Read-across based on grouping of substances (category approach), Supporting study
NOAEL (Pimephales promelas, 124 d): 1.84 mg/l Read-across based on grouping of substances (category approach), Key study
NOAEL (Oncorhynchus mykiss, 16 Weeks): 77 mg/l Read-across based on grouping of substances (category approach), Supporting study

Aquatic Invertebrates

Product: No data available.

Toxicity to Aquatic Plants

Product: No data available.

Persistence and Degradability

Biodegradation

Product: No data available.

BOD/COD Ratio

Product: No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product: No data available.

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Mobility in soil: No data available.

Other adverse effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):

Chemical Identity	Reportable quantity
Sodium hydroxide	1000 lbs.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate (Acute) Health Hazards
Acute toxicity

SARA 302 Extremely Hazardous Substance

None present or none present in regulated quantities.

SARA 304 Emergency Release Notification

Chemical Identity	Reportable quantity
Sodium hydroxide	1000 lbs.
[1,1'-Biphenyl]-2-ol, sodium salt (1:1)	

SARA 311/312 Hazardous Chemical

Chemical Identity	Threshold Planning Quantity
Calcium nitrate	10000 lbs
Sodium thiocyanate	10000 lbs
Sodium hydroxide	10000 lbs

SARA 313 (TRI Reporting)

Chemical Identity
Calcium nitrate

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

[1,1'-Biphenyl]-2-ol, sodium salt (1:1)	Carcinogenic. 09 2011

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity
Calcium nitrate

US. Massachusetts RTK - Substance List

Chemical Identity
[1,1'-Biphenyl]-2-ol, sodium salt (1:1)

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol
not applicable

Stockholm convention
not applicable

Rotterdam convention
not applicable

Kyoto protocol
not applicable

VOC:

Regulatory VOC (less water and exempt solvent)	:	0 g/l
VOC Method 310	:	0.00 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.
China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date: 08/01/2017

Version #:	3.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

EUCON AEA-92S

Air Entraining Agent For Concrete

EUCLID CHEMICAL

Description

EUCON AEA-92S is formulated for use as an air entraining admixture for concrete of all types and is manufactured under rigid control which assures uniform and precise performance. It should be added to the mix independently and not with other admixtures.

Primary Applications

- Ready mix concrete
- Structural concrete
- Mass concrete
- Paving concrete
- All exterior concrete

Features/Benefits

- Provides a stable air void system with proper bubble size and spacing. This air void system protects concrete against damage caused by repeated freeze/thaw cycles
- Concrete is made more resistant to de-icing salts, sulfate attack and corrosive water
- Less mixing water can be used per yard (meter) of concrete and placeability is improved
- Minimizes bleeding and segregation of the concrete

Technical Information

EUCON AEA-92S is an aqueous solution compound of organic chemicals. It is compatible with concrete mixes containing other commonly used Euclid Chemical Company admixtures.

Packaging

EUCON AEA-92S is packaged in bulk, 275 gal (1041 L) totes, 55 gal (208 L) drums and 5 gal (18.9 L) pails.

Shelf Life

2 years in original, unopened package.

Specifications/Compliances

EUCON AEA-92S meets or exceeds the requirements of the following specifications:

- Corps of Engineers Specification CRD C-13
- ASTM Specification C 260
- AASHTO Specification M 154
- ANSI/NSF STD 61

19215 Redwood Road • Cleveland, OH 44110
800-321-7628 t • 216-531-9596 f

Directions for Use

EUCON AEA-92S is typically dosed at a rate of 0.5 to 2 oz per 100 lbs (30 to 130 mL per 100 kg) of total cementitious material to entrain 3% - 6% air content. The amount of EUCON AEA-92S will vary depending on type of cement, fineness of sand, temperature, design of the mix, other admixtures, etc. Concrete mixes must be tested regularly to confirm that proper air content is achieved. EUCON AEA 92S should be added directly to the sand to achieve maximum performance.

Precautions/Limitations

- Protect EUCON AEA-92S from freezing.
- Consult your local Euclid Chemical representative for the proper dosage rate adjustments when using fly ash, slag or high range water reducers.
- Add to the mix independent of other admixtures.
- In all cases, consult the Safety Data Sheet before use.

Rev. 2.15

SAFE USE INSTRUCTION SHEET

Creation Date 05-Mar-1997 **Revision Date** 07-Dec-2016 **Version** 3

0. GENERAL INFORMATION

This Safe Use Instruction Sheet is the document provided by Owens Corning to communicate safe handling and use instructions for manufactured articles neither regulated by OSHA Hazard Communication Standard, 29 CFR 1910.1200 nor by the Canada Hazardous Products Regulation SOR/2015-17 (WHMIS 2015)

1. IDENTIFICATION

Product Name FOAMULAR® Extruded Polystyrene Insulation - Zero Ozone Depletion Formula

Synonyms Buoyancy Billet, Foamular® 150, Foamular® 250, Foamular® 350, Foamular® 400, Foamular® 404, Foamular® 600, Foamular® 604, Foamular® 1000, Foamular® C-200, Foamular® C-300, Foamular® CodeBord®, Foamular® Cel-Lok®, Foamular® CW15, Foamular® CW25, Foamular® High-R CW Plus, Foamular® LT30, Foamular® LT40, Foamular® 404RB, Foamular® 604RB, Foamular® AgTek, Foamular® PROPINK®, Foamular® DURAPINK®, Foamular® PINKCORE®, Foamular® PINKCORE® TT, Foamular® Half-Inch, Foamular® INSULPINK®, Foamular® THERMAPINK®, Foamular® DURAPINK® FA, Foamular® DURAPINK® Plus, FOAMULAR EASI, Foamular® INSULPINK® - Z, Foamular® THERMAPINK® 18, Foamular® THERMAPINK® 25, Foamular® THERMAPINK® 40, Foamular® THERMAPINK® 60, Foamular® Extruded Polystyrene, Foamular® Insulating Sheathing, Foamular® INSUL-DRAIN®, Fabrication Billet, ProPink® Fanfold, Fanfold DWB, TRUFOLD® Fanfold

Product Code OCFI00001

Recommended Use Air and Water Sealing Insulation

Manufacturer Address Owens Corning Foam Insulation, LLC
One Owens Corning Parkway
Toledo, Ohio 43659

Company Phone Number 1-800-GET-PINK or 1-800-438-7465
24 Hour Emergency Phone Number Chemtrec 1-800-424-9300
Emergency Telephone 1-419-248-5330 (after 5 pm ET and weekends)

E-mail address safetydatasheet@owenscorning.com
Company Website http://owenscorning.com/

2. HAZARDS IDENTIFICATION

OSHA Regulatory Status This product is considered an article. 29 CFR 1910.1200(c) definition of an article is as follows: "Article" means a manufactured item other than a fluid or particle: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent in whole or in part upon its shape or design during end use; and (iii) which under normal conditions of use does not release more than very small quantities, e.g., minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees

WHMIS Regulatory Status This product is considered an article per the Canadian Hazardous Products Regulation SOR/2015-17

Manufactured articles which meet the definition of the Canadian Hazardous Products Act (any article that is formed to a specific shape or design during manufacture, the intended use of which when in that form is dependent in whole or in part on its shape or design, and that, when being installed, if the intended use of the article requires it to be installed, and under normal conditions of use, will not release or otherwise cause an individual to be exposed to a hazardous product) are not regulated by the Canadian Hazardous Products Regulation SOR/2015-17

GHS - Classification This product is not classified hazardous according to GHS criteria

3. COMPOSITION/INFORMATION ON INGREDIENTS

There are no hazardous components/ingredients in this product

4. FIRST AID MEASURES

Description of First Aid Measures

Eye contact
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
- If eye irritation persists: Get medical advice/attention

Skin contact
- Wash skin with soap and water

Inhalation
- Remove to fresh air

Ingestion
- Accidental ingestion of this material is unlikely
- If this does occur watch person for several days to make sure intestinal blockage does not occur

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
- Dry chemical
- Foam
- Carbon dioxide (CO2)
- Water spray (fog)

Protective equipment and precautions for firefighters
- As in any fire, wear self-contained breathing apparatus (positive-pressure), MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
- Avoid contact with eyes and skin

Methods for cleaning up
- Use personal protective equipment as required
- Take up mechanically, placing in appropriate containers for disposal
- Clean contaminated surface thoroughly
- Avoid creating dust

7. HANDLING AND STORAGE

Storage Conditions
- Store in a manner which will minimize dust generation and accumulation
- Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity)

• To prevent build-up of flammable vapors, do not store large quantities of this product in unventilated spaces

Incompatible materials
• Amines
• Esters
• Hydrocarbons

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Controls Ensure adequate ventilation, especially in confined areas

Individual protection measures, such as personal protective equipment

Eye/face protection • Wear safety glasses with side shields (or goggles)

Skin and body protection
• Wear protective gloves
• Wear long-sleeved shirt and long pants

Respiratory protection • When workers are facing concentrations above the exposure limit they must use appropriate certified respirators in accordance with their company's respiratory protection program, local regulations or 29 CFR 1910.134

General Hygiene Considerations • Wash face, hands and any exposed skin thoroughly after handling

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	Solid Board
Appearance	Board Pellets
Odor	No detectable odor
Color	Pink, White, Gray
Water solubility	Insoluble in water
Specific Gravity	0.021-0.064 (Ref: water=1)
Softening point	104 °C

10. STABILITY AND REACTIVITY

Stability • Stable

Possibility of Hazardous Reactions • None under normal processing

Hazardous Decomposition Products
• Carbon dioxide (CO_2)
• Carbon monoxide
• Styrene
• Small quantities of hydrogen fluoride, hydrogen chloride, fluorine and chlorine could be released
• Other undetermined compounds could be released in small quantities

11. TOXICOLOGICAL INFORMATION

Product Information Product does not present an acute toxicity hazard based on known or supplied information

12. ECOLOGICAL INFORMATION

This product is not expected to be hazardous for the environment

13. DISPOSAL CONSIDERATIONS

Disposal should be in accordance with applicable regional, national and local laws and regulations

14. TRANSPORT INFORMATION

This material is not subject to regulation as a hazardous material for shipping

15. REGULATORY INFORMATION

International Inventories	This product is classified as an article. Articles are exempted from registration or listing under chemicals inventories like TSCA (USA), DSL/NDSL (CAN), REACH (EU), ENCS (JP), IECSC (CN), KECL (KR), PICCS (PH), AICS (AUS)
California Proposition 65	This product does not contain any Proposition 65 chemicals

16. OTHER INFORMATION

Creation Date	05-Mar-1997
Revision Date	07-Dec-2016
Revision Note	This product is classified as an Article according to OSHA 29 CFR 1910.1200 and to the Canadian Hazardous Products Regulation SOR/2015-17 (WHMIS 2015). therefore is not regulated. This Safe Use Instruction Sheet replaces the former Material Safety Data Sheet (MSDS) and is not regulated

Disclaimer
Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use

End of Safe Use Instruction Sheet

Safety Data Sheet

Forta-Ferro

Version 2 Revision Date 6/14/17

1. *Product and Company Identification*

Name of Product:

Forta-Ferro

Recommended use:

Concrete Reinforcement

Producer:

Forta Corporation
100 Forta Drive
Grove City, PA 16127
1-800-245-0306

Emergency Number:

1-800-245-0306
724-458-5221

2. *Hazard(s) Identification:*

Hazard Classification

Not Classified

Label Elements

Hazard Symbol

No Symbol

Signal Word

No Signal word

Hazard Statement

NONE

Precautionary Statement

NONE

Other hazards which do not result in GHS classification

None

HMIS (United States)	
Health	*1*

Flammability	*0*
Reactivity	*0*
PPE	

Forta-Ferro

Version 3 Revision Date 6/14/17

3. Composition/Information on Ingredients

Name	*CAS#*	*% by Weight*
Polypropylene	9003-07-0	
Polyethylene	9002-88-4	
Additives	Various	

This product is non-hazardous as defined in 29 CFR1910.1200

4. First Aid Measures

Inhalation:

Leave area to breathe fresh air. Avoid further overexposures. If symptoms persist, get medical attention.

Skin Contact:

Not applicable under normal conditions of use.

Eye Contact:

Flush with water for 15 minutes. If irritation persists, get medical attention.

Ingestion:

Not applicable under normal conditions of use.

5. Fire Fighting Measures

Flash Point:

600°F, 316°C

Flash Point Method:

NONE

Autoignition Temperature:

>735°F

Burning Rate:

NONE

Fire and Explosion Hazard:

None

Firefighting Equipment:

Use dry chemicals, CO^2, foam.

Hazardous Products of Combustion:

Carbon monoxide, Carbon dioxide and Hydrocarbons

6. Accidental Release Measures

Small Spill or Leak:

Pick-up and place in container for recovery or disposal.

Large Spill or Leak:

Pick-up and place in container for recovery or disposal.

7. Handling and Storage

Handling Precautions:

Keep away from open flame and temperatures exceeding 300°F

Storage Requirements:

No specific storage is required, use any dry container.

8. Exposure Controls/Personal Protection

Engineering Measures:

Not required under normal conditions of use.

Protective Equipment

Respirators- Follow OSHA guidelines for respirator regulations, if necessary wear a MSHA/NIOSH approved respirator.

Protective Gloves- Not required under normal use conditions.

Eye Protection- Glasses or Goggles

Protective Clothing- Not required under normal use conditions.

9. Physical and Chemical Properties

Appearance:

Gray Fiber

Physical State:

Solid

Boiling Point:

NONE

Odor:

Odorless

Freezing/Melting Point:

- 320°F

pH:

NONE

Solubility:

NONE

Specific Gravity:

0.90

10. Stability and Reactivity

Stability:

This product is stable

Conditions to avoid:

None

Materials to avoid (Incompatibility):

Strong acids and bases. Oxidizing agents.

11. Toxicological Information

Toxicity to Animals:

This product has not been tested for animal effects. This product is not expected to be toxic to animals.

Toxicity to Humans:

This product has not been tested for human effects. This product is not expected to be toxic to humans.

12. Ecological Information

Ecotoxicity:

Not expected to be ecotoxic.

BOD5 and COD:

NONE

Biodegradable / OECD:

NONE

Mobility:

NONE

Toxicity of the Products of Biodegradation:
NONE
Special Remarks on the Products of Biodegradation:
NONE

13. Disposal Considerations

Not classified as hazardous waste. Dispose of in accordance with Federal, State and local regulations.

14. Transport Information

Restrictions:
NONE
DOT Requirements:
Not a DOT controlled material. (USA)
ADR Requirements:
Not an ADR controlled material. (Europe)
IMDG Requirements:
Not an IMDG controlled material.
IATA requirements:
Not an IATA controlled material.
Marine Pollutant:
Not a marine pollutant.

15. Regulatory Information

U.S. Federal Regulations

Chemical (& CAS Number)	SARA 302 (EHS) Rq	SARA 304 (EHS) Rq	SARA 313 de minimis	CERCLA Rq	CAA 112 (r) TQ	RCRA Code
NONE						

All quantities in pounds

State Regulations

Chemical (& CAS Number)	CA Prop 65	MA RTK	MN RTK	NJ RTK	PA RTK RI RTK	
9003-07-0				**x**		
9003-07-0					**x**	

International Regulations

DSL (Canada):

None

EINECS:

None

WHMIS:

Not classified as hazardous.

16. Other Information

Prepared by:

Forta Corporation.

Telephone:

1-800-245-0306

Website:

WWW.Forta-Ferro.com

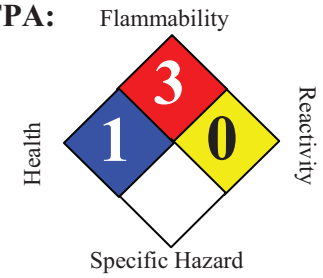
Forta-Ferro

Version 2 Revision Date 6/14/17

The information and recommendations contained in this Material Safety Data sheet have been compiled from sources believed to be reliable and to represent the most reasonable current opinion on the subject when the MSDS was prepared. No warranty, guarantee or representation is made as to the correctness or sufficiency of the information. The user of this product must decide what safety measures are necessary to safely use this product, either alone or in combination with other products, and determine its environmental regulatory compliance obligations under any applicable federal or state laws.

Safety Data Sheet
Gasoline, Unleaded

NFPA:



SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name	:	Gasoline, Unleaded			
Synonyms	:	Blend of Highly Flammable Petroleum Distillates, Regular, Mid-Grade, Premium, 888100008809			
SDS Number	:	888100008809	**Version**	:	1.1
Product Use Description	:	Fuel			
Company	:	For: Tesoro Refining & Marketing Co. 19100 Ridgewood Parkway, San Antonio, TX 78259			
Tesoro Call Center	:	(877) 783-7676	**Chemtrec (Emergency Contact)**	:	(800) 424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classifications :
Flammable Liquid – Category 1 or 2 depending on formulation.
Aspiration Hazard – Category 1
Carcinogenicity – Category 2
Specific Target Organ Toxicity (Repeated Exposure) – Category 2
Specific Target Organ Toxicity (Single Exposure) – Category 3
Skin Irritation – Category 2
Eye Irritation – Category 2B
Chronic Aquatic Toxicity – Category 2

Pictograms :

Signal Word : **Danger**

Hazard Statements

Extremely flammable liquid and vapor.
May be fatal if swallowed and enters airways – do not siphon gasoline by mouth.
Suspected of causing blood cancer if repeated over-exposure by inhalation and/or skin contact occurs.
May cause damage to liver, kidneys and nervous system by repeated and prolonged inhalation or skin contact. Causes eye irritation. Can be absorbed through skin.
May cause drowsiness or dizziness. Extreme exposure such as intentional inhalation may cause unconsciousness, asphyxiation and death.
Repeated or prolonged skin contact can cause irritation and dermatitis.

Harmful to aquatic life.

Precautionary statements

Prevention : Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat, sparks, open flames, welding and hot surfaces.
No smoking.
Keep container tightly closed.
Ground and/or bond container and receiving equipment.
Use explosion-proof electrical equipment.
Use only non-sparking tools (if tools are used in flammable atmosphere).
Take precautionary measures against static discharge.
Wear gloves, eye protection and face protection (as needed to prevent skin and eye contact with liquid).
Wash hands or liquid-contacted skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Do not breathe vapors.
Use only outdoors or in a well-ventilated area.

Response : In case of fire: Use dry chemical, CO2, water spray or fire fighting foam to extinguish.
If swallowed: Immediately call a poison center, doctor, hospital emergency room, medical clinic or 911. Do NOT induce vomiting. Rinse mouth.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eye: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin or eye irritation persists, get medical attention.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Get medical attention if you feel unwell.

Storage : Store in a well ventilated place. Keep cool. Store locked up. Keep container tightly closed . Use only approved containers. Some containers not approved for gasoline may dissolve and release flammable gasoline liquid and vapors.

Disposal : Dispose of contents/containers to approved disposal site in accordance with local, regional, national, and/or international regulations.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No.	Weight %
Gasoline, natural; Low boiling point naphtha	8006-61-9	10 - 30%
Toluene	108-88-3	10 - 30%
Xylene	1330-20-7	10 - 30%
Ethanol; ethyl alcohol	64-17-5	0-8.2%
Trimethylbenzene	25551-13-7	1 - 5%
Isopentane; 2-methylbutane	78-78-4	1 - 5%

Naphthalene	91-20-3	1 - 5%
Benzene	71-43-2	Less than 1.3%
Pentane	109-66-0	1 - 5%
Cyclohexane	110-82-7	1 - 5%
Ethylbenzene	100-41-4	1 - 5%
Butane	106-97-8	1 - 20%
Heptane [and isomers]	142-82-5	0.5 - 0.75%
N-hexane	110-54-3	0.5 - 0.75%

SECTION 4. FIRST AID MEASURES

Inhalation : If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Contaminated leather, particularly footwear, must be discarded. Note that contaminated clothing may be a fire hazard. Seek medical advice if symptoms persist or develop.

Eye contact : Remove contact lenses. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek medical advice if symptoms persist or develop.

Ingestion : Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Obtain medical attention.

Notes to physician : Symptoms: Dizziness, Discomfort, Headache, Nausea, Kidney disorders, Liver disorders. Aspiration may cause pulmonary edema and pneumonitis. Swallowing gasoline is more likely to be fatal for small children than adults, even if aspiration does not occur.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media : SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray or fire fighting foam. LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers. Keep containers and surroundings cool with water spray.

Specific hazards during fire fighting : Extremely flammable liquid and vapor. This material is combustible/flammable and is sensitive to fire, heat, and static discharge.

Special protective equipment for fire-fighters : Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Further information : Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam. Exposure to decomposition products may be a hazard to health. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions : Evacuate personnel to safe areas. Ventilate the area. Remove all sources of ignition. Response and clean-up crews must be properly trained and must utilize proper protective equipment (see Section 8).

Environmental precautions : Discharge into the environment must be avoided. If the product contaminates rivers and lakes or drains inform respective authorities.

Methods for cleaning up : Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling : Keep away from fire, sparks and heated surfaces. No smoking near areas where material is stored or handled. The product should only be stored and handled in areas with intrinsically safe electrical classification.

Hydrocarbon liquids including this product can act as a non-conductive flammable liquid (or static accumulators), and may form ignitable vapor-air mixtures in storage tanks or other containers. Precautions to prevent static-initated fire or explosion during transfer, storage or handling, include but are not limited to these examples:

(1) Ground and bond containers during product transfers. Grounding and bonding may not be adequate protection to prevent ignition or explosion of hydrocarbon liquids and vapors that are static accumulators.
(2) Special slow load procedures for "switch loading" must be followed to avoid the static ignition hazard that can exist when higher flash point material (such as fuel oil or diesel) is loaded into tanks previously containing low flash point products (such gasoline or naphtha).
(3) Storage tank level floats must be effectively bonded.

For more information on precautions to prevent static-initated fire or explosion, see NFPA 77, Recommended Practice on Static Electricity (2007), and API Recommended Practice 2003, Protection Against Ignitions Arising Out of Static, Lightning, and Stray Currents (2008).

Conditions for safe storage, including incompatibilities : Keep away from flame, sparks, excessive temperatures and open flame. Use approved containers. Keep containers closed and clearly labeled. Empty or partially full product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose containers to sources of ignition. Store in a well-ventilated area. The storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Reports suggest that government-mandated ethanol, if present, may not be compatible with fiberglass gasoline tanks. Ethanol may dissolve fiberglass resin, causing engine damage and possibly allow leakage of explosive gasoline.

Keep away from food, drink and animal feed. Incompatible with oxidizing agents. Incompatible with acids.

No decomposition if stored and applied as directed. Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Store only in containers approved and labeled for gasoline.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

List	Components	CAS-No.	Type:	Value
OSHA	Benzene	71-43-2	TWA	1 ppm
		71-43-2	STEL	5 ppm
		71-43-2	OSHA_ACT	0.5 ppm
OSHA Z1	Xylene	1330-20-7	PEL	100 ppm 435 mg/m3
	Ethanol; Ethyl alcohol	64-17-5	PEL	1,000 ppm 1,900 mg/m3
	Naphthalene	91-20-3	PEL	10 ppm 50 mg/m3
	Cyclohexane	110-82-7	PEL	300 ppm 1,050 mg/m3
	Ethylbenzene	100-41-4	PEL	100 ppm 435 mg/m3
	Heptane [and isomers]	142-82-5	PEL	500 ppm 2,000 mg/m3
	N-hexane	110-54-3	PEL	500 ppm 1,800 mg/m3
ACGIH	Toluene	108-88-3	TWA	50 ppm
	Xylene	1330-20-7	TWA	100 ppm
		1330-20-7	STEL	150 ppm
	Ethanol; Ethyl alcohol	64-17-5	TWA	1,000 ppm
	Trimethylbenzene	25551-13-7	TWA	25 ppm
	Isopentane; 2-Methylbutane	78-78-4	TWA	600 ppm
	Naphthalene	91-20-3	TWA	10 ppm
		91-20-3	STEL	15 ppm
	Benzene	71-43-2	TWA	0.5 ppm
		71-43-2	STEL	2.5 ppm
	Pentane	109-66-0	TWA	600 ppm
	Cyclohexane	110-82-7	TWA	100 ppm
	Ethylbenzene	100-41-4	TWA	100 ppm
		100-41-4	STEL	125 ppm
	Heptane [and isomers]	142-82-5	TWA	400 ppm
		142-82-5	STEL	500 ppm

	N-hexane	110-54-3	TWA	50 ppm

Engineering measures : Use adequate ventilation to keep gas and vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces. Use only intrinsically safe electrical equipment approved for use in classified areas.

Eye protection : Safety glasses or goggles are recommended where there is a possibility of splashing or spraying. Ensure that eyewash stations and safety showers are close to the workstation location.

Hand protection : Gloves constructed of nitrile or neoprene are recommended. Consult manufacturer specifications for further information.

Skin and body protection : If needed to prevent skin contact, chemical protective clothing such as of DuPont TyChem®, Saranex or equivalent recommended based on degree of exposure. Flame resistant clothing such as Nomex ® is recommended in areas where material is stored or handled.

Respiratory protection : A NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection. Use a NIOSH/ MSHA-approved positive-pressure supplied-air respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

Work / Hygiene practices : Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use solvents or harsh abrasive skin cleaners for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and launder before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : Clear to straw colored liquid

Odor : Characteristic hydrocarbon-like

Odor threshold 0.5 - 1.1 ppm

pH : Not applicable

Melting point/freezing point About -101°C (-150°F)

Initial boiling point & range Boiling point varies: 30 – 200°C (85 – 392°F)

Flash point < -21°C (-5.8°F)

Evaporation rate : Higher initially and declining as lighter components evaporate

Flammability (solid, gas) : Flammable vapor released by liquid

Upper explosive limit	7.6 %(V)
Lower explosive limit	1.3 %(V)
Vapor pressure	345 - 1,034 hPa at 37.8 °C (100.0 °F)
Vapor density (air = 1)	Approximately 3 to 4
Relative density (water = 1)	0.8 g/mL
Solubility (in water)	Negligible
Partition coefficient (n-octanol/water)	2 – 7 as log Pow
Auto-ignition temperature	Approximately 250°C (480°F)
Decomposition temperature	Will evaporate or boil and possibly ignite before decomposition occurs.
Kinematic viscosity	0.64 to 0.88 mm²/s range reported for gasoline
Conductivity (conductivity can be reduced by environmental factors such as a decrease in temperature)	: Hydrocarbon liquids without static dissipater additive may have conductivity below 1 picoSiemens per meter (pS/m). The highest electro-static ignition risks are associated with ”ultra-low conductivities” below 5 pS/m. See Section 7 for sources of information on defining safe loading and handling procedures for low conductivity products.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Vapors may form explosive mixture with air. Hazardous polymerization does not occur.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	Can react with strong oxidizing agents, peroxides, alkaline products and strong acids. Contact with nitric and sulfuric acids will form nitrocresols that can decompose violently.
Conditions to avoid	: Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Avoid static charge accumulation and discharge (see Section 7).
Hazardous decomposition products	: Ignition and burning can release carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

SECTION 11. TOXICOLOGICAL INFORMATION

Skin contact	: Irritating to skin. Can be partially absorbed through skin.
Eye contact	: Irritating to eyes.
Ingestion	: Aspiration hazard if liquid is inhaled into lungs, particularly from vomiting after ingestion. Aspiration may result in chemical pneumonia, severe lung damage, respiratory failure and even death. Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death may occur.

Inhalation and further information

Acute toxicity of benzene results primarily from depression of the central nervous system (CNS). Inhalation of concentrations over 50 ppm can produce headache, lassitude, weariness, dizziness, drowsiness, over excitation. Exposure to very high levels can result in unconsciousness and death.

Repeated over-exposure may cause liver and kidney injuries.
Components of the product may affect the nervous system.

IARC has determined that gasoline and gasoline exhaust are possibly carcinogenic in humans. Inhalation exposure to completely vaporized unleaded gasoline caused kidney cancers in male rats and liver tumors in female mice. The U.S. EPA has determined that the male kidney tumors are species-specific and are irrelevant for human health risk assessment. The significance of the tumors seen in female mice is not known. Exposure to light hydrocarbons in the same boiling range as this product has been associated in animal studies with effects to the central and peripheral nervous systems, liver, and kidneys. The significance of these animal models to predict similar human response to gasoline is uncertain.
This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

Component:

Gasoline, natural; Low boiling point naphtha	8006-61-9	Acute oral toxicity: LD50 rat Dose: 18.8 mg/kg Acute inhalation toxicity: LC50 rat Dose: 20.7 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Mild skin irritation Eye irritation: Classification: Irritating to eyes. Result: Moderate eye irritation
Toluene	108-88-3	Acute oral toxicity: LD50 rat Dose: 636 mg/kg Acute dermal toxicity: LD50 rabbit Dose: 12,124 mg/kg Acute inhalation toxicity: LC50 rat Dose: 49 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Mild skin irritation Prolonged skin contact may defat the skin and produce dermatitis. Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation
Xylene	1330-20-7	Acute oral toxicity: LD50 rat Dose: 2,840 mg/kg Acute dermal toxicity: LD50 rabbit Dose: ca. 4,500 mg/kg Acute inhalation toxicity: LC50 rat Dose: 6,350 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Mild skin irritation

		Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product. Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation
Ethanol; Ethyl alcohol	64-17-5	Acute oral toxicity: LD50 rat Dose: 6,200 mg/kg Acute dermal toxicity: LD50 rabbit Dose: 19,999 mg/kg Acute inhalation toxicity: LC50 rat Dose: 8,001 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Mild skin irritation Prolonged skin contact may cause skin irritation and/or dermatitis. Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation Mild eye irritation
Naphthalene	91-20-3	Acute oral toxicity: LD50 rat Dose: 2,001 mg/kg Acute dermal toxicity: LD50 rat Dose: 2,501 mg/kg Acute inhalation toxicity: LC50 rat Dose: 101 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Mild skin irritation Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation Carcinogenicity: N11.00422130
Benzene	71-43-2	Acute oral toxicity: LD50 rat Dose: 930 mg/kg Acute inhalation toxicity: LC50 rat Dose: 44 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Mild skin irritation Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product. Eye irritation: Classification: Irritating to eyes. Result: Risk of serious damage to eyes.
Pentane	109-66-0	Acute oral toxicity: LD50 rat Dose: 2,001 mg/kg Acute inhalation toxicity: LC50 rat Dose: 364 mg/l Exposure time: 4 h Skin irritation: Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product. Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation
Cyclohexane	110-82-7	Acute dermal toxicity: LD50 rabbit Dose: 2,001 mg/kg Acute inhalation toxicity: LC50 rat Dose: 14 mg/l Exposure time: 4 h

		Skin irritation: Classification: Irritating to skin. Result: Skin irritation Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation
Ethylbenzene	100-41-4	Acute oral toxicity: LD50 rat Dose: 3,500 mg/kg Acute dermal toxicity: LD50 rabbit Dose: 15,500 mg/kg Acute inhalation toxicity: LC50 rat Dose: 18 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Mild skin irritation Eye irritation: Classification: Irritating to eyes. Result: Risk of serious damage to eyes.
Heptane [and isomers]	142-82-5	Acute oral toxicity: LD50 rat Dose: 15,001 mg/kg Acute inhalation toxicity: LC50 rat Dose: 103 g/m3 Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Skin irritation Repeated or prolonged exposure may cause skin irritation and dermatitis, due to degreasing properties of the product. Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation
N-hexane	110-54-3	Acute oral toxicity: LD50 rat Dose: 25,000 mg/kg Acute dermal toxicity: LD50 rabbit Dose: 2,001 mg/kg Acute inhalation toxicity: LC50 rat Dose: 171.6 mg/l Exposure time: 4 h Skin irritation: Classification: Irritating to skin. Result: Skin irritation Eye irritation: Classification: Irritating to eyes. Result: Mild eye irritation Teratogenicity: N11.00418960

Carcinogenicity

NTP	:	Naphthalene (CAS-No.: 91-20-3) Benzene (CAS-No.: 71-43-2)
IARC	:	Gasoline, natural; Low boiling point naphtha (CAS-No.: 8006-61-9) Naphthalene (CAS-No.: 91-20-3) Benzene (CAS-No.: 71-43-2) Ethylbenzene (CAS-No.: 100-41-4)
OSHA	:	Benzene (CAS-No.: 71-43-2)
CA Prop 65	:	WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm. Toluene (CAS-No.: 108-88-3)

Benzene (CAS-No.: 71-43-2)

SECTION 12. ECOLOGICAL INFORMATION

Additional ecological information : Keep out of sewers, drainage areas, and waterways. Report spills and releases, as applicable, under Federal and State regulations.

Component:

Toluene	108-88-3	Toxicity to fish: LC50 Species: Carassius auratus (goldfish) Dose: 13 mg/l Exposure time: 96 h Acute and prolonged toxicity for aquatic invertebrates: EC50 Species: Daphnia magna (Water flea) Dose: 11.5 mg/l Exposure time: 48 h Toxicity to algae: IC50 Species: Selenastrum capricornutum (green algae) Dose: 12 mg/l Exposure time: 72 h
Ethanol; Ethyl alcohol	64-17-5	Toxicity to fish: LC50 Species: Leuciscus idus (Golden orfe) Dose: 8,140 mg/l Exposure time: 48 h Acute and prolonged toxicity for aquatic invertebrates: EC50 Species: Daphnia magna (Water flea) Dose: 9,268 - 14,221 mg/l Exposure time: 48 h
Isopentane; 2-Methylbutane	78-78-4	Toxicity to fish: LC50 Species: Oncorhynchus mykiss (rainbow trout) Dose: 3.1 mg/l Exposure time: 96 h Acute and prolonged toxicity for aquatic invertebrates: EC50 Species: Daphnia magna (Water flea) Dose: 2.3 mg/l Exposure time: 96 h
Naphthalene	91-20-3	Toxicity to algae: EC50 Species: Dose: 33 mg/l Exposure time: 24 h
Pentane	109-66-0	Acute and prolonged toxicity for aquatic invertebrates: EC50 Species: Daphnia magna (Water flea) Dose: 9.74 mg/l Exposure time: 48 h
Cyclohexane	110-82-7	Acute and prolonged toxicity for aquatic invertebrates: EC50 Species: Daphnia magna (Water flea) Dose: 3.78 mg/l Exposure time: 48 h

Heptane [and isomers]	142-82-5	Toxicity to fish: LC50 Species: Carassius auratus (goldfish) Dose: 4 mg/l Exposure time: 24 h Acute and prolonged toxicity for aquatic invertebrates: EC50 Species: Daphnia magna (Water flea) Dose: 1.5 mg/l Exposure time: 48 h
N-hexane	110-54-3	Toxicity to fish: LC50 Species: Pimephales promelas (fathead minnow) Dose: 2.5 mg/l Exposure time: 96 h Acute and prolonged toxicity for aquatic invertebrates: EC50 Species: Daphnia magna (Water flea) Dose: 2.1 mg/l Exposure time: 48 h

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal : Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION 14. TRANSPORT INFORMATION

CFR

Proper shipping name	: Petrol
UN-No.	: 1203
Class	: 3
Packing group	: II

TDG

Proper shipping name	: Gasoline
UN-No.	: UN1203
Class	: 3
Packing group	: II

IATA Cargo Transport

UN UN-No.	: UN1203
Description of the goods	: Gasoline
Class	: 3
Packaging group	: II
ICAO-Labels	: 3
Packing instruction (cargo aircraft)	: 364
Packing instruction (cargo aircraft)	: Y341

IATA Passenger Transport

UN UN-No.	: UN1203
Description of the goods	: Gasoline
Class	: 3

Packaging group	:	II
ICAO-Labels	:	3
Packing instruction (passenger aircraft)	:	353
Packing instruction (passenger aircraft)	:	Y341

IMDG-Code

UN-No.	:	UN 1203
Description of the goods	:	Gasoline
Class	:	3
Packaging group	:	II
IMDG-Labels	:	3
EmS Number	:	F-E S-E
Marine pollutant	:	No

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : Flammable liquid
Highly toxic by ingestion
Moderate skin irritant
Severe eye irritant
Carcinogen

TSCA Status : On TSCA Inventory

DSL Status : . All components are on the Canadian DSL list.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIROMENT)
The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil. Fractions of crude oil, and products (both finished and intermediate) from the crude oil refining process and any indigenous components of such from the CERCLA Section 103 reporting requirements. However, other federal reporting requirements, including SARA Section 304, as well as the Clean Water Act may still apply.

California Prop. 65 : WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Toluene	108-88-3
Benzene	71-43-2

SECTION 16. OTHER INFORMATION

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Date : 08/09/2012

6, 8, 10, 12, 14, 16, 64, 68, 91, 112, 306, 1092, 1106, 1500, 1570, 1571, 1651, 1652, 1654, 1700, 1701, 1702, 1710, 1711, 1714, 1726, 1729, 1730, 1732, 1733, 1826, 1848, 1880, 1950

SAFETY DATA SHEET
THE DOW CHEMICAL COMPANY

Product name: GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant 24oz HC EF RU 12ct

Issue Date: 01/04/2016

Print Date: 06/10/2016

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: GREAT STUFF PRO™ Gaps & Cracks Insulating Foam Sealant 24oz HC EF RU 12ct

Recommended use of the chemical and restrictions on use
Identified uses: Polyurethane foam.

COMPANY IDENTIFICATION
THE DOW CHEMICAL COMPANY
2030 WILLARD H DOW CENTER
MIDLAND MI 48674-0000
UNITED STATES

Customer Information Number: 800-258-2436
SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER
24-Hour Emergency Contact: CHEMTREC +1 800-424-9300
Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification
This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.
Flammable aerosols - Category 2
Gases under pressure - Liquefied gas
Acute toxicity - Category 4 - Inhalation
Skin irritation - Category 2
Eye irritation - Category 2A
Respiratory sensitisation - Category 1
Skin sensitisation - Category 1
Effects on or via lactation
Specific target organ toxicity - single exposure - Category 3
Specific target organ toxicity - repeated exposure - Category 2 - Inhalation

Label elements
Hazard pictograms

Signal word: **DANGER!**

Hazards
Flammable aerosol.
Contains gas under pressure; may explode if heated.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
Harmful if inhaled.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.
May cause harm to breast-fed children.
May cause damage to organs (Respiratory Tract) through prolonged or repeated exposure if inhaled.

Precautionary statements

Prevention
Obtain special instructions before use.
Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Avoid contact during pregnancy/ while nursing.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/ eye protection/ face protection.
In case of inadequate ventilation wear respiratory protection.

Response
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF exposed or concerned: Get medical advice/ attention.
If skin irritation or rash occurs: Get medical advice/ attention.
If eye irritation persists: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.

Storage
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
Water Reactive

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer	57029-46-6	>= 30.0 - <= 60.0 %
Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer	53862-89-8	>= 5.0 - <= 10.0 %
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9	>= 10.0 - <= 30.0 %
Paraffin waxes and Hydrocarbon waxes, chlorinated	63449-39-8	>= 5.0 - <= 10.0 %
Isobutane	75-28-5	>= 3.0 - <= 7.0 %
Propane	74-98-6	>= 1.0 - <= 5.0 %
Methyl ether	115-10-6	>= 1.0 - <= 5.0 %
4,4' -Methylenediphenyl diisocyanate	101-68-8	>= 7.0 - <= 13.0 %
N,N'-Dimorpholinodiethylether	6425-39-4	>= 0.5 - <= 5.0 %

Note
Note: CAS 101-68-8 is an MDI isomer that is part of CAS 9016-87-9.

4. FIRST AID MEASURES

Description of first aid measures
General advice: First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If not breathing, give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc). If breathing is difficult, oxygen should be administered by qualified personnel. Call a physician or transport to a medical facility.

Skin contact: Remove material from skin immediately by washing with soap and plenty of water. Remove contaminated clothing and shoes while washing. Seek medical attention if irritation persists. Wash clothing before reuse. An MDI skin decontamination study demonstrated that cleaning very soon after exposure is important, and that a polyglycol-based skin cleanser or corn oil may be more effective than soap and water. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Suitable emergency safety shower facility should be available in work area.

Eye contact: Immediately flush eyes with water; remove contact lenses, if present, after the first 5 minutes, then continue flushing eyes for at least 15 minutes. Obtain medical attention without delay, preferably from an ophthalmologist. Suitable emergency eye wash facility should be immediately available.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms and effects, both acute and delayed: Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed
Notes to physician: Excessive exposure may aggravate preexisting asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Repeated excessive exposure may aggravate preexisting lung disease. Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Exposure may increase "myocardial irritability". Do not administer sympathomimetic drugs such as epinephrine unless absolutely necessary. If you are sensitized to diisocyanates, consult your physician regarding working with other respiratory irritants or sensitizers. Although cholinesterase depression has been reported with this material, it is not of benefit in determining exposure and need not be considered in the treatment of persons exposed to the material. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Unsuitable extinguishing media: Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

Special hazards arising from the substance or mixture
Hazardous combustion products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen chloride. Carbon monoxide. Carbon dioxide. Hydrogen cyanide.

Unusual Fire and Explosion Hazards: Contains flammable propellant. Aerosol cans exposed to fire can rupture and become flaming projectiles. Propellant release may result in a fireball. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Dense smoke is produced when product burns.

Advice for firefighters
Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Do not use direct water stream. May spread fire. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Use water spray to cool fire-exposed containers and fire-affected zone until fire is out.

Special protective equipment for firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Evacuate area. Only trained and properly protected personnel must be involved in clean-up operations. Keep personnel out of low areas. Keep personnel out of confined or poorly ventilated areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. See Section 10 for more specific information. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection. Refer to section 7, Handling, for additional precautionary measures.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Ground and bond all containers and handling equipment. Isolate area until gas has dispersed. Use non-sparking tools in cleanup operations. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Collect in suitable and properly labeled containers. Absorb with materials such as: Clay. Dirt. Milsorb®. Sand. Sawdust. Vermiculite. See Section 10 for more specific information. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Keep away from heat, sparks and flame. Avoid contact with eyes. Avoid contact with skin and clothing. Avoid prolonged or repeated contact with skin. Avoid breathing

vapor. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Keep out of reach of children. No smoking, open flames or sources of ignition in handling and storage area. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Contents under pressure. Do not puncture or incinerate container. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Do not enter confined spaces unless adequately ventilated. Never use air pressure for transferring product. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Conditions for safe storage: Minimize sources of ignition, such as static build-up, heat, spark or flame. Store in a dry place. See Section 10 for more specific information.

Storage stability

Storage temperature:	**Shelf life: Use within**
49 °C (120 °F)	12 Month

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits are listed below, if they exist.

Component	Regulation	Type of listing	Value/Notation
Isobutane	ACGIH	STEL	1,000 ppm
Propane	ACGIH		Asphyxiant
	OSHA Z-1	TWA	1,800 mg/m3 1,000 ppm
Methyl ether	US WEEL	TWA	1,000 ppm
4,4' -Methylenediphenyl diisocyanate	ACGIH	TWA	0.005 ppm
	OSHA Z-1	C	0.2 mg/m3 0.02 ppm
	NIOSH REL	TWA	0.05 mg/m3 0.005 ppm
	NIOSH REL	C	0.2 mg/m3 0.02 ppm

Exposure controls

Engineering controls: Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations. Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Exhaust systems should be designed to move the air away from the source of vapor/aerosol generation and people working at this point. The odor and irritancy of this material are inadequate to warn of excessive exposure. Lethal concentrations may exist in areas with poor ventilation.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material. Examples of preferred glove barrier materials include: Butyl rubber. Chlorinated polyethylene. Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Viton. Polyvinyl chloride ("PVC" or "vinyl"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity,

thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.
Other protection: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

Respiratory protection: Atmospheric levels should be maintained below the exposure guideline. When atmospheric levels may exceed the exposure guideline, use an approved air-purifying respirator equipped with an organic vapor sorbent and a particle filter. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective, use a positive-pressure air-supplying respirator (air line or self-contained breathing apparatus). For emergency response or for situations where the atmospheric level is unknown, use an approved positive-pressure self-contained breathing apparatus or positive-pressure air line with auxiliary self-contained air supply. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.
The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	
Physical state	Foam
Color	Orange
Odor	Odorless
Odor Threshold	No test data available
pH	Not applicable
Melting point/range	No test data available
Freezing point	No test data available
Boiling point (760 mmHg)	Not applicable
Flash point	**closed cup** -104 °C (-155 °F) *Estimated.*
Evaporation Rate (Butyl Acetate = 1)	No test data available
Flammability (solid, gas)	No data available
Lower explosion limit	No test data available
Upper explosion limit	No test data available
Vapor Pressure	1,100 kPa at 55 °C (131 °F) *Supplier*
Relative Vapor Density (air = 1)	No test data available
Relative Density (water = 1)	1.06 *Calculated.*
Water solubility	Insoluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No test data available
Decomposition temperature	No test data available
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	No

Molecular weight No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions. See Storage, Section 7. Unstable at elevated temperatures.

Possibility of hazardous reactions: Can occur. Exposure to elevated temperatures can cause product to decompose and generate gas. This can cause pressure build-up and/or rupturing of closed containers. Acids.

Conditions to avoid: Avoid temperatures above 50 °C
Elevated temperatures can cause container to vent and/or rupture. Exposure to elevated temperatures can cause product to decompose.

Incompatible materials: Avoid contact with: Acids. Alcohols. Amines. Ammonia. Bases. Metal compounds. Strong oxidizers. Products based on diisocyanates like TDI and MDI react with many materials to release heat. The reaction rate increases with temperature as well as with increased contact; these reactions can become violent. Contact is increased by stirring or if the other material acts as a solvent. Products based on diisocyanates such as TDI and MDI are not soluble in water and will sink to the bottom, but react slowly at the interface. The reaction forms carbon dioxide gas and a layer of solid polyurea. Reaction with water will generate carbon dioxide and heat.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Toxic gases are released during decomposition.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity
Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Observations in animals include: Gastrointestinal irritation.

As product: Single dose oral LD50 has not been determined.

LD50, Rat, > 2,000 mg/kg Estimated.

Acute dermal toxicity
Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

LD50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity
In confined or poorly ventilated areas, vapor can easily accumulate and can cause unconsciousness and death due to displacement of oxygen. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. May cause pulmonary edema (fluid in the lungs.) Effects may be delayed. May cause central nervous system depression. Symptoms of excessive exposure may be anesthetic or narcotic effects; dizziness and drowsiness may be observed. Excessive exposure may increase sensitivity to epinephrine and increase myocardial irritability (irregular heartbeats). Decreased lung function has been associated with overexposure to isocyanates.

The LC50 has not been determined.,

Skin corrosion/irritation
Prolonged contact may cause moderate skin irritation with local redness.
Material may stick to skin causing irritation upon removal.
May stain skin.

Serious eye damage/eye irritation
May cause eye irritation.
May cause slight temporary corneal injury.

Sensitization
Skin contact may cause an allergic skin reaction.
Animal studies have shown that skin contact with isocyanates may play a role in respiratory sensitization.

May cause allergic respiratory reaction.
MDI concentrations below the exposure guidelines may cause allergic respiratory reactions in individuals already sensitized.
Asthma-like symptoms may include coughing, difficult breathing and a feeling of tightness in the chest.
Occasionally, breathing difficulties may be life threatening.

Specific Target Organ Systemic Toxicity (Single Exposure)
May cause respiratory irritation.
Route of Exposure: Inhalation

Specific Target Organ Systemic Toxicity (Repeated Exposure)
Tissue injury in the upper respiratory tract and lungs has been observed in laboratory animals after repeated excessive exposures to MDI/polymeric MDI aerosols.
Contains component(s) which have been reported to cause effects on the following organs in animals:
kidney
Liver.

Carcinogenicity
Lung tumors have been observed in laboratory animals exposed to respirable aerosol droplets of MDI/Polymeric MDI (6 mg/m3) for their lifetime. Tumors occurred concurrently with respiratory irritation and lung injury. Current exposure guidelines are expected to protect against these effects reported for MDI.

Teratogenicity
In laboratory animals, MDI/polymeric MDI did not cause birth defects; other fetal effects occurred only at high doses which were toxic to the mother.

Reproductive toxicity
Based on information for component(s): May cause harm to breastfed babies.

Mutagenicity
In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity data on MDI are inconclusive. MDI was weakly positive in some in vitro studies; other in vitro studies were negative. Animal mutagenicity studies were predominantly negative.

Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

Carcinogenicity

Component	List	Classification
Paraffin waxes and Hydrocarbon waxes, chlorinated	IARC	Group 2B: Possibly carcinogenic to humans
	US NTP	Reasonably anticipated to be a human carcinogen

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

Acute toxicity to fish
For this family of materials:
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Acute toxicity to fish
Not expected to be acutely toxic to aquatic organisms.

Diphenylmethane Diisocyanate, isomers and homologues

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:

EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

Paraffin waxes and Hydrocarbon waxes, chlorinated

Acute toxicity to fish
Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).
LC50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 0.1 mg/l

Isobutane

Acute toxicity to fish
No relevant data found.

Propane

Acute toxicity to fish
No relevant data found.

Methyl ether

Acute toxicity to fish
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
LC50, Poecilia reticulata (guppy), semi-static test, 96 Hour, > 4,000 mg/l

Acute toxicity to aquatic invertebrates
LC50, Daphnia magna (Water flea), 48 Hour, > 4,000 mg/l, OECD Test Guideline 202 or Equivalent

4,4' -Methylenediphenyl diisocyanate

Acute toxicity to fish
The measured ecotoxicity is that of the hydrolyzed product, generally under conditions maximizing production of soluble species.
Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).
Based on information for a similar material:
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 1,000 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
Based on information for a similar material:
EC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
Based on information for a similar material:
NOEC, Desmodesmus subspicatus (green algae), static test, 72 Hour, Growth rate inhibition, 1,640 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
Based on information for a similar material:
EC50, activated sludge, static test, 3 Hour, Respiration rates., > 100 mg/l

Toxicity to soil-dwelling organisms
EC50, Eisenia fetida (earthworms), Based on information for a similar material:, 14 d, > 1,000 mg/kg

Toxicity to terrestrial plants
EC50, Avena sativa (oats), Growth inhibition, 1,000 mg/l
EC50, Lactuca sativa (lettuce), Growth inhibition, 1,000 mg/l

N,N'-Dimorpholinodiethylether

Acute toxicity to fish
Material is practically non-toxic to fish on an acute basis (LC50 > 100 mg/L).
May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.
LC50, Danio rerio (zebra fish), static test, 96 Hour, > 2,150 mg/l, OECD Test Guideline 203 or Equivalent

Acute toxicity to aquatic invertebrates
EC50, Daphnia (water flea), static test, 48 Hour, > 100 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants
ErC50, Algae, static test, 72 Hour, > 100 mg/l, OECD Test Guideline 201 or Equivalent

Toxicity to bacteria
EC50, Bacteria, static test, 3 Hour, 100 mg/l, activated sludge test (OECD 209)

Persistence and degradability

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer
Biodegradability: For this family of materials: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer
Biodegradability: Expected to degrade slowly in the environment.

Diphenylmethane Diisocyanate, isomers and homologues
Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric

environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

Paraffin waxes and Hydrocarbon waxes, chlorinated

Biodegradability: Expected to degrade slowly in the environment.

Theoretical Oxygen Demand: 2.89 mg/mg

Isobutane

Biodegradability: Biodegradation may occur under aerobic conditions (in the presence of oxygen).

Theoretical Oxygen Demand: 3.58 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 4.4 d
Method: Estimated.

Propane

Biodegradability: No relevant data found.

Theoretical Oxygen Demand: 3.64 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 8.4 d
Method: Estimated.

Methyl ether

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 5 %
Exposure time: 28 d
Method: OECD Test Guideline 301A or Equivalent

Theoretical Oxygen Demand: 2.08 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 6.4 d
Method: Estimated.

4,4' -Methylenediphenyl diisocyanate

Biodegradability: In the aquatic and terrestrial environment, material reacts with water forming predominantly insoluble polyureas which appear to be stable. In the atmospheric environment, material is expected to have a short tropospheric half-life, based on calculations and by analogy with related diisocyanates.
10-day Window: Not applicable
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 302C or Equivalent

N,N'-Dimorpholinodiethylether

Biodegradability: Material is expected to biodegrade very slowly (in the environment). Fails to pass OECD/EEC tests for ready biodegradability.
10-day Window: Fail
Biodegradation: 0 - 10 %
Exposure time: 28 d
Method: OECD Test Guideline 301A or Equivalent

Theoretical Oxygen Demand: 2.49 mg/mg

Photodegradation
Test Type: Half-life (indirect photolysis)
Sensitizer: OH radicals
Atmospheric half-life: 0.03 d
Method: Estimated.

Bioaccumulative potential

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

Bioaccumulation: No relevant data found.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

Bioaccumulation: In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Diphenylmethane Diisocyanate, isomers and homologues

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

Paraffin waxes and Hydrocarbon waxes, chlorinated

Bioaccumulation: Bioconcentration potential is low (BCF less than 100 or log Pow greater than 7).
Partition coefficient: n-octanol/water(log Pow): 7.4 Estimated.

Isobutane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.76 Measured

Propane

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 2.36 Measured

Methyl ether

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.10 Measured

4,4' -Methylenediphenyl diisocyanate

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3). Reacts with water. In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.
Bioconcentration factor (BCF): 92 Cyprinus carpio (Carp) 28 d

N,N'-Dimorpholinodiethylether

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.5 Estimated.

Mobility in soil

Polymethylenepolyphenylisocyanate, propoxylated glycerin polymer

No relevant data found.

Polymethylenepolyphenyl polyisocyanate, polypropyleneglycol copolymer

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Diphenylmethane Diisocyanate, isomers and homologues

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

Paraffin waxes and Hydrocarbon waxes, chlorinated

Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.
Expected to be relatively immobile in soil (Koc > 5000).
Partition coefficient(Koc): > 5000 Estimated.

Isobutane

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 35 Estimated.

Propane

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 24 - 460 Estimated.

Methyl ether

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 1.29 - 14 Estimated.

4,4' -Methylenediphenyl diisocyanate

In the aquatic and terrestrial environment, movement is expected to be limited by its reaction with water forming predominantly insoluble polyureas.

N,N'-Dimorpholinodiethylether

Potential for mobility in soil is low (Koc between 500 and 2000).
Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process.

Partition coefficient(Koc): 784 Estimated.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

14. TRANSPORT INFORMATION

DOT

Proper shipping name	Aerosols
UN number	UN 1950
Class	2.1
Packing group	

Classification for SEA transport (IMO-IMDG):

Proper shipping name	AEROSOLS
UN number	UN 1950
Class	2.1
Packing group	
Marine pollutant	Paraffin waxes and Hydrocarbon waxes, chlorinated
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Aerosols, flammable
UN number	UN 1950
Class	2.1
Packing group	

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Acute Health Hazard
Chronic Health Hazard
Fire Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product contains the following substances which are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and which are listed in 40 CFR 372.

Components	CASRN
Diphenylmethane Diisocyanate, isomers and homologues	9016-87-9
4,4' -Methylenediphenyl diisocyanate	101-68-8

Pennsylvania Worker and Community Right-To-Know Act:
The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Isobutane	75-28-5
Propane	74-98-6
Methyl ether	115-10-6

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

United States TSCA Inventory (TSCA)
All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Revision
Identification Number: 101216112 / A001 / Issue Date: 01/04/2016 / Version: 4.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
Asphyxiant	Asphyxiant
C	Ceiling
NIOSH REL	USA. NIOSH Recommended Exposure Limits
OSHA Z-1	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
STEL	Short-term exposure limit
TWA	8-hour, time-weighted average
US WEEL	USA. Workplace Environmental Exposure Levels (WEEL)

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

SAFETY DATA SHEET

Section 1: Product and Company Identification

Product Name: GreenGuard® Insulation Board – CM, DC, SB, SL

Product Use: Building insulation board, Foamed Polystyrene

Manufacturer:
Pactiv Corporation
2100 River Edge Parkway
Suite 175
Atlanta, GA
USA, 30328
www.green-guard.com

Phone Number:
(678) 589-7309
Customer service: 1-800-227-7339, Extension 7309

Section 2: Hazards Identification

NFPA (USA)	WHMIS Classification (Canada)	Transport Symbol	Personal Protective Equipment
	 Not Regulated	 Not Regulated	

Emergency Overview: During a fire, dense smoke, irritating and toxic fumes may be generated.

Appearance, Color and Odor: Green extruded polystyrene insulation board.

USA: This product conforms to the U.S. Occupational Safety and Health Administration (OSHA) Hazard Communication Standard's definition of an "Article," i.e., "…a manufactured item: (i) which is formed to a specific shape or design during manufacture; (ii) which has end use function(s) dependent … upon its shape or design …; and (iii) which does not release, or otherwise result in exposure to, a hazardous chemical, under normal conditions of use." [29 CFR 1910.1200 (b) (6) (iv)]

This product is an article pursuant to 29 CFR 1910.1200 and, as such, is not subject to the OSHA Hazard Communication Standard requirement

Canada: This is not a controlled product under WHMIS. This product meets the definition of a "Manufactured Article" and is not subject to the regulations of the Hazardous Products Act.

While this product is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200) and under WHMIS, this SDS contains valuable information critical to the safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

Potential Health Effects: **ACUTE (short term): see Section 8 for exposure controls**

Relevant Route(s) of Exposure: Skin contact, Eye contact.
Board product does not present an inhalation, ingestion, or contact health hazard unless subjected to operations such as cutting, sawing or machining which result in the generation of airborne particulate.

Inhalation: High concentrations of dust may cause coughing and mild, temporary irritation following a short-term exposure. Long-term inhalation exposure to dusts can have respiratory effects (see Chronic health effects below).

Ingestion: Component substances are not acutely toxic. Swallowing particulates may cause gastrointestinal problems.

Skin: Dusts of this product may cause mild, temporary irritation.

Eye: Dusts may cause temporary irritation as a foreign object in the eye.

Section 2: Hazards Identification, continued

CHRONIC (long term): see Section 11 for additional toxicological data

Heavy prolonged industrial exposure to high airborne concentrations of dust may cause impaired lung function. Chronic bronchitis, pulmonary fibrosis and respiratory tract lesions have also been reported with high level inhaled dust exposures.

Medical Conditions Aggravated by Exposure: Not available

Interactions With Other Chemicals: Tobacco smoking in combination with long-term high dust exposures may increase both smoking and dust-related pulmonary health problems.

Potential Environmental Effects: Not available

Section 3: Composition / Information on Ingredients

No hazardous ingredients by OSHA and WHMIS criteria.

Section 4: First Aid Measures

Inhalation: If symptoms are experienced remove source of contamination or move victim to fresh air. Obtain medical advice.

Eye Contact: Do not allow victim to rub eyes. Let the eyes water naturally for a few minutes. Have victim look right and left, and then up and down. If particle/dust does not dislodge, flush with lukewarm, gently flowing water for 5 minutes or until particle/dust is removed, while holding the eyelids open. If irritation persists, immediately obtain medical attention. DO NOT attempt to manually remove anything stuck to the eye.

Skin Contact: Quickly and gently, blot or brush away excess chemical. Wash gently and thoroughly with lukewarm, gently flowing water and non-abrasive soap If irritation persists, obtain medical advice.

Ingestion: Not an expected route of exposure; no first aid measures expected to be required.

Section 5: Fire Fighting Measures

Flammable Properties: Not flammable. Product can burn if involved in a fire.

Suitable extinguishing Media: Use extinguishing agents approved for Class A hazards e.g. water spray, foam, carbon dioxide or dry chemical.

Unsuitable extinguishing Media: Not available

Explosion Data:

Sensitivity to Mechanical Impact: Not applicable

Sensitivity to Static Discharge: Not applicable

Specific Hazards arising from the Chemical: Combustion of the product is expected to produce carbon dioxide, carbon monoxide, irritating, and potentially toxic, fumes and dense black smoke.

Protective Equipment and precautions for firefighters: As for any fire, evacuate the area and fight the fire from a safe distance. Wear a pressure-demand, self-contained breathing apparatus and full protective gear. Fight fire from a protected location or a safe distance. Prevent water runoff from fire control from entering natural waterways, sewers and drinking water supplies.

NFPA

Health: 0
Flammability: 1
Instability: 0

Section 6: Accidental Release Measures

Personal Precautions: Wear proper personal protective equipment as indicated in Section 8.

Environmental Precautions: It is good practice to prevent release of this product into the environment.

Methods for Containment: Isolate the spill area.

Methods for Clean-up: Sweep, scoop or vacuum product for recovery, recycllng or disposal.

Section 7: Handling and Storage

Handling: During cutting machining operations, avoid contact with eyes and skin; do not breathe in any dust. Wear protective gloves. See Section 8 for Personal Protective Clothing.

Storage: KEEP OUT OF REACH OF CHILDREN. Protect from water and moisture. See Section 13 for disposal considerations.

Section 8: Exposure Controls/Personal Protection

Exposure Guidelines

Consult local authorities for acceptable exposure limits.

Ingredient	ACGIH TLV (8-hr. TWA) mg/m^3	U.S. OSHA PEL (8-hr. TWA) mg/m^3	Ontario (Canada) TWAEV mg/m^3
Inhalable dust	3 (respirable) 10 (inhalable) Particles (insoluble or poorly soluble) Not Otherwise Specified (PNOS)	5 (respirable) 15 (total dust) Particles (insoluble or poorly soluble) Not Otherwise Regulated (PNOR)	3 (respirable) 10 (inhalable) Particles (insoluble or poorly soluble) Not Otherwise Specified (PNOS)

Exposure Controls

Engineering Controls: Provide good general ventilation or local exhaust ventilation when necessary to control dust concentrations below exposure limits.

Personal Protection: Follow the directions for personal protective equipment for the worksite. Appropriate protective footwear is recommended when handling boards.

Eye/Face Protection: Wear safety glasses or goggles for all cutting operations.

Skin Protection: Not required for normal use of this product however, however it is good practice to wear gloves and clean body-covering clothing.

Respiratory Protection: When dust concentrations in air exceed the occupational exposure guidelines, wear an approved particulate respirator equipped with an N95, R95 or P95 filter.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or Canadian Standards Association (CSA) Standard Z94.4-2002 must be followed whenever workplace conditions warrant a respirator's use.

Other Protective Equipment: Not applicable

General Hygiene Measures: Do not eat, drink or smoke in work areas. Wash hands thoroughly after handling this material. Maintain good housekeeping.

Section 9: Physical and Chemical Properties

Physical State:	Solid	**Flash Point & method:**	>260° (500°F) ASTM D 1929
Appearance, Color and Odor:	Green extruded polystyrene insulation board.	**Autoignition Temperature:**	>482°C (900°F)
Odor Threshold:	Not available	**Flammability Limits in Air:**	Not available
pH:	Not applicable	**Vapor Pressure:**	Not available
Relative density (water = 1):	0.07	**Vapor Density (Air = 1):**	Not available
Partition coefficient: (n-octanol/water)	Not available	**Evaporation Rate: (n-Butyl Acetate = 1)**	Not available
Solubility:	Insoluble in water	**Boiling Point/Range:**	Not available
Decomposition Temperature:	Not available	**Melting Point:**	>93°C (200°F)

Section 10: Stability and Reactivity

Chemical Stability: Stable

Conditions to Avoid: Avoid extreme high temperatures, and any source of ignition.

Incompatible Materials: Strong oxidizers, aromatic and chlorinated hydrocarbons.

Hazardous Decomposition Products: Thermal decomposition and incomplete combustion can produce toxic fumes containing the following: acids, acrolein, aldyhydes, halogens, ketones, monomers, possible hydrocarbons, carbon monoxide and carbon dioxide.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Section 11: Toxicological Information

Acute Toxicity Data is not available for this article.

Other Toxicity Data

Irritation: Worker experience with this material indicates the product is non-irritating. Animal test data indicate the material is non-irritating.

Corrosivity: Not applicable

Sensitization: Not applicable

Carcinogenicity: The component substances are not classified as carcinogens in humans as described by ACGIH (American Conference of Governmental Industrial Hygienists) and IARC (International Agency for Research on Cancer).

Neurological Effects: Not applicable

Genetic Effects: Not applicable

Reproductive Effects: Not applicable

Developmental Effects: Not applicable

Target Organ Effects: Not applicable

Section 12: Ecological Information

Ecotoxicity: Not available

Persistence/Degradability: This product is not readily bio-degradable. Plastic components will photodegrade with prolonged exposures to UV light (e.g. sunlight).
Product is treated with a flame-retardant substance which is known to be persistent, bioaccumulative and toxic in the aquatic environment. Prevent releases to the environment and ensure proper disposal.

Bioaccumulation/Accumulation: Not applicable

Mobility: Not available

Section 13: Disposal Considerations

Waste Disposal Method: Where facilities exist, the product and packaging can be recycled. Dispose in accordance with local regulations. Store material for disposal as indicated in Section 7 Handling and Storage.

Proper incineration in state-of-the-art incinerators equipped with after-burners, yields carbon dioxide and water. Polymer materials may not decompose in modern sanitary landfills. Materials may be recycled where adequate collection and recycling facilities exist.

Section 14: Transport Information:

U.S. Hazardous Materials Regulation (DOT 49CFR): Not regulated as a dangerous good for transport.

Canadian Transportation of Dangerous Goods (TDG): Not regulated

ADR/RID: Not regulated

IMDG: Not regulated

Marine Pollutants: Not applicable

ICAO/IATA: Not regulated

Section 15: Regulatory Information

USA

TSCA : All component substances are listed on the TSCA 8(b) inventory.
Contains: Hexabromocyclododecane as flame-retardant TSCA Section 8(a) PAIR reporting list; Section 8(d) health and safety reporting list of substances.

SARA Title III :
Sec. 302/304: None
Sec: 311/312: Not applicable
Sec. 313: Not applicable
CERCLA RQ: None

Canada This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the SDS contains all the information required by the *Controlled Products Regulations*.

WHMIS Classification: (for workplace exposures) Not controlled. Product meets the definition of a “manufactured article” and is not subject to the regulations of the Hazardous Products Act.

DSL Inventory Status: This product meets the definition of an article under the NSNR (New Substance Notification Regulations) and is not required to be reported. Component substances are listed on the DSL.

NPRI Substances: There are no NPRI (National Pollutant Release Inventory) reportable substances in this product.

Section 16: Other Information

Issue date: May 25, 2011

For additional product and/or MSDS information, please contact your Pactiv Corporation sales representative or customer service representative. (1-800-227-7339, Extension 7309).

Information provided by sources external to our company and set forth herein is offered in good faith as accurate, but without guarantee. Safety precautions contained herein cannot anticipate all individual and unique situations. Conditions of use and suitability of the product for particular uses are beyond our control. All risks of use of the product are, therefore, assumed by the user, and we expressly disclaim all warranties of every kind and nature, including warranties of merchantability and fitness for a particular purpose in respect to the use or suitability of the product. Nothing herein is intended as recommendation for uses which infringe valid patents or as extension of license under valid patents. Appropriate warnings and safe handling procedures should be provided to users.

Prepared by: LEHDER Environmental Services Limited (519) 336-4101
www.lehder.com

Disclaimer: While LEHDER Environmental Services Limited believes that the data set forth herein is accurate, as of the date hereof, LEHDER makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data is offered solely for your consideration, investigation and verification.

SAFETY DATA SHEET

SDS ID NO.: 0298MAR019
Revision Date 05/22/2015

1. IDENTIFICATION

Product Name: Marathon Petroleum Premium AW II Hydraulic Oil

Synonym: Premium AW II ISO 32 Hydraulic Oil; Premium AW II ISO 46 Hydraulic Oil; Premium AW II ISO 68 Hydraulic Oil; Premium AW II ISO 100 Hydraulic Oil; ISO 32 Premium AW II Hydraulic Oil; ISO 46 Premium AW II Hydraulic Oil; ISO 68 Premium AW II Hydraulic Oil; ISO 100 Premium AW II Hydraulic Oil

Product Code: 0298MAR019
Chemical Family: Hydrocarbon Mixture

Recommended Use: Hydraulic Fluid.
Restrictions on Use: All others.

Manufacturer, Importer, or Responsible Party Name and Address:

MARATHON PETROLEUM COMPANY LP
539 South Main Street
Findlay, OH 45840

SDS information: 1-419-421-3070

Emergency Telephone: 1-877-627-5463

2. HAZARD IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 3

Hazards Not Otherwise Classified (HNOC)
Not applicable.

Label elements

EMERGENCY OVERVIEW

Harmful to aquatic life with long lasting effects

Appearance Clear Liquid **Physical State** Liquid **Odor** Petroleum

Precautionary Statements - Prevention
Avoid release to the environment

Precautionary Statements - Response
Not applicable.

Precautionary Statements - Storage
Not applicable.

Precautionary Statements - Disposal
Dispose of contents/container at an approved waste disposal plant

Additional Information
Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Lube oil is a complex mixture of highly refined lubricating base stocks and additives.

Composition Information:

Name	CAS Number	% Concentration
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	64742-54-7	98-99
2,6-di-tert-butylphenol	128-39-2	0.1-1

All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

4. FIRST AID MEASURES

First Aid Measures

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show directions for use or safety data sheet if possible).

Inhalation: Remove to fresh air. If not breathing, institute rescue breathing. If breathing is difficult, ensure airway is clear, give oxygen and continue to monitor. If heart has stopped, immediately begin cardiopulmonary resuscitation (CPR). If symptoms occur get medical attention.

Skin Contact: Wash skin with plenty of soap and water. If irritation or other symptoms occur get medical attention. Wash contaminated clothing and clean shoes before reuse. Any injection injury from high pressure equipment should be evaluated immediately by a physician as potentially serious (See NOTES TO PHYSICIAN).

Eye Contact: Flush immediately with large amounts of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Gently remove contacts while flushing. Get medical attention if irritation persists.

Ingestion: Rinse mouth out with water. If spontaneous vomiting occurs, keep head below hips, or if patient is lying down, turn body and head to side to prevent aspiration and monitor for breathing difficulty. Never give anything by mouth to an unconscious person. Keep affected person warm and at rest. If symptoms develop, seek medical attention.

Most important signs and symptoms, both short-term and delayed with overexposure

Adverse Effects: Preexisting skin conditions and/or respiratory disorders may be aggravated by exposure to this product.

Indication of any immediate medical attention and special treatment needed

Notes To Physician: SKIN: Leaks or accidents involving high-pressure equipment may inject a stream of material through the skin and initially produce an injury that may not appear serious. Only a small

puncture wound may appear on the skin surface but, without proper treatment and depending on the nature, original pressure, volume, and location of the injected material, can compromise blood supply to an affected body part. Prompt surgical debridement of the wound may be necessary to prevent irreversible loss of function and/or the affected body part. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
For small fires, Class B fire extinguishing media such as CO2, dry chemical, foam (AFFF/ATC) or water spray can be used. For large fires, water spray, fog or foam (AFFF/ATC) can be used. Firefighting should be attempted only by those who are adequately trained and equipped with proper protective equipment.

Unsuitable extinguishing media
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical
The product is not combustible per the OSHA Hazard Communication Standard, but will ignite and burn at temperatures exceeding the flash point.

Hazardous combustion products
Smoke, carbon monoxide, and other products of incomplete combustion.

Explosion data
Sensitivity to Mechanical Impact No.
Sensitivity to Static Discharge No.

Special protective equipment and precautions for firefighters
Avoid using straight water streams. Water spray and foam (AFFF/ATC) must be applied carefully to avoid frothing and from as far a distance as possible. Avoid excessive water spray application. Use water spray to cool exposed surfaces from as far a distance as possible. Keep run-off water out of sewers and water sources.

Additional firefighting tactics
Not applicable.

NFPA	Health 1	Flammability 1	Instability 0	Special Hazard -

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Keep public away. Isolate and evacuate area. Shut off source if safe to do so.

Protective equipment: Use personal protection measures as recommended in Section 8.

Emergency procedures: Advise authorities and National Response Center (800-424-8802) if the product has entered a water course or sewer. Notify local health and pollution control agencies, if appropriate.

Environmental precautions: Avoid release to the environment. Avoid subsoil penetration.

Methods and materials for containment: Prevent further leakage or spillage if safe to do so.

Methods and materials for cleaning up: Use suitable absorbent materials such as vermiculite, sand, or clay to clean up residual liquids. Recover and return free product to proper containers.

7. HANDLING AND STORAGE

Safe Handling Precautions: Avoid contact with skin, eyes and clothing. Do not swallow. Avoid breathing vapors or mists.

Use good personal hygiene practices. Wash thoroughly after handling. Use personal protection measures as recommended in Section 8. Do not cut, drill, grind or weld on empty containers since explosive residues may remain. Refer to applicable EPA, OSHA, NFPA and consistent state and local requirements.

High-pressure injection of any material through the skin is a serious medical emergency even though the small entrance wound at the injection site may not initially appear serious. These injection injuries can occur from high-pressure equipment such as paint spray or grease or guns, fuel injectors, or pinhole leaks in hoses or hydraulic lines and should all be considered serious. High pressure injection injuries may be SERIOUS SURGICAL EMERGENCIES (See First Aid Section 4).

Storage Conditions: Store in properly closed containers that are appropriately labeled and in a cool, well-ventilated area. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible materials.

Incompatible Materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	ACGIH TLV	OSHA PELS:	OSHA - Vacated PELs	NIOSH IDLH
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate 64742-54-7	Mineral oil, highly/severely refined, inhalable fraction 5 mg/m^3 TWA	-	-	-
2,6-di-tert-butylphenol 128-39-2	-	-	-	-

Notes: The manufacturer has voluntarily elected to provide exposure limits contained in OSHA's 1989 air contaminants standard in its SDSs, even though certain of those exposure limits were vacated in 1992.

Engineering measures: Local or general exhaust required when using at elevated temperatures that generate vapors or mists.

Personal protective equipment

Eye protection: Use goggles or face-shield if the potential for splashing exists.

Skin and body protection: Wear neoprene, nitrile or PVA gloves to prevent skin contact. Glove suitability is based on workplace conditions and usage. Contact the glove manufacturer for specific advice on glove selection and breakthrough times. Wear appropriate protective clothing.

Respiratory protection: Use a NIOSH approved organic vapor chemical cartridge or supplied air respirators when there is the potential for airborne exposures to exceed permissible exposure limits or if excessive vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 29 CFR 1910.134. Self-contained breathing apparatus should be used for fire fighting.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Clear Liquid
Color	Clear
Odor	Petroleum
Odor Threshold	No data available.

Property	Values (Method)
Melting Point / Freezing Point	No data available.
Initial Boiling Point / Boiling Range	No data available.
Flash Point	> 220 °C / > 428 °F (Cleveland Open-Cup)
Evaporation Rate	No data available.
Flammability (solid, gas)	Not applicable.
Flammability Limit in Air (%):	
Upper Flammability Limit:	No data available.
Lower Flammability Limit:	No data available.
Explosion limits:	No data available.
Vapor Pressure	No data available.
Vapor Density	No data available.
Specific Gravity / Relative Density	0.88
Water Solubility	No data available.
Solubility in other solvents	No data available.
Partition Coefficient	No data available.
Decomposition temperature	No data available.
pH:	No available data.
Autoignition Temperature	No data available.
Kinematic Viscosity	≥ 28.8 mm2/s @ 40°C / 104°F (ASTM D445)
Dynamic Viscosity	No data available.
Explosive Properties	No data available.
VOC Content (%)	0.12-37.7 (w/w)
Density	No data available.
Bulk Density	Not applicable.

10. STABILITY AND REACTIVITY

Reactivity The product is non-reactive under normal conditions.

Chemical stability Stable under recommended storage conditions.

Possibility of hazardous reactions None under normal processing.

Hazardous polymerization Will not occur.

Conditions to avoid Sources of heat or ignition.

Incompatible Materials Strong oxidizing agents.

Hazardous decomposition products None known under normal conditions of use.

11. TOXICOLOGICAL INFORMATION

Potential short-term adverse effects from overexposures

Inhalation Overheating may produce vapors which may cause respiratory irritation, dizziness and nausea.

Eye contact Exposure to vapor or contact with liquid may cause mild eye irritation, including tearing, stinging, and redness.

Skin contact Prolonged or repeated exposure may cause dermatitis, folliculitis or oil acne.

Ingestion May cause irritation of the mouth, throat and gastrointestinal tract.

Acute toxicological data

Name	Oral LD50	Dermal LD50	Inhalation LC50
Solvent Refined, Hydrotreated	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 5.5 mg/l (Rat) 4 h

Heavy Paraffinic Distillate 64742-54-7			
2,6-di-tert-butylphenol 128-39-2	> 5000 mg/kg (Rat)	> 10 g/kg (Rabbit)	-

Delayed and immediate effects as well as chronic effects from short and long-term exposure

This product is considered to have a low order of acute and chronic oral and dermal toxicity.

Adverse effects related to the physical, chemical and toxicological characteristics

Signs and Symptoms Repeated or prolonged skin contact may cause drying, reddening, itching and cracking.

Sensitization Not expected to be a skin or respiratory sensitizer.

Mutagenic effects None known.

Carcinogenicity Cancer designations are listed in the table below

Name	ACGIH (Class)	IARC (Class)	NTP	OSHA
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate 64742-54-7	Mineral oil, poorly/mildly refined Suspected Human Carcinogen (A2) Mineral oil, highly/severely refined, inhalable fraction Not Classifiable (A4)	Mineral oil, untreated or mildly treated Carcinogenic to humans (1) Mineral oil, highly refined Not Classifiable (3)	Mineral oil, poorly/mildly refined Known to be human carcinogen	Not Listed
2,6-di-tert-butylphenol 128-39-2	Not Listed	Not Listed	Not Listed	Not Listed

Reproductive toxicity None known.

Specific Target Organ Toxicity (STOT) - single exposure Not classified.

Specific Target Organ Toxicity (STOT) - repeated exposure Not classified.

Aspiration hazard Not classified.

12. ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic life with long lasting effects.

Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate 64742-54-7	-	96-hr LC50 = 5000 mg/L Rainbow trout	-	48-hr EC50 = 1000 mg/L Daphnia magna
2,6-di-tert-butylphenol 128-39-2	-	-	-	48-hr EC50 = 0.45 mg/l Daphnia magna

Persistence and degradability No information available.

Bioaccumulation Contains component(s) with the potential to bioaccumulate.

Mobility in soil No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Description of Waste Residues
No information available.

Safe Handling of Wastes
Handle in accordance with applicable local, state, and federal regulations. Use personal protection measures as required.

Disposal of Wastes / Methods of Disposal
The user is responsible for determining if any discarded material is a hazardous waste (40 CFR 262.11). Dispose of in accordance with federal, state and local regulations.

Methods of Contaminated Packaging Disposal
Empty containers should be completely drained and then discarded or recycled, if possible. Do not cut, drill, grind or weld on empty containers since explosive residues may be present. Dispose of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

DOT (49 CFR 172.101):

UN Proper Shipping Name:	Not Regulated
UN/Identification No:	Not applicable
Class:	Not applicable.
Packing Group:	Not applicable.

TDG (Canada):

UN Proper Shipping Name:	Not Regulated
UN/Identification No:	Not applicable.
Transport Hazard Class(es):	Not applicable.
Packing Group:	Not applicable.

15. REGULATORY INFORMATION

US Federal Regulatory Information:

US TSCA Chemical Inventory Section 8(b): This product and/or its components are listed on the TSCA Chemical Inventory.

EPA Superfund Amendment & Reauthorization Act (SARA):

SARA Section 302: This product may contain component(s) that have been listed on EPA's Extremely Hazardous Substance (EHS) List:

Name	CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	NA
2,6-di-tert-butylphenol	NA

SARA Section 304: This product may contain component(s) identified either as an EHS or a CERCLA Hazardous substance which in case of a spill or release may be subject to SARA reporting requirements:

Name	Hazardous Substances RQs
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	NA
2,6-di-tert-butylphenol	NA

SARA Section 311/312: The following EPA hazard categories apply to this product:

None

SARA Section 313: This product may contain component(s), which if in exceedance of the de minimus threshold, may be subject to the reporting requirements of SARA Title III Section 313 Toxic Release Reporting (Form R).

Name	CERCLA/SARA 313 Emission reporting:
Solvent Refined, Hydrotreated Heavy Paraffinic Distillate	None
2,6-di-tert-butylphenol	None

State and Community Right-To-Know Regulations:
The following component(s) of this material are identified on the regulatory lists below:

Solvent Refined, Hydrotreated Heavy Paraffinic Distillate

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed
Pennsylvania Right-To-Know:	Not Listed
Massachusetts Right-To Know:	Not Listed
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Carcinogen
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Present
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

2,6-di-tert-butylphenol

Louisiana Right-To-Know:	Not Listed
California Proposition 65:	Not Listed
New Jersey Right-To-Know:	Not Listed
Pennsylvania Right-To-Know:	Not Listed
Massachusetts Right-To Know:	Not Listed
Florida Substance List:	Not Listed
Rhode Island Right-To-Know:	Not Listed
Michigan Critical Materials Register List:	Not Listed
Massachusetts Extraordinarily Hazardous Substances:	Not Listed
California - Regulated Carcinogens:	Not Listed
Pennsylvania RTK - Special Hazardous Substances:	Not Listed
New Jersey - Special Hazardous Substances:	Not Listed
New Jersey - Environmental Hazardous Substances List:	Not Listed
Illinois - Toxic Air Contaminants:	Not Listed
New York - Reporting of Releases Part 597 - List of Hazardous Substances:	Not Listed

Canada DSL/NDSL Inventory: This product and/or its components are listed either on the Domestic Substances List (DSL) or are exempt.

Canadian Regulatory Information: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all of the information required by those regulations.

Name	Canada - WHMIS: Classifications of Substances:	Canada - WHMIS: Ingredient Disclosure:
2,6-di-tert-butylphenol	D2B	1%

Note: Uncontrolled product according to WHMIS classification criteria.

16. OTHER INFORMATION

Prepared By Toxicology and Product Safety

Revision Notes

Revision Date 05/22/2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is intended as guidance for safe handling, use, processing, storage, transportation, accidental release, clean-up and disposal and is not considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Safety Data Sheet & Warranty

BUILDING TRUST

L. M. Scofield Company - A SIKA COMPANY

LITHOCHROME® Antiquing Release - 1410

SDS according to GHS OSHA 29 CFR 1910.1200 and 1272/2008/EC (CLP) amending 1907/2006/EC (REACH)

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

1.1 GHS Product Identifier

Commercial Product Name: LITHOCHROME® Antiquing Release - 1410

1.2 Relevant identified uses of product

Product is a dry powder release agent with pigments and is used for application on freshly-placed concrete to facilitate stamp tool release during imprinting and to provide subtle coloration of new concrete.

This product is intended for use only by professionals.

1.3 Details of the supplier of the safety data sheet:

L. M. SCOFIELD Company, A SIKA Company **Scofield Phone #: (800) 800-9900** www.scofield.com

6533 Bandini Blvd, Los Angeles, CA 90040 Information Phone Number (323) 720-3000 M-F 8AM-5PM

4155 Scofield Road, Douglasville, GA 30134 Information Phone Number (770) 920-6000 M-F 8AM-5PM

1.4 Transportation Emergency Telephone Number: CHEMTREC (800) 424-9300

2 HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture:

Human Health: Product contains respirable silica. Properly fitted dust type respirators can control respirable silica exposure.

Acute Toxicity, dermal, SE, H316, category 5

Acute Toxicity, inhalation, SE, STOT, lungs, H332, category 4

Carcinogenicity, Inhalation, RE, STOT, lungs, H350, category 2B

Environment: Product is not harmful to the environment.

GHS Category Key
1 = most hazardous
5 = least hazardous

2.2 Label elements:

GHS Hazard (H) Statements

Acute toxicity

H316--Causes mild skin irritation

H332--Harmful if inhaled

GHS Pictograms

GHS Signal Word: **WARNING**

Chronic Toxicity

H350--Toxic by inhalation, RE, may cause cancer (silicosis)

H370--Causes damage to organs(lungs/respiratory system, by inhalation)

GHS Precaution (P) Statements:

Prevention precautionary statements

P102--Keep out of the reach of children

P202--Do not handle until all safety precautions have been read and understood

P280--Wear eye protection and face protection

P284--In case of inadequate ventilation, wear respiratory protection

Response precautionary statements

P301+P330+P331--**IF SWALLOWED**: Rinse mouth, do NOT induce vomiting.

P302+P352--**IF ON SKIN**: Wash with plenty of water

P304+P340--**IF INHALED**: Move person to fresh air and keep comfortable for breathing.

P305+P351+P338--**IF IN EYES**: Rinse cautiously with water for 15 minutes. Remove contacts if easy to do. Continue rinsing.

Disposal precautionary statements

P501--Dispose of contents/container in accordance with applicable local/state/regional/federal regulations.

2.3 Other hazards: No other hazards are known.

Refer to Section 16 for wording of terms.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Main Constituent:

Various metal oxide pigments

3.2 Mixture:

Components of Mixture, Formula	CAS #	EINECS #	Weight %	Hazardous Material Statement
Magnesium Silicate Hydrate, Talc	14807-96-6	238-877-9	40 - 60%	Contains <1% respirable silica, can cause silicosis
Calcium Stearate	1592-23-0	216-472-8	10 - 30%	May form combustible dust concentration in air.
Iron oxide pigment, black, Fe_3O_4	1317-61-9	215-277-5	0 - 60%	classified as non-hazardous, no specific data
Iron oxide pigment, red, Fe_2O_3	1309-37-1	215-168-2	0 - 60%	classified as non-hazardous, no specific data
Iron oxide pigment, yellow, FeO(OH)	51274-00-1	257-098-5	0 - 60%	classified as non-hazardous, no specific data
Titanium Dioxide, TiO_2	13463-67-7	236-675-5	0 - 60%	Titanium dioxide is an IARC Class 2B carcinogen.
Chromium III Oxide, Cr_2O_3	1308-38-9	215-160-9	0 - 60%	No known significant effects or critical hazards.

The exact percentages in this composition and the components have been withheld as confidential business information.

4 FIRST AID MEASURES

4.1 Description of first aid measures:

Eye Contact: Quickly flush with plenty of clean water for 15 minutes. Remove contact lenses if easy to do. Open eyelids widely during flushing. If irritation persists, continue flushing during transport to emergency room and bring these instructions. Provide easy access to eye wash stations in work area.

Inhalation: Move person to fresh air, make comfortable for breathing. Get medical attention if condition worsens.

Skin contact: May result in skin irritation. Remove contaminated clothing. Wash skin with soap and water.

Ingestion: If swallowed, call 911 or a Poison Center 1 (800) 222-1222 for instructions on first aid treatment.

4.2 Most important symptoms and effects both acute and delayed:

Eye contact with product can cause irritation. If irritation persists after rinsing eye(s), take person to emergency room.

Repeated inhalation of respirable silica over long periods of time increases the risk of developing lung disease.

4.3 Indication of any immediate medical attention and special treatment needed:

Primary routes of entry include: Inhalation (dust), Eye Contact, Skin Contact. Eye contact requires immediate first aid.

Refer to SECTION 11 for more detailed information on health effects and symptoms.

LITHOCHROME® Antiquing Release - 1410

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media: Use fire extinguishing media appropriate for surrounding fire.

5.2 Special Hazards arising from the substance or mixture:

Fire Hazard: Not flammable under normal conditions.

Explosion Hazard: May form combustible dust concentrations in air, avoid flames or combustion sources.

Reactivity: Hazardous reactions will not occur.

5.3 Advice for fire-fighting: Use normal fire-fighting protective equipment.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions :

General measures: Use personal protective equipment. Provide adequate ventilation.

Protective equipment: Wear suitable eye protection and if ventilation is not adequate wear a particulate respirator.

6.2 Environmental precautions:

Avoid discharge into waterways, sewers and soil. If product enters water, contact local authorities.

6.3 Methods and material containment and cleaning up:

Method of cleaning up: Avoid generating dust. Use a vacuum with a HEPA filtered exhaust or clean up with broom & shovel.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling:

Do not breathe dust. Avoid creating or spreading dust. Handle in accordance with good industrial hygiene procedures. Always wash hands immediately after handling product. Do not eat or drink in area where product is being used.

7.2 Conditions for safe storage including any incompatibilities:

Store product in a dry shaded area.

7.3 Specific end uses:

This product is intended for use only by professionals to release stamp tools and to add subtle colors to freshly-placed concrete.

8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control Parameters	Exposure Limits in Air		
Components of Mixture, Formula	ACGIH TLV 8hr	OSHA PEL 8 hour PEL TWA	NIOSH REL (TWA)
Magnesium Silicate Hydrate, Talc	2 mg/m^3	50 $\mu g/m^3$ <1% respirable silica	2 mg/m^3 <1% quartz
Calcium Stearate	10 mg/m^3	5 mg/m^3 (respirable) 15 mg/m^3 (total)	not listed
Iron oxide pigment, black, Fe_3O_4	not known	No exposure limit value is known	not known
Iron oxide pigment, red, Fe_2O_3	not known	No exposure limit value is known	not known
Iron oxide pigment, yellow, FeO(OH)	not known	No exposure limit value is known	not known
Titanium Dioxide, TiO_2	10 mg/m^3	5 mg/m^3 respirable dust, 15 mg/m^3 total	2.4 mg/m^3 (fine)
Chromium III Oxide, Cr_2O_3	0.5 mg/m^3 as Cr	0.5 mg/m^3 as Cr	not listed

8.2 Exposure controls: Engineering measures: Use only with adequate ventilation. Use local exhaust or other engineering controls to keep airborne exposure below regulatory limits.

8.3 Individual protective measures:

Eye protection: Wear tight fitting goggles/safety glasses with side-shields to protect eyes.

Skin protection: Wear rubber gloves and clothing to protect skin.

Respiratory Protection: If dust level exceeds the OSHA PEL or other limit, wear a proper particulate respirator, N95 or P100.

Hygiene measures: Wash hands after exposure, Remove contaminated clothing, shower and wash with plenty of soap and water. Wash contaminated clothing prior to reuse.

Environmental exposure controls: Ensure that eye wash stations and emergency showers are located near work area.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information of basic physical and chemical properties

	Property-Test	Value/Result
a)	pH	not applicable
b)	Color	varies
c)	Odor	no odor
d)	Freezing/Melting Point	not applicable
e)	Boiling Range	not applicable
f)	Flash Point	>482 °F (250 °C)
g)	Auto ignition Temperature	>860 °F (460 °C)
h)	Upper and Lower Explosive Limits UEL, LEL	not applicable
i)	Flammability (solid)	not applicable
j)	Vapor Pressure	not applicable
k)	Density	not applicable
l)	Solubility in water	low water solubility
m)	Evaporation Rate	not applicable
n)	VOC	0.0 g/L (0.0 lb./gal)
o)	Specific Gravity, water = 1.0	2.8 to 4.5

9.2 Other information: No other information is available

10 STABILITY AND REACTIVITY

10.1 Reactivity: Black iron oxide can begin to decompose at 176 °F(80 °C) producing heat.

10.2 Chemical stability: Product is stable under most common conditions

10.3 Possibility of hazardous reactions: Hazardous reactions do not normally occur. Risk of dust explosion exists.

10.4 Conditions to avoid: Avoid dust formation. No other conditions to avoid are known.

10.5 Incompatible materials: Avoid strong oxidizers/acids. No other incompatible materials are known

10.6 Hazardous decomposition products: No hazardous decomposition products are known.

LITHOCHROME® Antiquing Release - 1410

11 TOXICOLOGICAL INFORMATION

Chemical Name	LD_{50} rat oral	LC_{50} Inhalation or water test (fish)	LC_{50} Other Exposure Route
Magnesium Silicate Hydrate, Talc	no data avail.	>100 g/L static Danio rerio 96 hours	no data available
Calcium Stearate	10 g/kg	>1241 mg/m^3 mammal 4 hours	no data available
Iron oxide pigment, black, Fe_3O_4	>5,000 mg/kg	Rat Male>185.6 mg/m^3 2 weeks 6hr/day	no data available
Iron oxide pigment, red, Fe_2O_3	>5,000 mg/kg	Rat Inhalation >210 mg/m^3 2 weeks	Acute EC_0 >10,000 mg/l fresh water Danio rerio
Iron oxide pigment, yellow, FeO(OH)	>10,000 mg/kg	Rat Inhalation >195 mg/m^3 2weeks	Acute EC_{50} >100 mg/l fresh water Daphnia magna
Titanium Dioxide, TiO_2	12,000 mg/kg	10,000 mg/kg rabbit dermal	>6.82 mg/L 4 hour rat inhalation
Chromium III Oxide, Cr_2O_3	5,000 mg/kg	>5.41 mg/l 4 hour rat	10,000 mg/L Danio rerio 96 hours

a) acute toxicity, Not classified as an acutely toxic material.

b) skin corrosion/irritation, Some product mixtures can cause skin irritation.

c) eye damage/irritation, Product can cause eye damage (as a mechanical irritant, do not rub eyes).

d) respiratory or skin sensitization, Not classified as a respiratory sensitizer or skin sensitizer.

e) germ cell mutagenicity Product does not cause germ cell mutagenicity.

f) carcinogenicity by agency: National Toxicity Program (NTP) status: Crystalline silica is a known human carcinogen. IARC lists Titanium Dioxide as a class 2B carcinogen. All other components of this product, present at 1% or more have not been identified by ACGIH or OSHA as probable, possible or confirmed carcinogens.

g) reproductive toxicity, Product does not cause or contribute to reproductive toxicity.

h) STOT-single exposure, Product can cause eye damage due to abrasion and irritation.

i) STOT-repeated exposure, Product dust can cause silicosis (lung injury) after repeated exposure over long periods of time.

J) aspiration hazard, Product is not an aspiration hazard.

11.1 Inhalation: Acute: Product dust can irritate throat and respiratory system and cause coughing.

Chronic: Product contains <1% respirable silica. Repeated exposure without respiratory protection can cause cancer (silicosis).

11.2 Skin contact: Product may have an irritating effect on skin.

11.3 Eye contact: Product can cause serious eye damage. Immediate first aid is required for eye contact.

11.4 Ingestion: Product ingestion may cause irritation of the mouth, esophagus and gastrointestinal tract.

11.5 Specific effects: Frequent inhalation of dust over a long period of time increases the risk of developing lung disease.

12 ECOLOGICAL INFORMATION

Components of Mixture	LC_{50} or *LC_0	Species	Duration
Magnesium Silicate Hydrate, Talc	>100 g/L static	B Danio rerio	96 hours
Calcium Stearate	>1241 mg/m3	mammal	4 hours
Iron Oxide Pigments, black	LC_0 >10,000mg/l	B Danio rerio	96 hours
Iron Oxide Pigments, red	LC_0 >50,000 mg/l	Danio rerio	96 hours
Iron Oxide Pigments, yellow	LC_0>100,000 mg/l	Danio rerio	96 hours
Titanium Dioxide Pigment	>6.82 mg/L	rat	4 hrs.
Chromium III Oxide Pigment	>5.41 mg/L	rat inhalation	96 hr.

12.1 Toxicity

Eco toxicity: This product is not expected to be hazardous to the environment.

12.2 Persistence and degradability:

Degradability: Calcium Stearate is readily biodegradable, all other ingredients are not biodegradable.

12.3 Bio accumulative Potential:

Bio accumulative Potential No information is available on bio accumulative potential.

12.4 Mobility in soil:

Mobility: No information is available on mobility in soil.

Results of PBT and vPvB assessment Mixture is mostly inorganic and is not relevant for PBT or vPvB assessment

Other adverse affects: No other adverse effects are known.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

GHS P501--Dispose of contents/container according to local/state/regional/federal regulations.

14 TRANSPORT INFORMATION

This product is not covered by international regulation of the transport of dangerous goods (IMDG, IATA, ADR, RID)

DOT: Not regulated

14.1 UN Number: Not regulated

14.2 UN proper shipping name: Not classified as dangerous goods under DOT and UN regulations.

14.3 Transport hazard class(es): Not regulated

14.4 Packing group: Not regulated.

Packaging group: Not regulated

14.5 Environmental hazards

Marine pollutant: Not regulated.

Environmentally hazardous substance: Not applicable.

14.6 Special precautions for user: None are known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code: Not regulated.

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture:

OSHA HazCom 2012, 29 CFR 1910.1200 and regulation (EC) No. 1272/2008 CLP of the European Parliament

15.2 Chemical Safety Assessment: Not required

For information on labeling refer to section 2.

There are no TSCA 12b chemicals in this product

LITHOCHROME® Antiquing Release - 1410

16 OTHER INFORMATION

Wording of terms:

ACGIH	American Conference of Government Industrial Hygienists
CAS	Chemical Abstract Service, unique identification code for chemicals
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act
CLP	Classification, Labeling and Packaging, EC 1272/2008
EC_0	Highest effective concentration that has no mortality of population
EC_{50}	Effective Concentration that causes 50% mortality of population
EINECS	European Inventory of Existing Commercial Chemical Substances
GHS	Global Harmonization System, worldwide chemical safety program.
IARC	International Agency for Research on Cancer
HazCom	Hazard Communication, US OSHA GHS 29 CFR 1910.1200
LC_0	Highest Concentration with no mortality of population
LC_{50}	Lethal Concentration that causes 50% mortality of population
LD_{50}	Lethal Dose for a chemical that causes 50% mortality of population
MARPOL	International Convention for the Prevention of Pollution from Ships
NFPA	National Fire Prevention Association
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PBT	Persistent, Bio accumulative and Toxic
PEL	Permissible Exposure Level
RCRA	Resource Conservation and Recovery Act
RE	Repeated Exposure
REACH	Registration, Evaluation, Authorization and Restrictions of Chemicals, EC/1907/2006
REL	Recommended Exposure Limit
RQ	Reportable Quantity
SDS	Safety Data Sheet (GHS replacement for MSDS)
SE	Single Exposure
STOT	Specific Target Organ Toxicity
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
US DOT	United States Department of Transportation
VOC	Volatile Organic Compound
vPvB	Very Persistent and Very Bioaccumulative
WHMIS	Workplace Hazardous Materials Information System (Canada).

Hazardous Material Identification	
Health Hazard	1
Flammability Hazard	0
Physical Hazard	0
Personal Protective Equipment	See sec. 8 PPE

0=minimal hazard. 4 = extreme hazard

NFPA 704 Fire

Health 

Reactivity

NFPA: 0=low hazard, 4=high hazard

California Prop 65 Warning: This product contains one or more chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

WHMIS Signal Word: WARNING

WHMIS Classification: D2A

L. M. Scofield Company - A SIKA COMPANY

LITHOCHROME® Antiquing Release - 1410

The details in this document are based on our current knowledge and experience and are only for this product and only in regard to safety requirements. Before using, read the Scofield Tech Data Bulletin TD-1410 for LITHOCHROME Antiquing Release, the complete package label and this SDS. Updated 11/17/2016.

END OF SDS

LIMITED WARRANTY

L. M. Scofield Company (Scofield) represents and warrants only that its products are of consistent quality and within manufacturing tolerances. NO OTHER ORAL OR WRITTEN REPRESENTATION OR STATEMENT OF ANY KIND, EXPRESS OR IMPLIED, NOW OR HEREAFTER MADE IS AUTHORIZED OR WARRANTED BY SCOFIELD, INCLUDING THOSE OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Liability for breach of contract, negligence, or on any other legal basis is limited to the lesser of refund or replacement of defective materials. SCOFIELD WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING FOR DELAYS OR LOST PROFITS. Communication of this warranty and its limitations to end users is not the responsibility of Scofield, but should be communicated by those in direct contract with the end user. Any claim regarding product defect must be received in writing within one year from the date of manufacture. No claim will be considered without such written notice or after the specified time interval. The end user shall determine the suitability of the products for the intended use and assumes all risks and liability in connection therewith.

Safety Data Sheet & Warranty

BUILDING TRUST

L. M. Scofield Company - A SIKA COMPANY

LITHOCHROME® Color Hardener - 1110

SDS according to GHS OSHA 29 CFR 1910.1200 and 1272/2008/EC (CLP) amending 1907/2006/EC (REACH)

1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

1.1 GHS Product Identifier

Commercial Product Name: LITHOCHROME® Color Hardener - 1110

Chemical Name: Mixture of silica (sand) aggregates, portland cement, pigments, pozzolans and additives (admixtures)

1.2 Relevant identified uses of product:

Product is a dry-shake color hardener for application to freshly-placed concrete to add color and increase abrasion resistance of concrete. This product is intended for use only by professionals. **KEEP OUT OF THE REACH OF CHILDREN.**

1.3 Details of the supplier of the safety data sheet:

L. M. SCOFIELD Company, A SIKA COMPANY **Scofield Phone No. (800) 800-9900** www.scofield.com

6533 Bandini Blvd, Los Angeles, CA 90040 Information Phone Number (323) 720-3000 8AM-5PM

4155 Scofield Road, Douglasville, GA 30134 Information Phone Number (770) 920-6000 8AM-5PM

1.4 Transportation Emergency Telephone Number: CHEMTREC (800) 424-9300

2 HAZARDS IDENTIFICATION

2.1 GHS Classification of substance or mixture:

Human Health:

Product contains silica sand, a form of crystalline silica. Properly fitted dust type respirators can control silica/cement dust exposure. Product contains portland cement which when wet can irritate the skin and seriously damage the eyes.

Acute toxicity, dermal, SE, H315, category 2

Acute toxicity, eyes, SE, H318, category 1

Carcinogenicity, STOT, lungs, Inhalation, RE, H350, category 1B

Carcinogenicity, STOT, lungs, Inhalation, RE, H351, category 2B

GHS Category Key
1 = most hazardous
5 = least hazardous

Environment: Product is not dangerous to environment, upon water contact it will set to a hard mass that is not biodegradable

2.2 Label elements:

GHS Hazard (H) Statements:

GHS Signal Word: **WARNING**

Acute Toxicity

H315--Causes skin irritation

H318--Causes serious eye damage

GHS Pictograms

Chronic Toxicity

H350--May cause cancer (silicosis), from repeated or prolonged exposure to respirable silica, class 1B carcinogen.

H351--Suspected of causing cancer, repeated or prolonged exposure, IARC lists Titanium Dioxide as a class 2B carcinogen.

LITHOCHROME® Color Hardener - 1110

GHS Precautionary (P) Statements:

Prevention Precautionary Statements

P202--Do not handle until all safety precautions have been read and understood.

P280--Wear protective gloves/eye protection/face protection.

P284--Wear respiratory protection.

Response Precautionary Statements

P301+P330+P331--**IF SWALLOWED**: Rinse mouth. Do NOT induce vomiting. Call 911 or POISON CENTER 1(800) 222-1222 for advice on first aid treatment.

P302 + P352--**IF ON SKIN:** Wash with plenty of water.

P304 + P340--**IF INHALED**: Move person to fresh air and keep comfortable for breathing.

P305 + P351 + P338--**IF IN EYES**: Rinse eye(s) cautiously with clean water for 15 minutes. Remove contacts if easy to do. Continue rinsing.

P337+P313--**IF EYE IRRITATION PERSISTS**, get medical advice/attention.

Disposal: P501--Dispose of contents/container in accordance with applicable local/state/federal regulations

2.3 Other hazards: No other hazards are known

Refer to Section 16 for wording of terms.

3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Main Constituent: Silica Sand

3.2 Mixture:

Components of Mixture	CAS #	EINECS #	Weight %	
Portland Cement	65997-15-1	266-043-4	30 - 60%	
Silica Sand, Crystalline Quartz	14808-60-7	238-878-4	40 - 70%	
Crystalline Quartz, respirable fraction	14808-60-7	238-878-4	<0.1%	
Flyash, Coal Combustion Residuals	68131-74-8	931-322-8	0 - 10%	
Iron Oxide Pigments, black, yellow, red	mixture	mixture	0 - 10%	Iron oxides are non-hazardous, see PNOR
Titanium Dioxide Pigment	13463-67-7	236-675-5	0 - 10%	IARC lists titanium dioxide as a 2B carcinogen.
Chromium III Oxide Pigment	1308-38-9	215-160-9	0 - 10%	No known significant effects, see PNOR

The exact percentages in this composition have been withheld as a trade secret, and as confidential business information.

4 FIRST AID MEASURES

4.1 Description of first aid measures:

Eye Contact : Quickly flush eyes with plenty of clean water for 15 minutes. Remove contact lenses if easy to do. Open eyelids widely during flushing. If irritation persists, continue flushing and transport person to emergency room and bring these instructions for doctor. Provide easy access to eye wash station in work area.

Inhalation: Move person to fresh air, make comfortable for breathing. Get medical attention if condition worsens.

Skin Contact: May result in skin irritation. Remove contaminated clothing. Wash skin with soap and water.

4.1 Description of first aid measures:
Ingestion: If swallowed, do NOT induce vomiting. Call 911 or a POISON CENTER (800) 222-1222 for instructions on first aid treatment. Transport person to the nearest emergency room and bring these safety instructions.

4.2 Most important symptoms and effects both acute and delayed:
Eye contact with cement (wet or dry) can cause serious and potentially irreversible injuries to eyes. If irritation persists after rinsing eyes, take person to emergency room for treatment. Repeated inhalation of respirable silica over long periods of time increases the risk of developing lung disease (silicosis). Cement may have an irritating effect that is most severe when sweating. Prolonged skin contact with wet product may cause serious burns that develop without pain being felt.

4.3 Indication of any immediate medical attention and special treatment needed:
Primary routes of entry include: Inhalation (dust), Eye Contact, Skin Contact. Eye contact requires immediate first aid. Refer to SECTION 11 for more detailed information on health effects and symptoms.

5 FIRE-FIGHTING MEASURES

5.1 Extinguishing media: Use fire extinguishing media appropriate for surrounding fire.

5.2 Special Hazards arising from the substance or mixture:

Fire Hazard:	Not flammable
Explosion Hazard:	No explosion hazard
Reactivity:	Hazardous reactions will not occur.

5.3 Advice for fire-fighting:
Use normal fire fighting protective equipment.

6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions :

General measures:	Use personal protective equipment. Provide adequate ventilation. See section 8 for additional information.
Protective equipment:	Wear suitable protective clothing with eye protection, respirators and gloves, see section 8.

6.2 Environmental precautions:
Avoid discharge into waterways, sewers and soil. If spill enters water, contact local authorities.

6.3 Methods and material containment and cleaning up:
Method of cleaning up: Collect material in dry state if possible. Avoid generating dust. Recover product by vacuuming, shoveling or sweeping. Use a HEPA type filter on vacuum exhaust to prevent release of particulates into air.

7 HANDLING AND STORAGE

7.1 Precautions for safe handling:
Do not breathe dust. Avoid creating or spreading dust. Handle in accordance with good industrial hygiene procedures. Always wash hands immediately after handling product. Do not eat or drink in area where product is being used. Prolonged or repeated exposure to respirable silica can cause silicosis.

7.2 Conditions for safe storage including any incompatibilities:

Store in a covered dry shaded area. Avoid all contact with water.

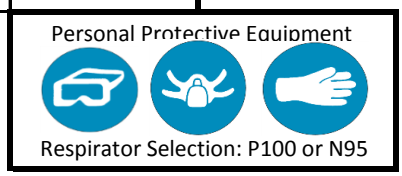
7.3 Specific end uses:

This product is intended for use only by professionals to color and harden and texture freshly-placed concrete surfaces.

8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 Control Parameters NDA = No Data Available

Components of Mixture	ACGIH TLV	OSHA 8-Hour PEL TWA	OSHA PEL 8 hr	NIOSH TWA
Portland Cement	1 mg/m^3	15 mg/m^3	NDA	10 mg/m^3 total
Silica Sand, Crystalline Quartz	0.025 mg/m^3	$(10mg/m^3) \div (SiO_2\% + 2)$	NDA	0.05 mg/m^3
Crystalline Quartz, Respirable Fraction	0.025 mg/m^3	50 $\mu g/m^3$	NDA	5 mg/m^3
Flyash, Coal Combustion Residues	NDA	NDA	NDA	NDA
Misc. iron/chromium oxide pigments, PNOR	3 mg/m^3	15 mg/m^3 total, 5 mg/m^3 dust	NDA	NDA
Titanium Dioxide pigment	10 mg/m^3	5 mg/m^3 as respirable dust	15 mg/m^3 total	NDA
Total Silica Dust	NDA	0.3 mg/m^3	NDA	10 mg/m^3



8.2 Exposure controls:

Avoid breathing dust. Wear a tight fitting respirator with particulate filters, P100 or N95.

Corrosive: Do not get into eyes or on skin.

Engineering measures: Use with adequate ventilation in work area. Keep worker exposure of airborne particulates below PEL & TLV limits in section 8.1, Provide easy access to eye wash station in work area.

8.3 Individual protective measures:

Eye/face protection: Wear tight fitting goggles or safety glasses with side shields to protect eyes.

Skin protection: Wear protective clothing, rubber apron or coat and neoprene or nitrile rubber gloves to protect skin.

Respiratory Protection: Wear a proper NIOSH approved particulate-type respirator, for example: N95 or P100.

Hygiene measures: Wash hands after exposure, Remove contaminated clothing, shower and wash with plenty of soap and water. Wash contaminated clothing prior to reuse.

Environmental exposure controls: Provide eye wash stations and emergency showers located near work area.

9 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information of basic physical and chemical properties

	Property-Test	Value/Result
a)	pH	10-12 when wet, not applicable when dry
b)	Color	various colors
c)	Odor	no odor
d)	Freezing/Melting Point	not applicable
e)	Boiling Range	not applicable

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Property-Test (continued)		Value/Result (continued)
f)	Flash Point	not applicable
g)	Auto ignition Temperature	not applicable
h)	Explosive Limits UEL	not applicable
i)	Explosive Limits LEL	not applicable
j)	Flammability (solid, gas)	not applicable
k)	Vapor density vs air = 1.0	not applicable
l)	Density	not applicable
m)	Solubility in water	only admixtures are soluble
n)	KOW Partition Coefficient	not applicable
o)	Evaporation Rate	not applicable
p)	VOC	0.0 g/L (0.0 lb/gal)
q)	Specific Gravity, water = 1.0	2.5 to 3.5

10 STABILITY AND REACTIVITY

10.1 Reactivity: When water is added, hardening occurs to make a solid mass.

10.2 Chemical stability: Product reacts rapidly with strong acids causing heat evolution.

10.3 Possibility of hazardous reactions: Hazardous reactions do not normally occur.

10.4 Conditions to avoid: Avoid contact with strong acids and moisture

10.5 Incompatible materials: Strong acids can react dangerously with product.

10.6 Hazardous decomposition products: No hazardous decomposition products are known.

11 TOXICOLOGICAL INFORMATION

Components of Mixture	LD_{50} oral (rat)	LC_{50} Inhalation	LD_{50} dermal (rabbit)
Portland Cement	2000 mg/kg	NDA	NDA
Silica Sand, Crystalline Quartz	>2,500 mg/kg	NDA	NDA
Sand, Crystalline Quartz, Respirable Fraction	NDA	NDA	NDA
Flyash, Coal Combustion Residuals	>2,000 mg/kg	2.2 mg/L 1 hr	>2,000 mg/kg (skin)
Titanium Dioxide	12,000 mg/kg	>6.82 mg/L rat	10,000 mg/kg
Misc. iron/chromium oxide pigments, PNOR	NDA	NDA	NDA

Toxicological results of testing

a) acute toxicity, Not classified as an acutely toxic material.

b) skin corrosion/irritation, Wet cementitious products can cause serious skin irritation.

c) serious eye damage/irritation, Wet or dry cementitious products can cause serious eye damage.

d) respiratory or skin sensitization, Repeated exposure to respirable silica can cause serious delayed lung injury (silicosis).

e) germ cell mutagenicity Product does not cause germ cell mutagenicity.

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Toxicological results of testing: (continued)

f) carcinogenicity by agency: Crystalline silica (respirable) in this product is identified by IARC, ACGIH, OSHA and NTP as a carcinogen or as a potential carcinogen. Titanium dioxide may be present in some formulations. Titanium Dioxide is classified by IARC as a class 2B carcinogen.

g) reproductive toxicity, Product is not known to cause or contribute to reproductive toxicity.

h) STOT-single exposure, Product can cause serious eye damage due to alkalinity and abrasiveness. Single exposure is not expected to cause carcinogenicity due to respirable silica.

i) STOT-repeated exposure, Repeated/prolonged exposure to respirable silica can cause silicosis, a form of cancer. Repeated exposure to respirable silica can contribute to COPD. No chronic effects have been observed when respirable silica is maintained below limit levels.

J) aspiration hazard, Product is not an aspiration hazard.

11.1 Inhalation: Product dust may irritate throat and respiratory system and cause coughing.

11.2 Skin contact: Product dust has an irritating effect on moist skin. Repeated or prolonged contact with skin may cause allergic reactions in sensitive individuals.

11.3 Eye contact: Dust from mixture can cause permanent eye damage. Immediate first aid is required, followed by emergency medical attention.

11.4 Ingestion: Is not likely to occur because of composition. Ingestion may cause severe irritation of the mouth esophagus and the gastrointestinal tract.

11.5 Specific effects: Frequent inhalation over a long period of time increases the risk of developing lung disease.

12 ECOLOGICAL INFORMATION

	Aquatic Toxicity Fish			Aquatic Toxicity Invertebrates		
Components of Mixture	LC_{50}	Species	Duration	EC_{50}	Species	Duration
Portland Cement	NDA	NDA	NDA	350 mg/L	Daphnia magna	48 hr
Silica Sand, Crystalline Quartz	>10,000 mg/kg	Carp	72 hr	NDA	NDA	NDA
Silica Sand Quartz, respirable silica	NDA	NDA	NDA	NDA	NDA	NDA
Iron Oxides and/or Chrome III Oxide, PNOR	NDA	NDA	NDA	NDA	NDA	NDA
Titanium Dioxide	>1,000 mg/kg	Pimephales pr.	96 hr	>1,000 mg/L	Daphnia magna	48 hr

12.1 Ecotoxicity

Ecotoxicity: This product is not expected to be hazardous to the environment.

12.2 Persistence and degradability:

Degradability: This product reacts with water to form a solid mass that is not degradable.

12.3 Bioaccumulative Potential:

Bioaccumulative Potential No information is available on bioaccumulative potential.

12.4 Mobility in soil:

Mobility: No information is available on mobility in soil.

Results of PBT and vPvB assessment: Mixture is inorganic and is not relevant for PBT or vPvB assessment

Other adverse affects: No other adverse effects are known.

13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods:

GHS P501-Dispose of contents/container according to local/state/regional/federal regulations.

14 TRANSPORT INFORMATION

This product is not covered by international regulation of the transport of dangerous goods (IMDG, IATA, ADR, RID).

DOT: Not regulated

14.1 UN Number: Not regulated

14.2 UN proper shipping name: Not classified as dangerous goods under DOT and UN regulations.

14.3 Transport hazard class(es): Not regulated

14.4 Packing group: Not regulated

Packaging group: Not regulated

14.5 Environmental hazards

Marine pollutant: Not regulated

Environmentally hazardous substance: Not applicable

14.6 Special precautions for user: None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code: Not regulated.

15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture.

OSHA HazCom 2012, 29 CFR 1910.1200 and regulation (EC) No 1272/2008 (CLP) of the European Parliament

15.2 Chemical Safety Assessment: Not required

For information on labeling go to section 2.

There are no TSCA 12b chemicals in this product.

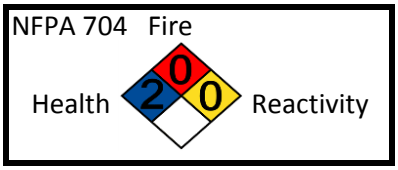
16 OTHER INFORMATION

Before using, read Scofield's Tech-Data Bulletin TD-1110 for this product, the complete package label and this SDS and Warranty.

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

Wording of terms:

ACGIH	American Conference of Government Industrial Hygienists.
CAS #	Chemical Abstract Service, unique chemical identification
EINECS	European Inventory of Existing Commercial Chemical Substances (EU)
EC_{50}	Effective Concentration that causes 50% mortality of population
GHS	Global Harmonization System, worldwide chemical safety program
LC_{50}	Lethal Concentration that causes 50% mortality of population
LD_{50}	Lethal Dose that causes 50% mortality of population



0 = lowest hazard, 4 = highest hazard

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LITHOCHROME® Color Hardener - 1110

Wording of terms: (continued)

NFPA	National Fire Protection Association
NTP	National Toxicology Program
OSHA	Occupational Safety & Health Administration
PBT	Persistent, Bioaccumulative and Toxic
PEL	Permissible Exposure Limit
PNOR	Particulates Not Otherwise Regulated
RE	Repeated Exposure
SDS	Safety Data Sheet (GHS replacement for MSDS)
SE	Single Exposure
STOT	Specific Target Organ Toxicity
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
vPvB	Very Persistent and very Bioaccumulative
WHMIS	Workplace Hazardous Materials Information System (Canada)

Hazardous Material Identification	
Health Hazard	2
Fire Hazard	0
Reactivity Hazard	0
Personal Protection	See sec. 8 PPE

0 = minimal hazard, 4 = extreme hazard

California Prop 65: WARNING! This product contains one or more chemicals known to the State of California to cause cancer, or birth defects or other reproductive harm.

WHMIS Category:D2B,D2A

WHMIS Signal Word: **WARNING**

SDS Issue Date: July 7, 2015. Revised November 28, 2016 added SIKA COMPANY Trademark.

END OF SDS

LIMITED WARRANTY

Since no control is exercised over product use, L. M. Scofield Company (Scofield) represents and warrants only that its products are of consistent quality within manufacturing tolerances. NO OTHER ORAL OR WRITTEN REPRESENTATION OR STATEMENT OF ANY KIND, EXPRESS OR IMPLIED, NOW OR HEREAFTER MADE IS AUTHORIZED OR WARRANTED BY SCOFIELD, INCLUDING THOSE OF MERCHANT-ABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Liability for breach of contract, negligence, or on any other legal basis is limited to the lesser of refund or replacement of defective materials. SCOFIELD WILL NOT BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING FOR DELAYS OR LOST PROFITS. Communication of this warranty and its limitations to end users is not the responsibility of Scofield, but should be communicated by those in direct contract with the end user. Any claim regarding product defect must be received in writing within one year from the date of manufacture. No claim will be considered without such written notice or after the specified time interval. The end user shall determine the suitability of the products for the intended use and assumes all risks and liability in connection therewith.

SAFETY DATA SHEET

Issue Date 01-April-2016 **Revision Date** 01-April-2016 **Version** 2

LY Cleaner **Lythic™ Cleaner - Concrete Floor Cleaner**

1. IDENTIFICATION

Product identifier

Product Name Lythic™ Cleaner - Concrete Floor Hardener

Other means of identification

Product Code LY CLEANER

Recommended use of the chemical and restrictions on use

Recommended Use Restricted to professional users.

Details of the supplier of the safety data sheet

Supplier Address
Solomon Colors, Inc.
4050 Color Plant Road
Springfield, IL
62702

Manufacturer Address
Solomon Colors, Inc.
4050 Color Plant Road
Springfield, IL
62702

Company Phone Number **800-624-0261 (US & Canada); 217-522-3112 (Outside North America)**
24 Hour Emergency Phone Number **800-373-7542**

2. HAZARDS IDENTIFICATION

GHS Classification(s): Not a hazardous substance or mixture
GHS Label Elements:
GHS Hazard Symbol

Precautionary Statements:
Prevention: Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection.
Response: IF SWALLOWED: Rinse mouth. Get medical attention if symptoms continue
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician. Specific treatment (see First Aid on SDS or on this label). Wash contaminated clothing before reuse.
Storage: Store in a secure manner in accordance with local regulations
Disposal: Dispose of in accordance with local, regional and international regulations.
Hazards Not Otherwise Classified: None known

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances/Mixtures:

Chemical or Common Name/Synonyms	CAS Number	% by Wt.
Triethanolamine	102-71-6	< 10 %
Glycol Ether DB	112-34-54	< 10 %
Colloidal Silica	proprietary	1 – 20%

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

4. FIRST-AID MEASURES

Description of Necessary Measures:

Eye Contact: Hold eyelids apart and immediately flush eyes with lukewarm water for at least 15 minutes. If contact lens is present, DO NOT delay irrigation or attempt to remove the lens. Call a physician if irritation persists.

Skin Contact: May cause irritation. Wash affected area with soap and water. Remove contaminated clothing and shoes. Seek medical attention if irritation persists.

Ingestion: Not expected to be toxic. Never give an unconscious person anything to ingest. If swallowed, immediately give two glasses of water, Seek Medical attention if ill effects develop.

Inhalation: May cause irritation. Remove to fresh air and provide oxygen. If not breathing, give artificial respiration. Seek medical attention if irritation persists.

Notes to Physician: Treat according to person's condition and specifics of exposure.

Indication of Immediate Medical Attention and Special Treatment Needed: There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

Flash Point: > 160 °F / > 70 °C (Closed Cup)

Autoignition Temperature: Not determined

Flammability Limits in Air: Not determined

Suitable Extinguishing Media: On large fires use dry chemical, foam or water spray. On small fires use carbon dioxide (CO_2), dry chemical or water spray. Water can be used to cool fire exposed containers.

Special Firefighting Procedures: Firefighters wear NIOSH approved self-contained breathing apparatus. Determine the need to evacuate or isolate the area according to your local emergency plan. Use water spray to keep fire exposed containers cool.

Unusual Fire Hazards: None.

6. ACCIDENTAL RELEASE MEASURES

Containment Procedures: Stop the leak and absorb spill. Ventilate the space involved. Shut off or remove all ignition sources if possible. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Use recommended personal protective clothing and equipment.

Methods for Cleanup and Disposal: Do not allow material to run off work area, excess material should be absorbed or vacuumed and disposed of in accordance with regulations. Dispose of material in accordance with federal, state, and local guidelines. Place spilled material in an appropriate container for disposal.

THIS PRODUCT WHEN SPILLED OR DISPOSED OF IS A NON-HAZARDOUS WASTE AS DEFINED IN RCRA REGULATION (40CFR 261).

7. HANDLING AND STORAGE

Handling: Avoid contact with skin or eyes. Avoid breathing vapor, mist, dust, or fumes. Use with adequate ventilation. Do not Swallow.

Storage: Keep in cool, dry, ventilated storage. Keep containers tightly closed when not in use. Product may freeze if stored below 32°F. Product damage may occur if frozen.

Waste Disposal Method: Dispose of material in accordance with federal, state, and local guidelines.

Special Precautions: Avoid breathing mist. Keep from freezing. Adhere to work practice rules established by government regulations (e.g. OSHA).

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation: Provide adequate mechanical ventilation to keep exposure levels below TLV's.

Respiratory Protection: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved respirator. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.

Inhalation: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn.

Protective Gloves: Use impermeable gloves to prevent skin contact.

Eye Protection: wear eye protection designed to protect the eyes from liquid splash or mists. Note: contact lenses may contribute to the severity of an eye injury and should not be worn when working around chemicals.

Other Protective Clothing or Equipment: As needed to prevent repeated/prolonged contact.

Work/Hygienic Practices: Eye washes and safety showers are recommended in the work place. Wash hands after using, before eating, drinking, or using tobacco products. Periodically monitor exposure levels to hazardous ingredients listed in Section II and review permissible limits.

OSHA Exposure Guidelines:

Component	Limits
Glycol Ether DB	Country specific, limits have not been established or are not applicable
Colloidal Silica	80 mg/m3/ %SiO2 TWA (dust)

ACGIH Exposure Guidelines:

Component	Limits
Colloidal Silica	80 mg/m3/ %SiO2 TWA (dust)

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.
Form: Liquid
Color: tinted, pink
Odor: Slight odor
Odor Threshold: N.D.
Vapor Pressure: 17mm Hg
Vapor Density: not determined
Specific Gravity: 1.01 - 1.03 @ 25 Deg. C
pH: 9.4-10.4, concentrate form
Flash Point: > 160 °F / > 70 °C (Closed Cup)
Boiling Point: 100°C
Freezing Point: 0°C
Water Solubility: Miscible
Material VOC Content: 96 g/l (concentrated form)
Actual VOC Content: <17 g/l (concentrated form)
Initial Boiling Point or Boiling Range: N.D. Evaporation Rate (nBuAc = 1): N.D. Flammability (solid, gas): N.D.
Lower Explosion Limit: N.A. Upper Explosion Limit: N.A.
Partition Coefficient (n-octanol/water): N.D. Autoignition Temperature: No Data Decomposition Temperature: N.D. Viscosity: N.D.
% Volatile (wt%): N.D.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions
Incompatibilities (Materials to avoid):	Strong oxidizing agents, acids
Hazardous Decomposition Products: (from burning, heating or reaction with other materials)	Carbon dioxide, Carbon monoxide
Conditions to avoid:	High Temperature, Ignition source
Hazardous Polymerization:	Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure: Eyes. Skin. Inhalation. Ingestion.

Symptoms/Effects: Acute, Delayed, Chronic

Eye Contact: May cause irritation. Health effects or injuries are not expected under normal use

Skin Contact: May cause irritation. Health effects or injuries are not expected under normal use

Skin Absorption: No absorption hazard expected under normal use.

Inhalation: May cause irritation. Health effects or injuries are not expected under normal use

Ingestion: May cause irritation. Health effects or injuries are not expected under normal use

Numerical Measures of Toxicity:

Inhalation Vapor: Inhalation Dust/Mist:

Component	Oral LD50	Dermal LD50	Inhalation LC50
Triethanolamine	= 4190 mg/kg (Rat)	> 2000 mg/kg (Rabbit) > 16 mL/kg (Rat)	No Data
Colloidal Silica	Rat: >5000 mg/kg	Rabbit: >5000 mg/kg	No Data
Acute Toxicity Estimate (ATE):	No Data	No Data	No Data

Cancer Information: This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

Medical Conditions Aggravated by Exposure to Product: Eye disorders. Skin disorders. Impaired respiratory function. Lung disorders. Respiratory system disorders.

Other: None known.

12. ECOLOGICAL INFORMATION

Eco toxicological Information: No data available.

Chemical Fate Information: No data available.

13. DISPOSAL CONSIDERATIONS

Waste Disposal : Dispose of container and unused contents in accordance with federal, state, and local requirements.

THIS PRODUCT WHEN SPILLED OR DISPOSED OF IS A NON-HAZARDOUS WASTE AS DEFINED IN RCRA REGULATION (40CFR 261).

14. TRANSPORT INFORMATION

Land transport (DOT): Product is not regulated during transportation

Air transport (IATA): Product is not regulated during transportation

Sea transport (IMDG/IMO): Product is not regulated during transportation

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

TOXIC SUBSTANCES CONTROL ACT (TSCA): The components of this product are included on the inventory list.

SUPERFUND AMENDMENTS and REAUTHORIZATION ACT OF 1986 (SARA) TITLE III:
Section 301 – 304 require emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355. Components present in this product at a level which could require reporting under this statute:

None Present or none present in reportable quantities

Sections 311 – 312 require products be reviewed and applicable EPA Hazard Definitions be identified and made known.

Acute Health Hazard, Chronic Health Hazard

Section 313 requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313).
This information must be included in all MSDS's that are copied and distributed for this material. Components present in this product at level which could require reporting under the statute are:

None

STATE REGULATIONS

California
PROPOSITION 65 CALIFORNIA: This product does not contain any chemicals known to the state of California to cause cancer, birth defects, or other reproductive harm.

15. OTHER INFORMATION

Hazard Rating System
Health: 1
Flammability: 0
Reactivity: 0
* = Chronic Health Hazard

NFPA Rating System
Health: 1
Flammability: 0
Reactivity: 0
Special Hazard: None

SDS Abbreviations
N.A. = Not Applicable
N.D. = Not Determined
HAP = Hazardous Air Pollutant
voc = Volatile Organic Compound
C = Ceiling Limit
N.E./Not Estab. = Not Established

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

We create chemistry

Safety Data Sheet
MasterAir AE 200 also MICRO AIR®

1. Identification

Product identifier used on the label

MasterAir AE 200 also MICRO AIR*

Recommended use of the chemical and restriction on use
Recommended use*: for industrial and professional users

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: admixture

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Skin Sens.	1	Skin sensitization

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H318	Causes serious eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

Precautionary Statements (Prevention):

P280	Wear protective gloves and eye/face protection.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name
68439-57-6	>= 1.0 - < 3.0%	Sulfonic acids, C14-16-alkane hydroxy and C14-16-alkene, sodium salts
1310-58-3	>= 0.0 - < 5.0%	Potassium hydroxide
8050-09-7	>= 0.0 - < 1.0%	rosin

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. Immediately remove contaminated clothing.

If inhaled:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:
After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.
Hazards: No applicable information available.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon dioxide, carbon monoxide, harmful vapours, nitrogen oxides, fumes/smoke, carbon black

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. If exposed to fire, keep containers cool by spraying with water. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Do not breathe vapour/aerosol/spray mists. Wear eye/face protection. If exposed to high vapour concentration, leave area immediately. Use personal protective clothing. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.
For large amounts: Pump off product.

7. Handling and Storage

Precautions for safe handling
Avoid aerosol formation. Avoid inhalation of mists/vapours. Avoid skin contact. No special measures necessary provided product is used correctly.

Conditions for safe storage, including any incompatibilities
No applicable information available.

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight.
Protect from temperatures below: 0 °C
The packed product must be protected from temperatures below the indicated one.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Potassium hydroxide	OSHA PEL	CLV 2 mg/m3 ;
	ACGIH TLV	CLV 2 mg/m3 ;
rosin	OSHA PEL	TWA value 0.1 mg/m3 (formaldehyde);
	ACGIH TLV	; Included in the regulation, but with no data values - See the regulation for further details ; Exposure by all routes should be carefully controlled to levels as low as possible.

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators.

Hand protection:
Wear chemical resistant protective gloves., Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields.

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Do not inhale gases/vapours/aerosols. Avoid contact with the skin, eyes and clothing. Avoid exposure - obtain special instructions before use. Handle in accordance with good building materials hygiene and safety practice. Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

9. Physical and Chemical Properties

Form:	liquid
Odour:	product specific
Odour threshold:	No applicable information available.
Colour:	brown
pH value:	approx. 10.7 - 12.3 (25 °C)
Melting point:	No applicable information available.
Information on: Water	
Melting point:	0 °C
---	
boiling temperature:	approx. 105 °C
Sublimation point:	No applicable information available.
Flash point:	not applicable
Flammability:	not determined
Lower explosion limit:	not applicable
Upper explosion limit:	No applicable information available.
Autoignition:	not applicable
Vapour pressure:	No applicable information available.
Information on: Water	
Vapour pressure:	23.4 hPa (20 °C) Literature data.

Density:	approx. 1.01 g/cm3 (20 °C)
Relative density:	No applicable information available.
Vapour density:	Heavier than air.
Partitioning coefficient n-octanol/water (log Pow):	No applicable information available.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	No applicable information available.

Viscosity, kinematic:	No applicable information available.
Solubility in water:	(20 °C) completely soluble
Miscibility with water:	(20 °C) miscible in all proportions
Solubility (quantitative):	No applicable information available.
Solubility (qualitative):	No applicable information available.
Evaporation rate:	No applicable information available.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
strong acids, strong bases, strong oxidizing agents, strong reducing agents

Hazardous decomposition products

Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Based on available Data, the classification criteria are not met.

Assessment other acute effects
No applicable information available.

Irritation / corrosion
Assessment of irritating effects: Risk of serious damage to eyes. Irritating to skin.

Sensitization
Assessment of sensitization: Sensitization after skin contact possible.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No reliable data was available concerning repeated dose toxicity. Based on available Data, the classification criteria are not met.

Genetic toxicity
Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Carcinogenicity
Assessment of carcinogenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Reproductive toxicity
Assessment of reproduction toxicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Teratogenicity
Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Based on available Data, the classification criteria are not met. There is a high probability that the product is not acutely harmful to aquatic organisms.

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Inherently biodegradable. The insoluble fraction can be removed by mechanical means in suitable waste water treatment plants.
The polymer component of the product is poorly biodegradable.

Bioaccumulative potential

Assessment bioaccumulation potential
Discharge into the environment must be avoided.

Mobility in soil

Assessment transport between environmental compartments
No data available.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. Residues should be disposed of in the same manner as the substance/product. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute;

CERCLA RQ	CAS Number	Chemical name
1000 LBS	75-07-0; 1310-58-3; 1310-73-2	acetaldehyde; Potassium hydroxide; Sodium Hydroxide
100 LBS	50-00-0; 123-91-1	Formaldehyde; 1,4-dioxane
10 LBS	75-21-8	Ethylene Oxide

CA Prop. 65:
WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

NFPA Hazard codes:
Health : 3 Fire: 0 Reactivity: 0 Special:

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/01/22

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET

We create chemistry

Safety Data Sheet
MasterEmaco ADH 326

1. Identification

Product identifier used on the label

MasterEmaco ADH 326

Recommended use of the chemical and restriction on use

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

2. Hazards Identification

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

Classification of the product

Skin Corr./Irrit.	1B	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Skin Sens.	1	Skin sensitization
Muta.	2	Germ cell mutagenicity
Repr.	2 (fertility)	Reproductive toxicity
Repr.	2 (unborn child)	Reproductive toxicity
Aquatic Acute	1	Hazardous to the aquatic environment - acute
Aquatic Chronic	1	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H317	May cause an allergic skin reaction.
H341	Suspected of causing genetic defects.
H361	Suspected of damaging fertility. Suspected of damaging the unborn child.
H314	Causes severe skin burns and eye damage.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P260	Do not breathe dust or mist.
P202	Do not handle until all safety precautions have been read and understood.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P303 + P361 + P352	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P391	Collect spillage.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

CAS Number	Weight %	Chemical name

112-57-2	>= 1.0 - < 5.0%	3,6,9-triazaundecamethylene-1,11-diamine
25068-38-6	>= 20.0 - < 50.0%	bisphenol A-epichlorohydrin resin
84852-15-3	>= 0.0 - < 0.1%	Phenol, 4-nonyl-, branched
25068-38-6	>= 20.0 - < 50.0%	Reaction product: bisphenol-A-(epichlorhydrin)-Epoxy resin (number average molecular weight <= 700)
2210-79-9	>= 10.0 - < 15.0%	Oxirane, 2-[(2-methylphenoxy)methyl]-

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). Immediately remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:
Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

If in eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Do not induce vomiting. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon dioxide, carbon monoxide, nitrogen oxides, fumes/smoke, carbon black, corrosive gases/vapours

Advice for fire-fighters
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Use personal protective clothing. Do not breathe vapour/aerosol/spray mists. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.
For large amounts: Pump off product.

7. Handling and Storage

Precautions for safe handling
Keep away from sources of ignition - No smoking. Keep container tightly sealed. Handle and open container with care.

Protection against fire and explosion:
The product is not an oxidizer, not self-combustible and not explosive.

Conditions for safe storage, including any incompatibilities

Suitable materials for containers: tinned carbon steel (Tinplate)

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight. Store protected against freezing.
Protect from temperatures below: 5 °C
The packed product must be protected from temperatures below the indicated one.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

Titanium dioxide	OSHA PEL	PEL 15 mg/m3 Total dust ; TWA value 10 mg/m3 Total dust ;
	ACGIH TLV	TWA value 10 mg/m3 ;

talc	OSHA PEL	TWA value 20 millions of particles per cubic foot of air ; TWA value 2.4 millions of particles per cubic foot of air Respirable ; The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 0.1 mg/m3 Respirable ; The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 0.3 mg/m3 Total dust ; The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 2 mg/m3 Respirable dust ; TWA value 0.3 mg/m3 Total dust ; The exposure limit is calculated from the equation, 30/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 0.1 mg/m3 Respirable ; The exposure limit is calculated from the equation, 10/(%SiO2+2), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 2.4 millions of particles per cubic foot of air Respirable ; The exposure limit is calculated from the equation, 250/(%SiO2+5), using a value of 100% SiO2. Lower percentages of SiO2 will yield higher exposure limits. TWA value 20 millions of particles per cubic foot of air ;
	ACGIH TLV	TWA value 2 mg/m3 Respirable fraction ; The value is for particulate matter containing no asbestos and <1% crystalline silica.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) respirator as necessary.

Hand protection:
Wear chemical resistant protective gloves., Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:
Tightly fitting safety goggles (chemical goggles) and face shield.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Do not inhale gases/vapours/aerosols. Avoid contact with the skin, eyes and clothing. Handle in accordance with good building materials hygiene and safety practice. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

9. Physical and Chemical Properties

Form:	liquid
Odour:	product specific
pH value:	neutral to slightly alkaline
Flash point:	> 93.3 °C
Density:	approx. 1.0 g/cm3 (20 °C)
Thermal decomposition:	No data available.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
not fire-propagating

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
zinc, aluminium, oxidizing agents, strong alkalies, acids

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No data available.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Irritation / corrosion

Information on: bisphenol A-epichlorohydrin resin
Assessment of irritating effects: Eye contact causes irritation. Skin contact causes irritation.

Information on: Oxirane, 2-[(2-methylphenoxy)methyl]-
Assessment of irritating effects: Eye contact causes irritation. Skin contact causes irritation.

Information on: 3,6,9-triazaundecamethylene-1,11-diamine
Assessment of irritating effects: Corrosive! Damages skin and eyes.

Sensitization
Assessment of sensitization: Sensitization after skin contact possible.

Information on: bisphenol A-epichlorohydrin resin
Assessment of sensitization:
Sensitization after skin contact possible.

Information on: Oxirane, 2,2'-[(1-methylethylidene)bis(4,1- phenyleneoxymethylene)]bis-, homopolymer
Assessment of sensitization:
May cause sensitization by skin contact.

Information on: Oxirane, 2-[(2-methylphenoxy)methyl]-
Assessment of sensitization:
Caused skin sensitization in animal studies.

Can sensitize the skin and/or respiratory tract of allergic persons. May produce an allergic reaction.

Chronic Toxicity/Effects

Genetic toxicity

Information on: Oxirane, 2-[(2-methylphenoxy)methyl]-
Assessment of mutagenicity: The substance was mutagenic in a bacterial test system. The substance was not mutagenic in studies with mammals.

Carcinogenicity

Information on: Titanium dioxide
Assessment of carcinogenicity: IARC (International Agency for Research on Cancer) has classified this substance as group 2B (The agent is possibly carcinogenic to humans). In long-term studies in rats in which the substance was given by inhalation, a carcinogenic effect was observed. Tumors were only observed in rats after chronic inhalative exposure to high concentrations which caused sustained lung inflammation. In long-term studies in rats and mice in which the substance was given by feed, a carcinogenic effect was not observed. Dermal exposure is not expected to be carcinogenic.

Other Information

The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
The product has not been tested.

Additional information

Other ecotoxicological advice:
The product has not been tested. Do not discharge product into the environment without control.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with local authority regulations. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
TDG

Hazard class:	8
Packing group:	III
ID number:	UN 2735
Hazard label:	8
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (contains 3,6,9-TRIAZAUNDECAMETHYLENEDIAMINE)

Sea transport
IMDG

Hazard class:	8
Packing group:	III
ID number:	UN 2735
Hazard label:	8
Marine pollutant:	NO
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (contains 3,6,9-TRIAZAUNDECAMETHYLENEDIAMINE)

Air transport

IATA/ICAO

Hazard class:	8
Packing group:	III
ID number:	UN 2735
Hazard label:	8
Proper shipping name:	AMINES, LIQUID, CORROSIVE, N.O.S. (contains 3,6,9-TRIAZAUNDECAMETHYLENEDIAMINE)

15. Regulatory Information

Federal Regulations

Registration status:

Chemical	DSL, CA	released / listed

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/10/14

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET

1. Identification

Product identifier used on the label

MasterKure CC 250SB

Recommended use of the chemical and restriction on use
Recommended use*: for industrial and professional users

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: No data available.

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Flam. Liq.	3	Flammable liquids
Skin Corr./Irrit.	2	Skin corrosion/irritation
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Muta.	1B	Germ cell mutagenicity
Carc.	1B	Carcinogenicity
Repr.	2 (fertility)	Reproductive toxicity
STOT SE	3 (Vapours may cause drowsiness and dizziness.)	Specific target organ toxicity — single exposure

STOT SE	3 (irritating to respiratory system)	Specific target organ toxicity — single exposure
STOT RE	1	Specific target organ toxicity — repeated exposure
Aquatic Acute	2	Hazardous to the aquatic environment - acute
Aquatic Chronic	2	Hazardous to the aquatic environment - chronic

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H226	Flammable liquid and vapour.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H335	May cause respiratory irritation.
H361	Suspected of damaging fertility.
H350	May cause cancer.
H340	May cause genetic defects.
H372	Causes damage to organs (Central nervous system) through prolonged or repeated exposure.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P273	Avoid release to the environment.
P271	Use only outdoors or in a well-ventilated area.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/gas/mist/vapours.
P202	Do not handle until all safety precautions have been read and understood.
P243	Take precautionary measures against static discharge.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.
P240	Ground/bond container and receiving equipment.
P242	Use only non-sparking tools.

Precautionary Statements (Response):

P308 + P311	IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P303 + P352	IF ON SKIN (or hair): Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P391	Collect spillage.
P337 + P311	If eye irritation persists: Call a POISON CENTER or doctor/physician.
P362 + P364	Take off contaminated clothing and wash before reuse.
P370 + P378	In case of fire: Use water spray, dry powder, foam or carbon dioxide for extinction.

Precautionary Statements (Storage):

P233	Keep container tightly closed.
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name
8052-41-3	>= 20.0 - < 50.0%	Stoddard solvent
64742-95-6	>= 20.0 - < 25.0%	solvent naphtha
95-63-6	>= 15.0 - < 20.0%	1,2,4-trimethylbenzene
64742-82-1	>= 7.0 - < 15.0%	Naphtha (petroleum), hydrodesulfurized heavy
108-67-8	>= 1.0 - < 3.0%	mesitylene
1330-20-7	>= 0.3 - < 3.0%	Xylene
25340-17-4	>= 0.3 - < 1.0%	Benzene, diethyl-
25550-14-5	>= 0.3 - < 3.0%	ethyltoluene
91-20-3	>= 0.1 - < 1.0%	naphthalene
25551-13-7	>= 0.0 - < 5.0%	Benzene, trimethyl-

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. Immediately remove contaminated clothing.

If inhaled:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:
After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.
Hazards: No applicable information available.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon dioxide, carbon monoxide, harmful vapours, nitrogen oxides, fumes/smoke, carbon black

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. If exposed to fire, keep containers cool by spraying with water. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Do not breathe vapour/aerosol/spray mists. Wear eye/face protection. If exposed to high vapour concentration, leave area immediately. Use personal protective clothing. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.
For large amounts: Pump off product.

7. Handling and Storage

Precautions for safe handling
Avoid aerosol formation. Avoid inhalation of mists/vapours. Avoid skin contact. No special measures necessary provided product is used correctly.

Conditions for safe storage, including any incompatibilities
No applicable information available.

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight.
Protect from temperatures below: 5 °C
The packed product must be protected from temperatures below the indicated one.
Protect from temperatures below: 40 °F
The packed product must be protected from temperatures below the indicated one.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

naphthalene	OSHA PEL	PEL 10 ppm 50 mg/m3 ; STEL value 15 ppm 75 mg/m3 ; TWA value 10 ppm 50 mg/m3 ;
	ACGIH TLV	TWA value 10 ppm ; STEL value 15 ppm ; Skin Designation ; The substance can be absorbed through the skin.
1,2,4-trimethylbenzene	OSHA PEL	TWA value 25 ppm 125 mg/m3 ;
	ACGIH TLV	TWA value 25 ppm ;
mesitylene	OSHA PEL	TWA value 25 ppm 125 mg/m3 ;
	ACGIH TLV	TWA value 25 ppm ;
Xylene	OSHA PEL	PEL 100 ppm 435 mg/m3 ; STEL value 150 ppm 655 mg/m3 ; TWA value 100 ppm 435 mg/m3 ;

	ACGIH TLV	TWA value 100 ppm ; STEL value 150 ppm ;
Stoddard solvent	OSHA PEL	PEL 500 ppm 2,900 mg/m3 ;
	ACGIH TLV	TWA value 100 ppm ;
Benzene, trimethyl-	OSHA PEL	TWA value 25 ppm 125 mg/m3 ;
	ACGIH TLV	TWA value 25 ppm ;
Naphtha (petroleum), hydrodesulfurized heavy	OSHA PEL	PEL 500 ppm 2,900 mg/m3 ; PEL 100 ppm 400 mg/m3 ; TWA value 100 ppm 400 mg/m3 ;
	ACGIH TLV	TWA value 100 ppm ;

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators.

Hand protection:
Wear chemical resistant protective gloves., Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Tightly fitting safety goggles (chemical goggles).

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Do not inhale gases/vapours/aerosols. Avoid contact with the skin, eyes and clothing. Avoid exposure - obtain special instructions before use. Handle in accordance with good building materials hygiene and safety practice. Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

9. Physical and Chemical Properties

Form:	liquid
Odour:	solvent-like
Odour threshold:	No applicable information available.
Colour:	clear
pH value:	The product has not been tested.
Melting point:	No applicable information available.
Boiling point:	137.22 - 171.11 °C
Sublimation temperature:	No applicable information available.
Flash point:	109 °F
Flammability:	not determined
Lower explosion limit:	0.9 %(V)
Upper explosion limit:	7.0 %(V)
Vapour pressure:	The product has not been tested.

Density:	0.9046 g/cm3 (20 °C)
Relative density:	No applicable information available.
Bulk density:	not applicable
Vapour density:	Heavier than air.
Partitioning coefficient n-octanol/water (log Pow):	not applicable
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	No applicable information available.
Viscosity, kinematic:	37 mm2/s (40 °C)
Solubility in water:	insoluble
Solubility (quantitative):	No applicable information available.
Solubility (qualitative):	No applicable information available.
Evaporation rate:	No applicable information available.
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
oxidizing agents

Hazardous decomposition products

Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: No applicable information available.

Oral
No applicable information available.

Inhalation
No applicable information available.

Dermal
No applicable information available.

Assessment other acute effects
Assessment of STOT single:
A single exposure may have relevant toxic effects on organs. Causes temporary irritation of the respiratory tract. Possible narcotic effects (drowsiness or dizziness).

Irritation / corrosion
Assessment of irritating effects: Eye contact causes irritation. Skin contact causes irritation.

Sensitization
Assessment of sensitization: No applicable information available.

Aspiration Hazard
Aspiration hazard May be harmful if swallowed and enters airways.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: Repeated exposure to small quantities may affect certain organs.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Acutely toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Additional information

Other ecotoxicological advice:

Do not discharge product into the environment without control. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. Residues should be disposed of in the same manner as the substance/product. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
USDOT

Hazard class:	C
Packing group:	III
ID number:	UN 1263
Hazard label:	CBL
Proper shipping name:	PAINT, COMBUSTIBLE LIQUID Classified as combustible liquid in containers greater than 119 gallons.

Sea transport
IMDG

Hazard class:	3
Packing group:	III
ID number:	UN 1263
Hazard label:	3
Marine pollutant:	NO
Proper shipping name:	PAINT

Air transport
IATA/ICAO

Hazard class:	3
Packing group:	III
ID number:	UN 1263
Hazard label:	3
Proper shipping name:	PAINT

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute; Chronic; Fire

CERCLA RQ	CAS Number	Chemical name
5000 LBS	98-82-8	cumene
1000 LBS	100-41-4; 108-88-3	ethylbenzene; Toluene
100 LBS	1330-20-7; 91-20-3	Xylene; naphthalene
10 LBS	71-43-2	Benzene

State regulations

State RTK	CAS Number	Chemical name
PA	8052-41-3	Stoddard solvent
	91-20-3	naphthalene
	98-82-8	cumene
	100-41-4	ethylbenzene
	1330-20-7	Xylene
	95-63-6	1,2,4-trimethylbenzene
	108-67-8	mesitylene
	64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy
MA	8052-41-3	Stoddard solvent
	91-20-3	naphthalene
	98-82-8	cumene
	100-41-4	ethylbenzene
	1330-20-7	Xylene
	95-63-6	1,2,4-trimethylbenzene
	108-67-8	mesitylene
	64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy
NJ	8052-41-3	Stoddard solvent
	91-20-3	naphthalene
	100-41-4	ethylbenzene
	1330-20-7	Xylene
	95-63-6	1,2,4-trimethylbenzene
	64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy
	98-82-8	cumene
	108-67-8	mesitylene

CA Prop. 65:
WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

NFPA Hazard codes:
Health : 2 Fire: 2 Reactivity: 0 Special:

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2015/07/13

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our

operations on society and the environment during production, storage, transport, use and disposal of our products.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE , IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
END OF DATA SHEET

Safety Data Sheet
KURE N SEAL 30

1. Product and Company Identification

Company
BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

24 Hour Emergency Response Information
CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Synonyms: Not Available. Usage: Product for construction chemicals

2. Hazards Identification

Emergency overview

May cause skin irritation.
Avoid all sources of ignition: heat, sparks, open flame.
Flammable Liquid

State of matter: liquid
Colour: clear
Odour: strong, solvent-like

Potential health effects

Acute toxicity:
The product has not been tested. The statement has been derived from the properties of the individual components.

Irritation / corrosion:
Not irritating to eyes and skin. The product has not been tested. The statement has been derived from the properties of the individual components.

Chronic toxicity:

Repeated dose toxicity: Repeated exposures may cause adverse effects on the brain, as seen in animal studies.

Potential environmental effects

Aquatic toxicity:
The product has not been tested.

3. Composition / Information on Ingredients

CAS Number	Content (W/W)	Hazardous ingredients
64742-95-6	>= 60.0 - <= 100.0 %	solvent naphtha

4. First-Aid Measures

General advice:
First aid personnel should pay attention to their own safety. Remove contaminated clothing.

If inhaled:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:
After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions.

5. Fire-Fighting Measures

Flash point: 37.78 °C

Suitable extinguishing media:
foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Hazards during fire-fighting:
carbon monoxide, carbon dioxide, harmful vapours, nitrogen oxides, fumes/smoke, carbon black

Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Further information:
Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions:
Use personal protective clothing. Do not breathe vapour/aerosol/spray mists. Sources of ignition should be kept well clear. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions:
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Cleanup:
For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.
For large amounts: Pump off product.

7. Handling and Storage

Handling

General advice:
Avoid aerosol formation. Avoid inhalation of mists/vapours. Avoid skin contact. No special measures necessary provided product is used correctly.

Protection against fire and explosion:
Keep away from heat. Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Storage

General advice:
Keep only in the original container in a cool, well-ventilated place. Protect from direct sunlight.

Storage incompatibility:
General advice: Segregate from metals. Segregate from lyes. Segregate from oxidants. Segregate from foods and animal feeds.

8. Exposure Controls and Personal Protection

Personal protective equipment

Respiratory protection:
When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators.

Hand protection:
Wear chemical resistant protective gloves., Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Tightly fitting safety goggles (chemical goggles).

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Avoid contact with the skin, eyes and clothing. In order to prevent contamination while handling, closed working clothes and working gloves should be used. Handle in accordance with good building materials hygiene and safety practice. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

9. Physical and Chemical Properties

Form:	liquid	
Odour:	strong, solvent-like	
Odour threshold:	No data available.	
Colour:	clear	
pH value:		not applicable
:		Unspecified

Vapour pressure:		The product has not been tested.
Density:	0.91 g/cm3	(20 °C)
Relative density:	0.91	
Bulk density:		not applicable
Vapour density:		Heavier than air.
Partitioning coefficient n-octanol/water (log Pow):		No data available.
Viscosity, dynamic:		No data available.
Solubility in water:		slightly soluble
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.	

10. Stability and Reactivity

Substances to avoid:
strong acids, strong bases, strong oxidizing agents

Hazardous reactions:
The product is stable if stored and handled as prescribed/indicated.

Decomposition products:
Thermal decomposition products: carbon oxides

Oxidizing properties:
Based on its structural properties the product is not classified as oxidizing.

11. Toxicological information

Acute toxicity

Information on: solvent naphtha
Assessment of acute toxicity:
Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Oral:

No data available.

Inhalation:

No data available.

Dermal:

No data available.

Irritation / corrosion

Information on: solvent naphtha
Assessment of irritating effects:
Skin contact causes irritation. Not irritating to the eyes. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.
---

12. Ecological Information

Other adverse effects:

Ecological data are not available.

13. Disposal considerations

Waste disposal of substance:
Do not discharge substance/product into sewer system. Dispose of in accordance with local authority regulations.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
TDG

Hazard class:	3
Packing group:	III
ID number:	UN 1263
Hazard label:	3
Proper shipping name:	PAINT

Sea transport
IMDG

Hazard class:	3
Packing group:	III
ID number:	UN 1263
Hazard label:	3
Marine pollutant:	NO
Proper shipping name:	PAINT

Air transport
IATA/ICAO

Hazard class:	3
Packing group:	III
ID number:	UN 1263
Hazard label:	3
Proper shipping name:	PAINT

15. Regulatory Information

Federal Regulations

Registration status:

Chemical	DSL, CA	released; restriction on use / listed

CEPA, Significant New Activity Restriction (SNAc)
Not for use in products designed to be used by children under the age of 7.
SNAc 12541

WHMIS classification: B2: Flammable Liquid

D2B: Materials Causing Other Toxic Effects - Toxic material

This product is WHMIS controlled.
THIS PRODUCT HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CPR AND THE MSDS CONTAINS ALL THE INFORMATION REQUIRED BY THE CPR.

16. Other Information

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

SDS Prepared by:

BASF NA Product Regulations
msds@basf.com
BASF HOTLINE (800) 454 – COPE (2673)

SDS Prepared on: 2013/07/22

END OF DATA SHEET

We create chemistry

Safety Data Sheet
MasterLife CI 30

1. Identification

Product identifier used on the label

MasterLife CI 30

Recommended use of the chemical and restriction on use
Suitable for use in industrial sector: cement industry
Recommended use*: for industrial and professional users

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: No data available.

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Eye Dam./Irrit.	1	Serious eye damage/eye irritation

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H318	Causes serious eye damage.

Precautionary Statements (Prevention):

P280	Wear eye/face protection.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name
10124-37-5	>= 0.0 - < 3.0%	calcium nitrate

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. Immediately remove contaminated clothing.

If inhaled:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:
After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.
Hazards: No applicable information available.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon dioxide, carbon monoxide, harmful vapours, nitrogen oxides, fumes/smoke, carbon black

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. If exposed to fire, keep containers cool by spraying with water. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/aerosol/spray mists. Wear eye/face protection. If exposed to high vapour concentration, leave area immediately. Use personal protective clothing. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.
For large amounts: Pump off product.

7. Handling and Storage

Precautions for safe handling

Avoid aerosol formation. Avoid inhalation of mists/vapours. Avoid skin contact. No special measures necessary provided product is used correctly.

Protection against fire and explosion:
Any material that has dried will become an oxidizer which may provide oxygen to combustible materials.

Conditions for safe storage, including any incompatibilities

No applicable information available.

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight.
Protect from temperatures below: 0 °C
The packed product must be protected from temperatures below the indicated one.
Protect from temperatures below: 32 °F
The packed product must be protected from temperatures below the indicated one.

8. Exposure Controls/Personal Protection

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators.

Hand protection:
Wear chemical resistant protective gloves., Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields.

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Do not inhale gases/vapours/aerosols. Avoid contact with the skin, eyes and clothing. Avoid exposure - obtain special instructions before use. Handle in accordance with good building materials hygiene and safety practice. Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

9. Physical and Chemical Properties

Form:	liquid
Odour:	characteristic
Odour threshold:	No applicable information available.
Colour:	yellow
pH value:	7 - 12
Melting point:	No applicable information available.
Boiling point:	approx. 108 °C
Sublimation point:	No applicable information available.
Flash point:	Non-flammable.
Flammability:	not flammable
Autoignition:	not applicable
Vapour pressure:	No applicable information available.
Density:	approx. 1.29 g/cm3 (20 °C)
Relative density:	No applicable information available.
Vapour density:	No applicable information available.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	No applicable information available.
Viscosity, kinematic:	No applicable information available.
Solubility in water:	(20 °C) soluble
Miscibility with water:	(20 °C) miscible in all proportions
Solubility (quantitative):	No applicable information available.
Solubility (qualitative):	No applicable information available.
Evaporation rate:	No applicable information available.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:
No corrosive effect on metal.

Oxidizing properties:
not fire-propagating

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
strong acids, strong bases, strong oxidizing agents, strong reducing agents

Hazardous decomposition products

Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Based on available Data, the classification criteria are not met.

Oral
No applicable information available.

Inhalation
No applicable information available.

Dermal
No applicable information available.

Assessment other acute effects
No applicable information available.

Irritation / corrosion
Assessment of irritating effects: May cause severe damage to the eyes.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No reliable data was available concerning repeated dose toxicity. Based on available Data, the classification criteria are not met.

Genetic toxicity
Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Carcinogenicity
Assessment of carcinogenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Reproductive toxicity
Assessment of reproduction toxicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Teratogenicity
Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Other Information
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Based on available Data, the classification criteria are not met. There is a high probability that the product is not acutely harmful to aquatic organisms.

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Inherently biodegradable. The insoluble fraction can be removed by mechanical means in suitable waste water treatment plants.
The polymer component of the product is poorly biodegradable.

Bioaccumulative potential

Assessment bioaccumulation potential
Discharge into the environment must be avoided.

Mobility in soil

Assessment transport between environmental compartments
No data available.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. Residues should be disposed of in the same manner as the substance/product. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute;

EPCRA 313:

CAS Number	Chemical name
10124-37-5	calcium nitrate

State regulations

State RTK	CAS Number	Chemical name
NJ	10124-37-5	calcium nitrate

NFPA Hazard codes:
Health : 3 Fire: 0 Reactivity: 0 Special:

HMIS III rating
Health: 3 Flammability: 0 Physical hazard: 0

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/06/30

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our

operations on society and the environment during production, storage, transport, use and disposal of our products.

IMPORTANT: WHILE THE DESCRIPTIONS, DESIGNS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE , IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU MAKE TESTS TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
END OF DATA SHEET

We create chemistry

Safety Data Sheet
MasterPolyheed 997

1. Identification

Product identifier used on the label

MasterPolyheed 997

Recommended use of the chemical and restriction on use
Recommended use*: for industrial and professional users

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: No data available.

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Eye Dam./Irrit.	1	Serious eye damage/eye irritation

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:
H318 Causes serious eye damage.

Precautionary Statements (Prevention):
P280 Wear eye/face protection.

Precautionary Statements (Response):
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER or doctor/physician.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name
7631-99-4	>= 25.0 - < 50.0%	Sodium nitrate
140-07-8	>= 7.0 - < 15.0%	Ethanol, 2,2',2'',2'''-(1,2-ethanediyldinitrilo)tetrakis-
540-72-7	>= 3.0 - < 10.0%	sodium thiocyanate
111-42-2	>= 0.1 - < 1.0%	2,2'-iminodiethanol
102-71-6	>= 0.0 - < 3.0%	2,2',2''-nitrilotriethanol
533-74-4	>= 0.0 - < 0.2%	dazomet

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. Immediately remove contaminated clothing.

If inhaled:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:
After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.
Hazards: No applicable information available.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon dioxide, carbon monoxide, harmful vapours, nitrogen oxides, fumes/smoke, carbon black

Advice for fire-fighters

Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. If exposed to fire, keep containers cool by spraying with water. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Do not breathe vapour/aerosol/spray mists. Wear eye/face protection. If exposed to high vapour concentration, leave area immediately. Use personal protective clothing. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.
For large amounts: Pump off product.

7. Handling and Storage

Precautions for safe handling
Avoid aerosol formation. Avoid inhalation of mists/vapours. Avoid skin contact. No special measures necessary provided product is used correctly.

Conditions for safe storage, including any incompatibilities
No applicable information available.

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight.
Protect from temperatures below: 0 °C
The packed product must be protected from temperatures below the indicated one.
Protect from temperatures below: 32 °F
The packed product must be protected from temperatures below the indicated one.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

2,2',2''-nitrilotriethanol		
	ACGIH TLV	TWA value 5 mg/m3 ; TWA value 5 mg/m3 ;
2,2'-iminodiethanol	OSHA PEL	TWA value 3 ppm 15 mg/m3 ;
	ACGIH TLV	Skin Designation Inhalable fraction and vapor ; The substance can be absorbed through the skin. TWA value 1 mg/m3 Inhalable fraction and vapor ;

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators.

Hand protection:
Wear chemical resistant protective gloves., Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Tightly fitting safety goggles (chemical goggles).

Body protection:
Body protection must be chosen based on level of activity and exposure.

General safety and hygiene measures:
Do not inhale gases/vapours/aerosols. Avoid contact with the skin, eyes and clothing. Avoid exposure - obtain special instructions before use. Handle in accordance with good building materials hygiene and safety practice. Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

9. Physical and Chemical Properties

Form:	liquid
Odour:	musty
Odour threshold:	No applicable information available.
Colour:	dark brown
pH value:	approx. 8
Melting point:	approx. 0 °C
Information on: Water	
Melting point:	0 °C

Boiling point:	100 °C
Information on: Water	
Boiling point:	100 °C

Sublimation point:	No applicable information available.
Flash point:	A flash point determination is unnecessary due to the high water content.
Flammability:	not flammable
Upper explosion limit:	No applicable information available.
Autoignition:	not applicable
Information on: Water	
Vapour pressure:	23.4 hPa (20 °C) Literature data.

Density:	approx. 1.27 g/cm3 (20 °C)
Relative density:	approx. 1.27
Vapour density:	Heavier than air.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, kinematic:	No applicable information available.
Solubility in water:	(20 °C) soluble
Miscibility with water:	(20 °C) miscible in all proportions
Solubility (quantitative):	No applicable information available.
Solubility (qualitative):	No applicable information available.
Evaporation rate:	No applicable information available.
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
strong acids, strong bases, strong oxidizing agents, strong reducing agents

Hazardous decomposition products

Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Based on available Data, the classification criteria are not met.

Oral
No applicable information available.

Inhalation
No applicable information available.

Dermal
No applicable information available.

Assessment other acute effects
No applicable information available.

Irritation / corrosion
Assessment of irritating effects: Risk of serious damage to eyes.

Sensitization
Assessment of sensitization: Based on available Data, the classification criteria are not met.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: Based on available Data, the classification criteria are not met.

Genetic toxicity
Assessment of mutagenicity: Based on available Data, the classification criteria are not met.

Carcinogenicity
Assessment of carcinogenicity: Based on available Data, the classification criteria are not met.

Reproductive toxicity
Assessment of reproduction toxicity: Based on available Data, the classification criteria are not met.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11., Further important symptoms and effects are so far not known.

12. Ecological Information

No applicable information available.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. Residues should be disposed of in the same manner as the substance/product. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Acute;

CERCLA RQ	CAS Number	Chemical name
1000 LBS	7664-93-9	Sulfuric acid
100 LBS	111-42-2; 123-91-1	2,2'-iminodiethanol; 1,4-dioxane
10 LBS	75-21-8	Ethylene Oxide

State regulations

State RTK	CAS Number	Chemical name
PA	7631-99-4	Sodium nitrate
	111-42-2	2,2'-iminodiethanol
	102-71-6	2,2',2"-nitrilotriethanol
MA	7631-99-4	Sodium nitrate
	111-42-2	2,2'-iminodiethanol
	102-71-6	2,2',2"-nitrilotriethanol
NJ	111-42-2	2,2'-iminodiethanol
	7631-99-4	Sodium nitrate
	102-71-6	2,2',2"-nitrilotriethanol

CA Prop. 65:
WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

NFPA Hazard codes:
Health : 3 Fire: 0 Reactivity: 0 Special:

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2015/12/22

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED OR DESIGNS, DATA OR INFORMATION SET FORTH, OR THAT THE PRODUCTS, DESIGNS, DATA OR INFORMATION MAY BE USED WITHOUT INFRINGING THE INTELLECTUAL PROPERTY RIGHTS OF OTHERS. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, DATA OR DESIGNS PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, YOU EXPRESSLY UNDERSTAND AND AGREE THAT THE DESCRIPTIONS, DESIGNS, DATA, AND INFORMATION FURNISHED BY OUR COMPANY HEREUNDER ARE GIVEN GRATIS AND WE ASSUME NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DESIGNS, DATA AND INFORMATION GIVEN OR RESULTS OBTAINED, ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.
END OF DATA SHEET

Safety Data Sheet
MasterRheobuild 1000 also RHEOBUILD 1000

1. Identification

Product identifier used on the label

MasterRheobuild 1000 also RHEOBUILD 1000

Recommended use of the chemical and restriction on use
Suitable for use in industrial sector: cement industry
Recommended use*: for industrial and professional users

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: Solution based on: naphthalene sulfonates admixture

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

No need for classification according to GHS criteria for this product.

Label elements

The product does not require a hazard warning label in accordance with GHS criteria.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

No particular hazards known.

4. First-Aid Measures

Description of first aid measures

General advice:
First aid personnel should pay attention to their own safety. Immediately remove contaminated clothing.

If inhaled:
If difficulties occur after vapour/aerosol has been inhaled, remove to fresh air and seek medical attention.

If on skin:
After contact with skin, wash immediately with plenty of water and soap. Under no circumstances should organic solvent be used. If irritation develops, seek medical attention.

If in eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention. Do not induce vomiting unless told to by a poison control center or doctor.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.
Hazards: No applicable information available.

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:	Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
carbon dioxide, carbon monoxide, harmful vapours, nitrogen oxides, fumes/smoke, carbon black

Advice for fire-fighters
Protective equipment for fire-fighting:
Wear a self-contained breathing apparatus.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. If exposed to fire, keep containers cool by spraying with water. Collect contaminated extinguishing water separately, do not allow to reach sewage or effluent systems. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Do not breathe vapour/aerosol/spray mists. Wear eye/face protection. If exposed to high vapour concentration, leave area immediately. Use personal protective clothing. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.
For large amounts: Pump off product.

7. Handling and Storage

Precautions for safe handling
Avoid aerosol formation. Avoid inhalation of mists/vapours. Avoid skin contact. No special measures necessary provided product is used correctly.

Conditions for safe storage, including any incompatibilities
No applicable information available.

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight.
Protect from temperatures below: 40 °F
The packed product must be protected from temperatures below the indicated one.
Protect from temperatures below: 5 °C

The packed product must be protected from temperatures below the indicated one.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
Wear respiratory protection if ventilation is inadequate.

Hand protection:
Wear chemical resistant protective gloves., Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields.

Body protection:
light protective clothing

General safety and hygiene measures:
Do not inhale gases/vapours/aerosols. Avoid contact with the skin, eyes and clothing. Avoid exposure - obtain special instructions before use. Handle in accordance with good building materials hygiene and safety practice. Wearing of closed work clothing is recommended. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

9. Physical and Chemical Properties

Form:	liquid
Odour:	characteristic
Odour threshold:	No applicable information available.
Colour:	dark brown
pH value:	6 - 10 (20 °C)
Melting temperature:	The product has not been tested.
boiling temperature:	> 100 °C
Sublimation point:	No applicable information available.
Flash point:	> 100 °C
Flammability:	not flammable
Autoignition:	not applicable
Vapour pressure:	The product has not been tested.
Density:	approx. 1.17 - 1.22 g/cm3 (20 °C)
Relative density:	1.21
Self-ignition temperature:	not self-igniting
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, kinematic:	No applicable information available.

Solubility in water:	(20 °C) soluble
Miscibility with water:	(20 °C) miscible in all proportions
Solubility (quantitative):	No applicable information available.
Solubility (qualitative):	No applicable information available.
Evaporation rate:	not determined

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals:
No corrosive effect on metal.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
strong acids, strong bases, strong oxidizing agents, strong reducing agents

Hazardous decomposition products

Decomposition products:
No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Virtually nontoxic after a single ingestion. Virtually nontoxic by inhalation. Virtually nontoxic after a single skin contact. Based on available Data, the classification criteria are not met. The product has not been tested. The statement has been derived from the properties of the individual components.

Oral
No applicable information available.

Inhalation

No applicable information available.

Dermal
No applicable information available.

Irritation / corrosion
Assessment of irritating effects: No irritation is expected under intended use and appropriate handling. Based on available Data, the classification criteria are not met.

Sensitization
Assessment of sensitization: There is no evidence of a skin-sensitizing potential. Based on available Data, the classification criteria are not met. The product has not been tested. The statement has been derived from the properties of the individual components.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No reliable data was available concerning repeated dose toxicity. Based on available Data, the classification criteria are not met.

Genetic toxicity
Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Carcinogenicity
Assessment of carcinogenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Reproductive toxicity
Assessment of reproduction toxicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Teratogenicity
Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Other Information
Based on our experience and the information available, no adverse health effects are expected if handled as recommended with suitable precautions for designated uses. The product has not been tested. The statements on toxicology have been derived from the properties of the individual components.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Based on available Data, the classification criteria are not met. There is a high probability that the product is not acutely harmful to aquatic organisms.

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Inherently biodegradable. The insoluble fraction can be removed by mechanical means in suitable waste water treatment plants.

Bioaccumulative potential

Assessment bioaccumulation potential
Discharge into the environment must be avoided.

Mobility in soil

Assessment transport between environmental compartments
No data available.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:
Dispose of in accordance with national, state and local regulations. Residues should be disposed of in the same manner as the substance/product. Do not discharge into drains/surface waters/groundwater.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:

Chemical	TSCA, US	released / listed

EPCRA 311/312 (Hazard categories): Not hazardous;

CERCLA RQ	CAS Number	Chemical name
100 LBS	50-00-0	Formaldehyde

CA Prop. 65:
WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER.

NFPA Hazard codes:
Health : 1 Fire: 0 Reactivity: 0 Special:

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/02/19

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET

We create chemistry

Safety Data Sheet
MasterSet FP 20 also POZZUTEC 20® PLUS

1. Identification

Product identifier used on the label

MasterSet FP 20 also POZZUTEC 20* PLUS

Recommended use of the chemical and restriction on use
Recommended use*: for industrial and professional users

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification
Chemical family: admixture

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox.	4 (oral)	Acute toxicity
Skin Corr./Irrit.	1B	Skin corrosion/irritation
Eye Dam./Irrit.	1	Serious eye damage/eye irritation
Skin Sens.	1A	Skin sensitization
Carc.	1B	Carcinogenicity

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H350	May cause cancer.
H314	Causes severe skin burns and eye damage.

Precautionary Statements (Prevention):

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P201	Obtain special instructions before use.
P260	Do not breathe dust or mist.
P202	Do not handle until all safety precautions have been read and understood.
P272	Contaminated work clothing should not be allowed out of the workplace.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P362 + P364	Take off contaminated clothing and wash it before reuse.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

Labeling of special preparations (GHS):
The following percentage of the mixture consists of components(s) with unknown hazards regarding the acute toxicity: 1 - 3 % oral

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Weight %	Chemical name

540-72-7	>= 0.0 - < 7.0%	sodium thiocyanate
5395-50-6	>= 0.0 - < 3.0%	tetramethylolacethylenediurea
10124-37-5	>= 0.0 - < 75.0%	calcium nitrate

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Keep patient calm, remove to fresh air, seek medical attention. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

If on skin:
Immediately wash thoroughly with plenty of water, apply sterile dressings, consult a skin specialist.

If in eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

If swallowed:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.
Hazards: No applicable information available.

Indication of any immediate medical attention and special treatment needed

Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media:
foam, water spray, dry powder, carbon dioxide

Unsuitable extinguishing media for safety reasons:
water jet

Special hazards arising from the substance or mixture

Hazards during fire-fighting:
carbon dioxide, carbon monoxide, nitrogen oxides, fumes/smoke, carbon black, corrosive gases/vapours

Advice for fire-fighters
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Use personal protective clothing. Do not breathe vapour/aerosol/spray mists. Handle in accordance with good building materials hygiene and safety practice.

Environmental precautions
Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up
For small amounts: Pick up with inert absorbent material (e.g. sand, earth etc.). Dispose of contaminated material as prescribed.
For large amounts: Pump off product.

7. Handling and Storage

Precautions for safe handling
Keep away from sources of ignition - No smoking. Keep container tightly sealed. Handle and open container with care.

Protection against fire and explosion:
The product is not an oxidizer, not self-combustible and not explosive.

Conditions for safe storage, including any incompatibilities
No applicable information available.

Suitable materials for containers: High density polyethylene (HDPE)

Further information on storage conditions: Keep only in the original container in a cool, dry, well-ventilated place away from ignition sources, heat or flame. Protect from direct sunlight. Store protected against freezing.
Protect from temperatures below: 0 °C
The packed product must be protected from temperatures below the indicated one.
Protect from temperatures below: 32 °F
The packed product must be protected from temperatures below the indicated one.

8. Exposure Controls/Personal Protection

No occupational exposure limits known.

Advice on system design:
No applicable information available.

Personal protective equipment

Respiratory protection:
Wear a NIOSH-certified (or equivalent) respirator as necessary.

Hand protection:
Wear chemical resistant protective gloves., Protective glove selection must be based on the user's assessment of the workplace hazards.

Eye protection:
Tightly fitting safety goggles (chemical goggles) and face shield.

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

General safety and hygiene measures:
Do not inhale gases/vapours/aerosols. Avoid contact with the skin, eyes and clothing. Handle in accordance with good building materials hygiene and safety practice. When using, do not eat, drink or smoke. Hands and/or face should be washed before breaks and at the end of the shift. At the end of the shift the skin should be cleaned and skin-care agents applied. Gloves must be inspected regularly and prior to each use. Replace if necessary (e.g. pinhole leaks).

9. Physical and Chemical Properties

Form:	liquid
Odour:	slight odour
Odour threshold:	No applicable information available.
Colour:	brown
pH value:	approx. 3.5 - 6.5
Melting point:	No applicable information available.
boiling temperature:	approx. 105 °C
Sublimation point:	No applicable information available.
Flash point:	A flash point determination is unnecessary due to the high water content.
Flammability:	not flammable
Lower explosion limit:	No applicable information available.
Upper explosion limit:	No applicable information available.
Autoignition:	not applicable
Vapour pressure:	No applicable information available.
Density:	approx. 1.35 g/cm3 (20 °C)
Relative density:	No applicable information available.
Vapour density:	Heavier than air.
Partitioning coefficient n-octanol/water (log Pow):	No data available.
Thermal decomposition:	No decomposition if stored and handled as prescribed/indicated.
Viscosity, dynamic:	No applicable information available.
Viscosity, kinematic:	No applicable information available.
Solubility in water:	(20 °C) soluble
Miscibility with water:	(20 °C) miscible
Solubility (quantitative):	No applicable information available.
Solubility (qualitative):	No applicable information available.
Evaporation rate:	No applicable information available.

Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Chemical stability
The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions
The product is stable if stored and handled as prescribed/indicated.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
zinc, aluminium, oxidizing agents, strong alkalies, acids

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition:
No decomposition if stored and handled as prescribed/indicated.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: Harmful if swallowed.

Oral
Type of value: ATE
Value: 1,730 mg/kg

Inhalation
No applicable information available.

Dermal
No applicable information available.

Assessment other acute effects
No applicable information available.

Irritation / corrosion

Assessment of irritating effects: Causes serious eye damage. Causes severe burns. The product has not been tested. The statement has been derived from the properties of the individual components.

Sensitization
Assessment of sensitization: May cause sensitization by skin contact.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: No reliable data was available concerning repeated dose toxicity. Based on available Data, the classification criteria are not met.

Genetic toxicity
Assessment of mutagenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Carcinogenicity
Assessment of carcinogenicity: May cause cancer.

Information on: Formaldehyde
Assessment of carcinogenicity: NTP listed carcinogen The International Agency for Research on Cancer (IARC) has classified formaldehyde as a Group 1 (known) human carcinogen based on epidemiological evidence linking formaldehyde exposure to occurrence of nasopharyngeal cancer and leukemia. Current regulatory information is provided in this MSDS. No adverse health effects are anticipated if recommended personal protective equipment and industrial hygiene practices are used.

Reproductive toxicity
Assessment of reproduction toxicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Teratogenicity
Assessment of teratogenicity: The chemical structure does not suggest a specific alert for such an effect. Based on available Data, the classification criteria are not met.

Other Information
The product has not been tested. The statement has been derived from the properties of the individual components.

Symptoms of Exposure

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:

Based on available Data, the classification criteria are not met. There is a high probability that the product is not acutely harmful to aquatic organisms.

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Inherently biodegradable. The insoluble fraction can be removed by mechanical means in suitable waste water treatment plants.

Bioaccumulative potential

Assessment bioaccumulation potential
Discharge into the environment must be avoided.

Mobility in soil

Assessment transport between environmental compartments
No data available.

Additional information

Other ecotoxicological advice:
Do not discharge product into the environment without control. The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

13. Disposal considerations

Waste disposal of substance:
Observe national and local legal requirements. Residues should be disposed of in the same manner as the substance/product.

Container disposal:
Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned.

14. Transport Information

Land transport
USDOT

Not classified as a dangerous good under transport regulations

Sea transport
IMDG

Not classified as a dangerous good under transport regulations

Air transport
IATA/ICAO

Not classified as a dangerous good under transport regulations

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released / listed

EPCRA 311/312 (Hazard categories): Chronic; Acute

CERCLA RQ	CAS Number	Chemical name
1000 LBS	1310-73-2	Sodium Hydroxide

State regulations

State RTK	CAS Number	Chemical name
NJ	10124-37-5	calcium nitrate
PA	50-00-0	Formaldehyde

CA Prop. 65:
WARNING: THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER AND BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.

NFPA Hazard codes:
Health : 3 Fire: 0 Reactivity: 0 Special:

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/11/22

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Hydrochloric Acid, 31 – 36%

Product Name: Hydrochloric Acid, 31 – 36.7%

Identified Uses: acid etching, steel pickling, oil and gas, ore and mineral, food processing, pharmaceutical, organic chemical synthesis

Company Information:
ASHTA Chemicals Inc.
P.O. Box 858
Ashtabula Ohio 44005
Phone: (440) 997-5221
Fax: (440) 998-0286
24-hour Emergency Phone: CHEMTREC: (800) 424-9300

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

GHS label elements, including precautionary statements:

Signal Word: **Danger**

Pictogram(s):

Hazard Statements	
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
Precautionary Statements	
P234	Keep only in original container.
P261	Avoid breathing dust/ fume/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water. Shower.

P304 + P340 + P310	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P403 + P233	Store in a well-ventilated place. Keep container with a resistant inner liner.
P405	Store locked up.
P406	Store in corrosive resistant stainless steel container with a resistant inner liner.
P501	Dispose of contents/ container to an approved waste disposal plant.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:

CHEMICAL NAME:	Hydrochloric acid
TRADE NAME:	Hydrochloric acid, 31 – 36%
SYNONYMS:	Muriatic acid, Chlorohydric acid, Hydrogen Chloride
C.A.S:	7647-01-0
EC:	231-595-7
WHMIS:	D2A, E
CHEMICAL FORMULA:	HCl (in aqueous solution)
CHEMICAL FAMILY:	Inorganic Acid

SECTION 4 FIRST AID MEASURES

Description of first aid measures:
Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give humidified air. Give oxygen, but only by a certified physician. Consult a physician.

In case of skin contact
Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Remove contact lenses if present and easy to do. Continue rinsing eyes during transport to medical facility.

If swallowed
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Consult a physician.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point (Method):	Non-combustible.
Extinguishing Media:	Use extinguishing agents compatible with acid and appropriate for the burning material. Use water spray to keep fire-exposed containers cool.
Auto Ignition Temp:	Non-combustible.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus and full protective clothing. In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials.
Unusual Fire/Explosion Hazards:	Releases flammable hydrogen gas when reacting with metals.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Environmental Precautions:
Use closed systems when possible. Provide local exhaust ventilation where vapor or mist may be generated. Avoid discharge into drains, water courses or onto the ground.

Containment and Cleaning:
Follow preplanned emergency procedures. Only properly equipped, trained, functional personnel should attempt to contain a leak. All other personnel should be evacuated from the danger area. Using full protective equipment, apply appropriate emergency device or other securement technology to stop the leak if possible.

Small Spill:	Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container. If necessary: neutralize the residue with a dilute solution of sodium carbonate.
Large Spill:	Corrosive liquid. Stop leak if without risk. Do not touch spilled material. Use water spray curtain to knock down vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Neutralize the residue with a dilute solution of sodium carbonate. Be careful that vapor is not present at a concentration level above TLV.

SECTION 7: HANDLING AND STORAGE

Precautions to be taken for handling and storage:
Wear appropriate personal protective equipment. Do not get in eyes, on skin, on clothing. Do not breathe mist or vapor. Observe good industrial hygiene practices. Do not empty into drains. Use caution when combining with water; DO NOT add water to acid, ALWAYS add acid to water while stirring to prevent release of heat, steam and fumes. Store in a well-ventilated place. Store away from incompatible materials. Store closed containers in a clean, cool, open or well ventilated area. Keep out of sun.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Principal Component: Hydrochloric Acid
Occupational Exposure Limits:
Regulatory Limits:

Component	OSHA Final PEL TWA	OSHA Final PEL STEL	OSHA Final PEL Ceiling
Hydrochloric Acid Mixture	---	---	5 ppm 7.59 mg/m^3

ACGIH TLV = 5 ppm (7.59 mg/m^3) TWA

NIOSH IDLH = 50 ppm (as HCl, 2010)

Exposure Controls:

Eye Protection: Tightly fitting safety goggles. Face shield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Respiratory Protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Other Protection: Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Ventilation Recommended: Exhaust ventilation is required to meet PEL limits.

Glove Type Recommended: Wear neoprene, nitrile, butyl rubber or PVC gloves to prevent exposure.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties:

Appearance	Colorless to light yellow liquid
Odor	Pungent (irritating/strong)
Odor Threshold	0.3ppm (can cause olfactory fatigue)
pH	<1 (in aqueous solution)
Melting point/freezing point	-30°C (-22°F)
Initial boiling point	>100°C (>212°F)
Flash point	Not applicable
Auto-ignition Temp	Not applicable
Evaporation rate	No data available

Decomposition temperature	No data available
Flammability (solid, gas)	Not combustible
Upper/lower flammability or explosive limits	Not combustible
Water solubility	100%
Molecular Weight	36.46
Relative Density (Specific Gravity)	1.16 (32% HCl solution) 1.19 (36.5% HCl solution)
Bulk Density	8.75 lbs/gal (32% HCl solution) 9.83 lbs/gal (36.5% HCl solution)
Vapor Density (air = 1)	1.267 at 20 °C
Vapor Pressure	84 mm Hg @ 20°C
Partition Coefficient: n-octanol/water	No data available

SECTION 10: STABILITY AND REACTIVITY

Stability: Hydrochloric acid is stable under normal conditions and pressures.

Conditions to avoid: Incompatible materials, metals, excess heat, bases.

Incompatibility: Bases, amines, metals, permanganates, (e.g. potassium permanganate), fluorine, metal acetylides, hexalithium disilicide.

Hazardous decomposition products: Hydrogen chloride, chlorine, hydrogen gas.

Polymerization: Hazardous polymerization WILL NOT occur.

SECTION 11: TOXICOGICAL INFORMATION

Information on likely routes of exposure:

Inhalation: Vapors and mist will irritate throat and respiratory system and cause coughing.

Skin contact: Causes skin burns.

Eye contact: Causes eye burns.

Ingestion: Harmful if swallowed. Causes digestive tract burns. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.

Symptoms related to the physical, chemical and toxicological characteristics:

Contact with this material will cause burns to the skin, eyes and mucous membranes. Permanent eye damage including blindness could result.

Information on toxicological effects:

Acute toxicity: Harmful if swallowed.

Skin corrosion/irritation: Causes severe skin burns and eye damage.

Serious eye damage/eye Irritation: Causes serious eye damage.

Respiratory sensitization: Not available.

Skin sensitization:	No data available.
Germ cell mutagenicity:	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity:	This product is not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.
Reproductive toxicity:	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure:	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure:	No data available.
Aspiration hazard:	Not available.
Chronic effects:	Prolonged inhalation may be harmful.

Components Species Test Results:
Hydrochloric acid (CAS# 7647-01-0)

Rat - Inhalation LC_{50}:	3124 ppm, (1 hour)
Rabbit - Dermal LD_{50}:	5010 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	Because of the low pH of this product, it would be expected produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.
Aquatic Toxicity:	This material is toxic to fish and aquatic organisms. Most aquatic species do not tolerate pH lower than 5.5 for any extended period.
Fish Toxicity:	Fish LC_{50} Mosquito fish: 282 mg/l, 96 hours Fish LC_{50} Bluegill: 3.6 mg/l, 48 hours
Persistence and degradability:	Not biodegradable. Hydrochloric acid will likely be neutralized to chloride by alkalinity present in natural environment..
Bioaccumulative Potential:	No data available.
Mobility in soil:	Hydrochloric acid will be neutralized by naturally occurring alkalinity. The acid will permeate soil, dissolving some soil material and will then neutralize.
Other adverse effects:	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation

SECTION 13: DISPOSAL CONSIDERATIONS

Collect and reclaim or dispose in sealed containers at a properly licensed waste disposal site. This material , if not neutralized, must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national or international regulations.

SECTION 14: TRANSPORT INFORMATION

Shipping:

Usual Shipping Containers:	Tank cars, bulk tankers.
Usual Shelf Life:	Indefinite (life of containers).
Storage/Transport Temperatures:	Ambient.

Suitable Storage:

Materials/Coatings:	Teflon, Tygon, Rubber, PVC and polypropylene materials.

D.O.T. Information:

Labeling:	Corrosive
D.O.T. Identification Number	UN 1789
D.O.T. Shipping Name:	Hydrochloric Acid
Hazard Class:	8
Packing Group:	II
Hazard Guide:	157
Placard:	UN 1789

SECTION 15 REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
The following components are subject to reporting levels established by SARA Title III, Section 313:
Hydrochloric Acid CAS#: 7647-01-0

SARA 311/312 Hazards
Acute health hazard, reactive hazard.

Massachusetts Right To Know Components
Hydrochloric Acid CAS#: 7647-01-0
Pennsylvania Right To Know Components
Hydrochloric Acid CAS#: 7647-01-0
New Jersey Right To Know Components
Hydrochloric Acid CAS#: 7647-01-0

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other reproductive harm.

OSHA PSM/RMP Threshold for Accidental Release:
CAS# 7647-01-0 is regulated under OSHA PSM ***only*** if anhydrous HCl.
CAS# 7647-01-0 is regulated under EPA RMP ***only*** if $\geq$ 37% HCl.

Toxic Substances Control Act (TSCA):
Hydrochloric Acid CAS#: 7647-01-0

Comprehensive Environmental Response Compensation Liability Act: (CERCLA)
Hydrochloric Acid CAS#: 7647-01-0

SECTION 16 OTHER INFORMATION

NFPA Rating:
Health hazard: 3
Fire Hazard: 0
Reactivity Hazard: 1

This information is drawn from recognized sources believed to be reliable. ASHTA Chemicals, Inc. Makes no guarantees or assumes any liability in connection with this information. The user should be aware of changing technology, research, regulations, and analytical procedures that may require changes herein. The above data is supplied upon the condition that persons will evaluate this information and then determine its suitability for their use. Only U.S.A regulations apply to the above.

Version 1.0	For the new GHS SDS Standard	Revision Date: 12/31/2014
Version 1.1	Graphics updated	Revision Date: 3/9/2015
Version 1.2	Title updated	Revision Date: 6/2/2015
Version 1.3	Section 9 changes	Revision Date: 7/30/2015
Version 1.4	Section 1, 15 changes	Revision Date: 4/15/2016

Safety Data Sheet
NOVOPLAN 710 SL
Safety Data Sheet dated: 5/22/2015 - version 1
Date of first edition: 5/22/2015

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: NOVOPLAN 710 SL

Recommended use of the chemical and restrictions on use

Recommended use: Self-Leveling Underlayment

Restrictions on use: N.A.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company: MAPEI CORP. (USA and Puerto Rico)
1144 East Newport Center Drive
33442 - Deerfield Beach - FL - USA
Phone: 954-246-8888

Emergency 24 hour numbers:

(USA) CHEMTREC 1-800-424-9300
(Canada) CANUTEC 1-613-996-6666

2. HAZARD(S) IDENTIFICATION

Classification of the chemical

Classification of the chemical

Eye Dam. 1	Causes serious eye damage.
Skin Sens. 1	May cause an allergic skin reaction.
Carc. 1A	May cause cancer if inhaled.
STOT RE 1	Causes damage to organs through prolonged or repeated exposure if inhaled.

Label elements

Symbols:

Danger

Code	Description
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H350.A	May cause cancer if inhaled.
H372.A	Causes damage to organs through prolonged or repeated exposure if inhaled.

Code	Description
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260.B	Do not breathe dust.
P264.2	Wash skin thoroughly after handling.
P270	Do no eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280.I	Wear protective gloves and eye protection.
P302+P352.A	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310.A	Immediately call a POISON CENTER.

P314	Get medical advice/attention if you feel unwell.
P321.A	Specific treatment (see supplementary instructions on this label)
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501.A	Dispose of contents/container in accordance with applicable regulations.

Ingredient(s) with unknown acute toxicity:

None

Hazards not otherwise classified identified during the classification process:

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

List of components

Quantity	Name	Ident. Numb.	Classification
40-50 %	Silica Sand	CAS:14808-60-7	Carc. 1A, H350.A; STOT RE 1, H372.A
1-5 %	Portland cement	CAS:65997-15-1	STOT SE 3, H335; Eye Dam. 1, H318; Skin Sens. 1, H317; Skin Irrit. 2, H315
0.1-1 %	Lithium carbonate	CAS:554-13-2	Acute Tox. 4, H302; Eye Irrit. 2A, H319

4. FIRST AID MEASURES

Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

Most important symptoms/effects, acute and delayed

Eye irritation

Eye damages

Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO_2).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products: N.A.

Explosive properties: N.A.

Oxidizing properties: N.A.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Use appropriate respiratory protection.
See protective measures under point 7 and 8.

Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand
Wash with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Exercise the greatest care when handling or opening the container.
Use localized ventilation system.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Storage temperature: N.A.
Incompatible materials:
None in particular.
Instructions as regards storage premises:
Adequately ventilated premises.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Note
Silica Sand	ACGIH			0,025					A2 - Suspected Human Carcinogen;lung cancer;pulmonary fibrosis;
Portland cement	OSHA			15					
	OSHA			5					
	ACGIH			1					A4 - Not Classifiable as a Human Carcinogen;pulmonary function;respiratory symptoms;asthma;

Appropriate engineering controls: N.A.

Individual protection measures

Eye protection:
Use close fitting safety goggles, don't use eye lens.
Protection for skin:
Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.
Protection for hands:
Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.
Respiratory protection:
Use adequate protective respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Solid
Appearance and colour: Powder grey
Odour: Cement like
Odour threshold: N.A.
pH in Water Dispersion: 12.00
Melting point / freezing point: N.A.
Initial boiling point and boiling range: N.A.

Flash point: Not Applicable
Evaporation rate: N.A.
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: N.A.
Solubility in water: Soluble
Solubility in oil: N.A.
Partition coefficient (n-octanol/water): N.A.
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.
Viscosity: N.A.
Explosive properties: N.A.
Oxidizing properties: N.A.
Solid/gas flammability: N.A.

Other information

Substance Groups relevant properties N.A.
Miscibility: N.A.
Fat Solubility: N.A.
Conductivity: N.A.

10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions

Chemical stability

Data not Available.

Possibility of hazardous reactions

None.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

None in particular.

Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological information of the mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

Silica Sand	a) acute toxicity	LD50 Oral Rat = 500mg/kg
Lithium carbonate	a) acute toxicity	LC50 Inhalation Rat > 217mg/l 4h

If not differently specified, the information required in the regulation and listed below must be considered as N.A.

a) acute toxicity
b) skin corrosion/irritation
c) serious eye damage/irritation
d) respiratory or skin sensitisation
e) germ cell mutagenicity
f) carcinogenicity
g) reproductive toxicity
h) STOT-single exposure
i) STOT-repeated exposure
j) aspiration hazard

Substance(s) listed on the IARC Monographs:

Silica Sand	Group 1

Substance(s) listed as OSHA Carcinogen(s):

Silica Sand

Substance(s) listed as NIOSH Carcinogen(s):

Silica Sand

Substance(s) listed on the NTP report on Carcinogens:

Silica Sand

12. ECOLOGICAL INFORMATION

Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of components with eco-toxicological properties

Quantity	Component	Ident. Numb.	Ecotox Infos
40-50 %	Silica Sand	CAS: 14808-60-7	LC50 a) Aquatic acute toxicity carp> 10000,00000mg/L 72h

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

N.A.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules). Do not dump into sewers, any body of water or onto the ground.

Waste must be handled in accordance with all federal, state, provincial, and local regulations. Consult authorities before disposal.

14. TRANSPORT INFORMATION

UN number

ADR-UN number: N/A
DOT-UN Number: N/A
IATA-Un number: N/A
IMDG-Un number: N/A

UN proper shipping name

ADR-Shipping Name: N/A
DOT-Proper Shipping Name: N/A
IATA-Technical name: N/A
IMDG-Technical name: N/A

Transport hazard class(es)

ADR-Class: N/A
DOT-Hazard Class: N/A
IATA-Class: N/A
IMDG-Class: N/A

Packing group

ADR-Packing Group: N/A
DOT-Packing group: N/A
IATA-Packing group: N/A
IMDG-Packing group: N/A

Environmental hazards

Marine pollutant: No
Environmental Pollutant: N.A.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

N.A.

Special precautions

Department of Transportation (DOT):

DOT-Special Provision(s): N/A
DOT-Label(s): N/A
DOT-Symbol: N/A
DOT-Cargo Aircraft: N/A
DOT-Passenger Aircraft: N/A
DOT-Bulk: N/A
DOT-Non-Bulk: N/A

Road and Rail (ADR-RID):

ADR-Label: N/A
ADR-Hazard identification number: N/A
ADR-Tunnel Restriction Code: N/A

Air (IATA):

IATA-Passenger Aircraft: N/A
IATA-Cargo Aircraft: N/A
IATA-Label: N/A
IATA-Subrisk: N/A
IATA-Erg: N/A
IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage Code: N/A
IMDG-Stowage Note: N/A
IMDG-Subrisk: N/A
IMDG-Special Provisions: N/A
IMDG-Page: N/A
IMDG-Label: N/A
IMDG-EMS: N/A
IMDG-MFAG: N/A

15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

TSCA inventory:

All the components are listed on the TSCA inventory

TSCA listed substances:

Silica Sand	is listed in TSCA	Section 8b
Portland cement	is listed in TSCA	Section 8b
Lithium carbonate	is listed in TSCA	Section 8b

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances:

no substances listed

Section 304 - Hazardous substances:

no substances listed

Section 313 - Toxic chemical list:

Lithium carbonate

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA:

no substances listed

CAA - Clean Air Act

CAA listed substances:

no substances listed

CWA - Clean Water Act

CWA listed substances:

no substances listed

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

Silica Sand	Listed as carcinogen
Lithium carbonate	Listed as reproductive toxicant

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

Silica Sand

Portland cement

Lithium carbonate

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

Silica Sand

Portland cement

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

Silica Sand

Portland cement

Lithium carbonate

16. OTHER INFORMATION

Code	Description
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H350.A	May cause cancer if inhaled.
H372.A	Causes damage to organs through prolonged or repeated exposure if inhaled.

Safety Data Sheet dated: 5/22/2015 - version 1

Product code: 2904

Additional classification information

NFPA

HMIS Health: 2 = Moderate

HMIS Health - Is health hazard chronic?: Yes

HMIS Flammability: 0 = Not Combustible

HMIS Reactivity: 0 = Minimal

HMIS P.P.E.: Safety glasses, gloves, dust respirator

NFPA Health: 2 = Moderate

NFPA Flammability: 0 = Not Combustible

NFPA Reactivity: 0 = Minimal

NFPA Special Risk: NONE

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

This document was prepared by a competent person who has received appropriate training.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
IMDG: International Maritime Code for Dangerous Goods.
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
CLP: Classification, Labeling, Packaging.
EINECS: European Inventory of Existing Commercial Chemical Substances.
INCI: International Nomenclature of Cosmetic Ingredients.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
GefStoffVO: Ordinance on Hazardous Substances, Germany.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
DNEL: Derived No Effect Level.
PNEC: Predicted No Effect Concentration.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
WGK: German Water Hazard Class.
KSt: Explosion coefficient.

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: **PERMINATOR®** **Part Number: 5242100**

Manufacturer: **W. R. MEADOWS, INC.** **Address:** 300 Industrial Drive, Hampshire, Illinois 60140

Telephone: (847) 214-2100 In case of emergency, dial (800) 424-9300 (CHEMTREC)

Revision Date: 6/27/2017

Product Use: Vapor Retarder

SECTION 2: HAZARDS IDENTIFICATION/EXPOSURE LIMITS

HMIS		
|Health|	|0|	Product is classified as non-hazardous per OSHA 1910.1200. Perminator is defined by OSHA as an "article." A manufactured item that is formed to a specific shape or design during manufacture that does not release or result in exposure to a hazardous chemical under normal use conditions.
|Flammability|	|0|	
|Reactivity|	|0|	
|Personal Protection|	| |	

SECTION 3: HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20°C)	LEL (@24°C)
1. Blown Polyethylene Film	Proprietary	100	No	N/A	N/A

Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 (SARA) and 40 CFR Part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313."

N/A: Not Applicable

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Not expected to be an exposure route.
SKIN CONTACT: Not Expected to be an exposure route.
INHALATION: Not expected to be an exposure route.
INGESTION: Not expected to be an exposure source.

SECTION 5: FIRE AND EXPLOSIVES HAZARDS

FLASHPOINT: Not applicable; product is a solid.
EXTINGUISHING MEDIA: Water fog, foam, dry chemical.
CHEMICAL/COMBUSTION HAZARDS: Carbon monoxide, carbon dioxide, and incomplete combustion products.
PRECAUTIONS/PERSONAL PROTECTIVE EQUIPMENT: Avoid smoke inhalation. Use appropriate respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Not applicable. Product is a solid.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES: None.
SAFE STORAGE: Prevent job-site damage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

	OSHA				ACGIH			
Chemical Name:	PEL	PEL/CEILING	PEL/STEL	SKIN	TLV	TLV/CEILING	TLV/STEL	SKIN
1. Blown Polyethylene	N/E	N/E	N/E	No	N/E	N/E	N/E	N/E

ENGINEERING CONTROLS: None required under normal use conditions.
PERSONAL PROTECTIVE EQUIPMENT: None required under normal use conditions. *N/E = Not Established*

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A **VAPOR DENSITY:** N/A **% VOLATILE BY VOLUME:** N/A
EVAPORATION RATE: N/A **pH LEVEL:** N/A **% VOLATILE BY WEIGHT:** N/A
WEIGHT PER GALLON: N/A **PRODUCT APPEARANCE:** Green Film **VOC CONTENT:** N/A

SECTION 10: STABILITY/REACTIVITY

STABILITY: Stable. **HAZARDOUS POLYMERIZATION:** Will not occur.
CONDITIONS AND MATERIALS TO AVOID: None recognized.
HAZARDOUS DECOMPOSITION PRODUCTS: None recognized.

SAFETY DATA SHEET

SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: Not anticipated to be an exposure route.
SKIN CONTACT: Direct contact may cause slight skin irritation.
INHALATION: Not anticipated to be an exposure route.
INGESTION: Not anticipated to be an exposure route.
SIGNS AND SYMPTOMS: None recognized.
AGGRAVATED MEDICAL CONDITIONS: None recognized.
OTHER HEALTH EFFECTS: None recognized

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: N/E **DEGRADABILITY:** N/E **BIOACCUMULATIVE POTENTIAL:** N/E
SOIL MOBILITY: N/E **OTHER ADVERSE EFFECTS:** None Recognized

SECTION 13: WASTE DISPOSAL INFORMATION

WASTE DISPOSAL INFORMATION: Product is classified as a non-hazardous waste.

SECTION 14: TRANSPORTATION INFORMATION

HAZARDOUS/NON-HAZARDOUS MATERIAL: Not regulated by DOT.
UN NUMBER: None **HAZARD CLASS:** N/A **PACKING GROUP:** N/A
UN PROPER SHIPPING NAME: N/A
ENVIRONMENTAL HAZARDS: None recognized.
BULK TRANSPORTATION INFORMATION: None.
SPECIAL PRECAUTIONS: None.

SECTION 15: REGULATORY INFORMATION

OTHER REGULATORY CONSIDERATIONS: None recognized.

SECTION 16: OTHER INFORMATION

PREPARATION DATE: 6/27/2017
PREPARED BY: Dave Carey

The information contained herein is based on the data available to us and is believed to be correct. However, we make no warranty, expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. We assume no responsibility for injury from the use of this product described herein.

Safety Data Sheet
PLANITOP XS
Safety Data Sheet dated: 6/6/2016 - version 2
Date of first edition: 5/22/2015

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: PLANITOP XS

Recommended use of the chemical and restrictions on use

Recommended use: Concrete Repair Mortar.

Restrictions on use: N.A.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company: MAPEI CORP. (USA and Puerto Rico)
1144 East Newport Center Drive
33442 - Deerfield Beach - FL - USA
Phone: 954-246-8888

Emergency 24 hour numbers:

(USA) CHEMTREC 1-800-424-9300
(Canada) CANUTEC 1-613-996-6666

2. HAZARD(S) IDENTIFICATION

Classification of the chemical

Skin Corr. 1A	Causes severe skin burns and eye damage.
Eye Dam. 1	Causes serious eye damage.
Skin Sens. 1	May cause an allergic skin reaction.
Carc. 1A	May cause cancer if inhaled.
STOT SE 3	May cause respiratory irritation.
STOT RE 1	Causes damage to organs through prolonged or repeated exposure if inhaled.

Label elements

Symbols:

Danger

Code	Description
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H350.A	May cause cancer if inhaled.
H372.A	Causes damage to organs through prolonged or repeated exposure if inhaled.

Code	Description
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260.B	Do not breathe dust.
P264.2	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P302+P352.A	IF ON SKIN: Wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310.B	Immediately call a doctor.
P314	Get medical advice/attention if you feel unwell.
P321.A	Specific treatment (see supplementary instructions on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501.A	Dispose of contents/container in accordance with applicable regulations.

Ingredient(s) with unknown acute toxicity:

None

Hazards not otherwise classified identified during the classification process:

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

List of components

Quantity	Name	Ident. Numb.	Classification
25-50 %	Silica Sand	CAS:14808-60-7	Carc. 1A, H350; STOT RE 1, H372
10-25 %	Portland cement	CAS:65997-15-1	STOT SE 3, H335; Eye Dam. 1, H318; Skin Sens. 1, H317; Skin Corr. 1A, H314
0.1-0.25 %	Lithium carbonate	CAS:554-13-2	Acute Tox. 4, H302; Eye Irrit. 2A, H319

4. FIRST AID MEASURES

Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Obtain medical attention if skin related symptoms persist.

Remove contaminated clothing immediately and dispose of safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

Most important symptoms/effects, acute and delayed

Eye irritation

Eye damages

Skin Irritation

Erythema

Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO_2).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.
Burning produces heavy smoke.
Hazardous combustion products: N.A.
Explosive properties: N.A.
Oxidizing properties: N.A.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus.
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.
Provide adequate ventilation.
Use appropriate respiratory protection.
See protective measures under point 7 and 8.

Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand
Wash with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.
Exercise the greatest care when handling or opening the container.
Do not use on extensive surface areas in premises where there are occupants.
Use localized ventilation system.
Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.
Contamined clothing should be changed before entering eating areas.
Do not eat or drink while working.
See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Storage temperature: N.A.

Always keep in a well ventilated place.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Cool and adequately ventilated.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

List of components with OEL value

Component	OEL Type	Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Note
Silica Sand	ACGIH			0,025					A2 - Suspected Human Carcinogen;lung cancer;pulmonary fibrosis;
Portland cement	OSHA			15					
	OSHA			5					
	ACGIH			1					A4 - Not Classifiable as a Human Carcinogen;pulmonary function;respiratory symptoms;asthma;

Appropriate engineering controls: N.A.

Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use adequate protective respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Solid
Appearance and colour: Powder grey
Odour: Cement like
Odour threshold: N.A.
pH in Water Dispersion: 11.50
Melting point / freezing point: N.A.
Initial boiling point and boiling range: N.A.
Flash point: Not Applicable
Evaporation rate: N.A.
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: N.A.
Solubility in water: Dispersible
Solubility in oil: N.A.
Partition coefficient (n-octanol/water): N.A.
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.
Viscosity: N.A.
Explosive properties: N.A.
Oxidizing properties: N.A.
Solid/gas flammability: N.A.

Other information

Substance groups relevant properties: N.A.
Miscibility: N.A.
Fat Solubility: N.A.
Conductivity: N.A.

10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions

Chemical stability

Data not Available.

Possibility of hazardous reactions

None.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

None in particular.

Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological information of the mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

Silica Sand	a) acute toxicity	LD50 Oral Rat = 500mg/kg
Lithium carbonate	a) acute toxicity	LC50 Inhalation Rat > 217mg/l 4h
		LD50 Oral Rat = 525mg/kg

If not differently specified, the information required in the regulation and listed below must be considered as N.A.

a) acute toxicity

b) skin corrosion/irritation

c) serious eye damage/irritation

d) respiratory or skin sensitisation

e) germ cell mutagenicity

f) carcinogenicity

g) reproductive toxicity

h) STOT-single exposure

i) STOT-repeated exposure

j) aspiration hazard

Substance(s) listed on the IARC Monographs:

Silica Sand Group 1

Substance(s) listed as OSHA Carcinogen(s):

Silica Sand

Substance(s) listed as NIOSH Carcinogen(s):

Silica Sand

Substance(s) listed on the NTP report on Carcinogens:

Silica Sand

12. ECOLOGICAL INFORMATION

Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of components with eco-toxicological properties

Quantity	Component	Ident. Numb.	Ecotox Infos
25-50 %	Silica Sand	CAS: 14808-60-7	LC50 a) Aquatic acute toxicity carp> 10000,00000mg/L 72h

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

N.A.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste must be handled in accordance with all federal, state, provincial, and local regulations. Consult authorities before disposal.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

UN number

ADR-UN number: N.A.

DOT-UN Number: N.A.

IATA-Un number: N.A.

IMDG-Un number: N.A.

UN proper shipping name

ADR-Shipping Name: N.A.

DOT-Proper Shipping Name: N.A.

IATA-Technical name: N.A.

IMDG-Technical name: N.A.

Transport hazard class(es)

ADR-Class: N.A.

DOT-Hazard Class: N.A.

IATA-Class: N.A.

IMDG-Class: N.A.

Packing group

ADR-Packing Group: N.A.
DOT-Packing group: N.A.
IATA-Packing group: N.A.
IMDG-Packing group: N.A.

Environmental hazards

Marine pollutant: No
Environmental Pollutant: N.A.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

N.A.

Special precautions

Department of Transportation (DOT):
N.A.
Road and Rail (ADR-RID):
N.A.
Air (IATA):
N.A.
Sea (IMDG):
N.A.

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15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

TSCA inventory:

All the components are listed on the TSCA inventory

TSCA listed substances:

Silica Sand	is listed in TSCA	Section 8b
Portland cement	is listed in TSCA	Section 8b
Lithium carbonate	is listed in TSCA	Section 8b

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances:

no substances listed

Section 304 - Hazardous substances:

no substances listed

Section 313 - Toxic chemical list:

Lithium carbonate

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA:

no substances listed

CAA - Clean Air Act

CAA listed substances:

no substances listed

CWA - Clean Water Act

CWA listed substances:

no substances listed

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

Silica Sand	Listed as carcinogen
Lithium carbonate	Listed as reproductive toxicant

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

Silica Sand

Portland cement

Lithium carbonate

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

Silica Sand

Portland cement

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

Silica Sand

Portland cement

Lithium carbonate

Canada- Federal regulations

DSL - Domestic Substances List

DSL Inventory:

All the substances are listed in the DSL.

NDSL - Non Domestic Substances List

NDSL Inventory:

no substances listed

NPRI - National Pollutant Release Inventory

Substances listed in NPRI:

no substances listed

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16. OTHER INFORMATION

Code	Description
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H350	May cause cancer .
H350.A	May cause cancer if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure .
H372.A	Causes damage to organs through prolonged or repeated exposure if inhaled.

Safety Data Sheet dated: 6/6/2016 - version 2
Product code: 2682

Additional classification information

NFPA

HMIS Health: 2 = Moderate
HMIS Health - Is health hazard chronic?: Yes
HMIS Flammability: 0 = Not Combustible
HMIS Reactivity: 0 = Minimal
HMIS P.P.E.: Safety glasses, gloves, dust respirator
NFPA Health: 2 = Moderate
NFPA Flammability: 0 = Not Combustible
NFPA Reactivity: 0 = Minimal

NFPA Special Risk: NONE

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

This document was prepared by a competent person who has received appropriate training.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.

IMDG: International Maritime Code for Dangerous Goods.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).

GHS: Globally Harmonized System of Classification and Labeling of Chemicals.

CLP: Classification, Labeling, Packaging.

EINECS: European Inventory of Existing Commercial Chemical Substances.

INCI: International Nomenclature of Cosmetic Ingredients.

CAS: Chemical Abstracts Service (division of the American Chemical Society).

GefStoffVO: Ordinance on Hazardous Substances, Germany.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

DNEL: Derived No Effect Level.

PNEC: Predicted No Effect Concentration.

TLV: Threshold Limiting Value.

TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).

STEL: Short Term Exposure limit.

STOT: Specific Target Organ Toxicity.

WGK: German Water Hazard Class.

KSt: Explosion coefficient.

Paragraphs modified from the previous revision:

- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 15. REGULATORY INFORMATION
- 16. OTHER INFORMATION

FICHE SIGNALÉTIQUE

Georgia-Pacific

1. Identification du produit et de l'entreprise

Nom de la substance	**Bois d'œuvre traité sous pression avec du CAQ**
Synonyme(s)	ACQ Treated * ACQ Treated Wood * ACQ Type D
Usage du produit	Produits de bois traité
Chimique rocidle	Bois d'œuvre traité avec un fongicide. Les produits hydrofuges peuvent contenir de la cire d'hydrocarbure.
Nom chimique	Composés de cuivre alcalin et d'ammonium quaternaire de type D
Renseignements sur le fabricant	Georgia-Pacific Treated Lumber LLC 133 Peachtree Street, NE Atlanta, GA 3030 Information technique 888.427.4778 Requête FSMD 404.652.5119 Chemtrec - urgence 800.424.9300

2. Identification des risques

Description générale des risques	Le sciage, le ponçage ou l'usinage du bois ou des produits du bois peuvent produire de la poussière. La poussière de bois peut s'enflammer ou former un mélange explosif avec l'air. Les poussières de produit peuvent être irritantes pour les yeux, la peau et l'appareil respiratoire.
Organes cibles	Yeux, peau et système respiratoire
Effets potentiels sur la santé	
Yeux	La poussière ou les éclats de bois peuvent causer de l'irritation ou des blessures aux yeux.
Peau	Le contact avec la peau peut causer une irritation.
Inhalation	Les poussières de ce produit peuvent entraîner une irritation du nez, de la gorge et des voies respiratoires.
Ingestion	Sans objet dans des conditions normales d'utilisation. Peut entraîner une obstruction et une irritation temporaire du tube digstif.

3. Composition / Renseignements sur les ingrédients

Composants	No CAS	Percent/Wt
Bois / Poussière de bois	Non assigné	60 - 100
Monoéthanolamine	141-43-5	1 - 5
Copper complex expressed as Copper oxides	Breveté	0.5 - 1.5
Didecyl dimethyl ammonium carbonate / bicarbonate	Breveté	0.1 - 1

Remarques sur la composition Certains produits de bois d'œuvre peuvent être enduits d'un revêtement contre les taches de sève.

4. Premiers soins

Procédures de premiers soins

Contact avec les yeux	En cas de contact, laver immédiatement les yeux à grande eau, continuer à rincer pendant 15 minutes. Ne pas frotter les yeux. Consulter immédiatement un médecin.
Contact cutané	En cas de contact avec la peau, se laver immédiatement avec du savon et de l'eau. Obtenir une assistance médicale si les irritations se développent ou persistent.
Inhalation	Retirer de la zone d'exposition. En cas d'arrêt respiratoire de la victime, pratiquer la respiration artificielle. Consulter un médecin en cas d'irritation persistante, de toux violente ou de difficultés à respirer.
Ingestion	En cas d'ingestion de bois ou de poussière de bois, consulter immédiatement un médecin ou demander des conseils – Ne pas faire vomir.

5. Mesures de lutte contre le feu

Risques généraux d'incendie	Le bois est un matériau combustible lorsqu'il est exposé à la chaleur ou à la flamme. La poussière de bois forme un mélange explosif avec l'air en présence d'une source d'inflammation. On utilise souvent une concentration de poussière en suspension dans l'air de 40 g/m3 d'air comme limite inférieure d'explosivité (LIE) pour la poussière de bois. Éviter de respirer la poussière ou des produits de décomposition.
Indice d'inflammabilité	Non disponible
Moyens d'extinction	
Moyen d'extinction approprié	Utiliser les méthodes pour un incendie environnant.
Protection pour les pompiers	
Équipement de protection et précautions pour les pompiers	Les pompiers doivent porter des vêtements de protection complets y compris un appareil de respiration autonome. La poussière partiellement brûlée est particulièrement dangereuse si elle est dispersée dans l'air. Arroser pour réduire les possibilités d'inflammation ou de dispersion. Transporter la poussière brûlée ou mouillée dans un endroit ouvert et sécuritaire après avoi éteint le feu.
Données sur l'explosibilité	
Sensibilité aux décharges électrostatiques	Non disponible
Sensibilité aux chocs	Non disponible
Produits de combustion dangereux	Les produits de combustion peuvent produire des fumées ou des gaz toxiques, notamment du chlorure d'hydrogène, des aldéhydes, des amines, du chlorure d'hydrogène, de l'ammoniac, des composés de cuivre, de l'oxygène, de l'anhydride borique, des oxydes de carbone ou de l'azote.

6. Procédures en cas de déversement

Précautions individuelles	Porter un équipement et des vêtements de protection appropriés durant le nettoyage. Assurer une ventilation adéquate. Éviter d'inhaler la poussière pendant le nettoyage.
Méthodes de nettoyage	Ramasser les petits morceaux et la poussière avec un aspirateur ou une vadrouille humide; placer dans un conteneur à déchet approprié. Ramasser les gros morceaux selon une méthode appropriée. Réduire les poussières en suspension dans l'air et empêcher leur propagation en humidifiant avec de l'eau.

7. Manutention et entreposage

Manutention	Mise en garde. Ne pas brûler le bois traité. Ne pas utiliser le bois traité comme paillis. Utilisez dans un endroit bien ventilé. Utiliser l'équipement de protection individuel requis. Éviter le contact avec la peau, les yeux et les vêtements. Se laver les mains soigneusement après manipulation. La poussière peut former un mélange explosif avec l'air. Minimiser la formation de poussières en suspension dans l'air. Tenir à l'écart de la chaleur et des sources d'ignition.
Entreposage	Entreposer à plat, supporter et protéger d'un contact direct avec le sol. Garder dans un endroit bien ventilé, à l'écart de matériaux incompatibles. Stocker dans un lieu sec et frais. Tenir à l'écart de la chaleur et des sources d'ignition.

8. Maîtrise de l'exposition / Protection individuelle

Bois / Poussière de bois (No CAS Not Assigned)

	TWA	STEL	Plafond
ACGIH	1 mg/m3 TWA (Inhalable)	Indéterminé	Indéterminé
OSHA	5 mg/m3 TWA (Total Dust) (Vacated)	10 mg/m3 (Vacated)	Indéterminé

Monoéthanolamine (No CAS 141-43-5)

	TWA	STEL	Plafond
ACGIH	3 ppm TWA	6 ppm STEL	Indéterminé
OSHA	3 ppm TWA; 6 mg/m3 TWA	Indéterminé	Indéterminé

Copper complex expressed as Copper oxides (No CAS Proprietary)

	TWA	STEL	Plafond
ACGIH	0.2 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist, as Cu)	Indéterminé	Indéterminé
OSHA	0.1 mg/m3 TWA (fume); 1 mg/m3 TWA (dust and mist)	Indéterminé	Indéterminé

Didecyl dimethyl ammonium carbonate / bicarbonate (No CAS Proprietary)

	TWA	STEL	Plafond
ACGIH	Indéterminé	Indéterminé	Indéterminé
OSHA	Indéterminé	Indéterminé	Indéterminé

Directives au sujet de l'exposition

Georgia-Pacific Wood Products LLC choisit volontairement de respecter les limites d'exposition contenues dans la OSHA's 1989 Air Contaminants Standard, bien que certaines limites aient été annulées en 1992. Les présentes limites d'exposition de l'OSHA qui régissent la poussière de bois sont de 15 mg/m3 (poussière totale) et de 5 mg/m3 (fraction respirable).

Contrôle ingénieur

En raison d'une possibilité d'explosion de la poussière lorsqu'elle est en suspension dans l'air, prendre des précautions lors du sciage, du ponçage et de l'usinage du bois et des produits du bois pour éviter les étincelles ou autres sources d'inflammation dans l'équipement de ventilation. Un système de ventilation par aspiration locale est recommandé lors du sciage, du ponçage et de l'usinage de ce produit. Une ventilation générale par adduction d'air neuf est recommandée dans les aires de transformation et d'entreposage.

Équipement de protection individuelle

Protection pour les yeux et le visage

Des lunettes de sécurité ou des protecteurs oculaires sont recommandés en utilisant le produit. Assurez-vous de respecter les normes de l'OSHA PPE (29 CFR 1910.132 (général) et 133 (protection oculaire et faciale)).

Protection de la peau

Des vêtements et des gants étanches sont recommandés afin d'éviter la sécheresse ou l'irritation des mains. Assurez-vous de respecter les normes de l'OSHA PPE (29 CFR 1910.132 (général) et 138 (protection des mains)). Une douche oculaire ou de sécurité doit être facilement accessible sur le lieu de travail (29 CFR 1910.151(c)).
Ensure compliance with OSHA's PPE standard 29 CFR 1910.132 (general) and .138 (hand protection).

Protection respiratoire

Dans les lieux mal aérés ou dont la concentration pourrait excéder la limite d'exposition permise, il est recommandé de porter un masque ou visière complète avec filtre approuvé par NIOSH. Les respirateurs doivent être choisis et utilisés sous les directives d'un professionnel de la santé et de la sécurité formé en la matière, conformément aux exigences de la norme en matière de respirateurs de l'OSHA (29 CFS 1910.134) et de la norme de l'ANSI en matière de protection respiratoire (Z88.2).

9. Caractéristiques chimiques et physiques

Aspect	Panneau de fibre de bois
Couleur	Variée
État physique	Solide
Odeur	Bois résineux
Seuil de l'odeur	Non disponible
pH	Sans objet

Point de congélation	Sans objet
Point d'ébullition	Sans objet
Point d'éclair	Sans objet
Taux d'évaporation	Sans objet
Inflammabilité	Combustible
Limites d'inflammabilité dans l'air, supérieure, % en volume	40 g/cm3 La poussière de bois
Limites bas d'inflammabilité dans l'air, en % selon volume	Sans objet
Tension de vapeur	Sans objet
Densité gazeuse	Sans objet
Poids specifique	<1.0
Coeff octanol/H2O	Sans objet
Solubilité dans leau	Insoluble
Température d'auto-inflammation	204.4 - 260 °C (400 - 500 °F) pour le bois

10. Stabilité chimique et données sur la réactivité

Stabilité chimique	Ceci est un produit stable.
Conditions à éviter	Contact avec des matériaux incompatibles. Températures élevées. Chaleur, flammes et étincelles. Les poussières peuvent former un mélange explosif avec l'air.
Conditions of Reactivity	Aucuns connus.
Matières incompatibles	Acides forts, alcalis, agents oxydants et huiles siccatives.
Produits de décomposition dangereux	Les produits de combustion peuvent produire des fumées ou des gaz toxiques, notamment du chlorure d'hydrogène, des aldéhydes, des amines, du chlorure d'hydrogène, de l'ammoniac, des composés de cuivre, de l'oxygène, de l'anhydride borique, des oxydes de carbone ou de l'azote.
Possibilité de réactions dangereuses	Ne se produit pas.

11. Propriétés toxicologiques

Informations toxicologiques

POUSSIÈRE DE BOIS. La poussière de bois peut causer de la sécheresse, de l'irritation, de la toux ou une sinusite. Le CIRC et le NTP classent la poussière de bois comme un carcinogène. Cette classification se fonde sur les cas de plus en plus fréquents d'adénocarcinomes des cavités nasales et des sinus paranasaux associés à une exposition à la poussière de bois. L'évaluation mentionne qu'il n'existe pas de preuves suffisantes pour associer le cancer de l'oropharynx, de l'hypopharynx, des poumons, des systèmes lymphatique et hématopoïétique, de l'estomac, du colon ou du rectum à une exposition à la poussière de bois.

MONOÉTHANOLAMINE. Des dommages pulmonaires, hépatiques, rénaux et cutanés ont été rapportés chez des animaux de laboratoire à la suite de l'inhalation de concentrations élevées de monoéthanolamine. La monoéthanolamine peut être corrosive pour les yeux, la peau, le système respiratoire et le tube digestif, et elle peut causer des dommages permanents aux yeux. La monoethanolamine peut être absorbée en quantité nocive par la peau et causer des réactions cutanées allergiques. Les expositions à la monoéthanolamine peuvent causer des dommages au système nerveux, aux poumons, au foie ou aux reins.

COMPLEXE DE CUIVRE EXPRIMÉ EN OXYDE DE CUIVRE. Le complexe de cuivre, exprimé en oxyde de cuivre dans ce produit, contient des sels de cuivres dont l'ingestion, à des doses orales élevées, peut entraîner des troubles gastro-intestinaux, de l'anémie et des dommages secondaires au foie et aux reins.

Toxicological information (Ingredients)

Monoéthanolamine (No CAS 141-43-5)

Données toxicologiques - LD50 et LC50 sélectionnées	Oral LD50 Rat 1720 mg/kg; Dermal LD50 Rabbit 1 mL/kg; Dermal LD50 Rabbit 1025 mg/kg

Sensibilisation N'est pas dangereux d'après les critères du OSHA/SIMDUT.

Cancérogénicité

Bois / Poussière de bois (No CAS Non assigné)

CIRC - Groupe 1 (cancérogène pour l'homme)	Monograph 62 [1995]
NTP (National Toxicology Program) - Report on Carcinogens - Known Human Carcinogens	Cancérogène humain connu
U.S. - OSHA - Hazard Communication Carcinogens	Présent

Mutagénicité N'est pas dangereux d'après les critères du OSHA/SIMDUT.

Effets sur la reproduction N'est pas dangereux d'après les critères du OSHA/SIMDUT.

Tératogénicité N'est pas dangereux d'après les critères du OSHA/SIMDUT.

Matériaux synergétiques N'est pas dangereux d'après les critères du OSHA/SIMDUT.

12. Données écologiques

Écotoxicité Ce produit ne devrait pas introduire des quantités dangereuses de préservatif dans l'environnement. Le produit de préservation du bois contient des fongicides et des insecticides qui, lorsqu'ils sont libérés dans l'environnement, peuvent avoir des effets négatifs sur les plantes et la faune.

Copper complex expressed as Copper oxides (No CAS Breveté)

Ecotoxicité - Données sur les algues d'eau douce	72 Hr EC50 Pseudokirchneriella subcapitata: 0.0426 - 0.0535 mg/L [static]; 96 Hr EC50 Pseudokirchneriella subcapitata: 0.031 - 0.054 mg/L [static]
Ecotoxicité - Poissons d'eau douce	96 Hr LC50 Pimephales promelas: 0.0068 - 0.0156 mg/L; 96 Hr LC50 Pimephales promelas: <0.3 mg/L [static]; 96 Hr LC50 Pimephales promelas: 0.2 mg/L [flow-through]; 96 Hr LC50 Oncorhynchus mykiss: 0.052 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 1.25 mg/L [static]; 96 Hr LC50 Cyprinus carpio: 0.3 mg/L [semi-static]; 96 Hr LC50 Cyprinus carpio: 0.8 mg/L [static]; 96 Hr LC50 Poecilia reticulata: 0.112 mg/L [flow-through]

Monoéthanolamine (No CAS 141-43-5)

Ecotoxicité - Données sur les algues d'eau douce	72 Hr EC50 Desmodesmus subspicatus: 15 mg/L
Ecotoxicité - Poissons d'eau douce	96 Hr LC50 Pimephales promelas: 227 mg/L [flow-through]; 96 Hr LC50 Brachydanio rerio: 3684 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 300-1000 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 114-196 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: >200 mg/L [flow-through]

Effets sur lenvironnement Le bois traité sous pression ne doit pas être utilisé dans des endroits où il pourrait entrer directement ou indirectement en contact avec l'eau potable. Le bois traité sous pression ne doit pas être utilisé lorsque le préservatif pourrait entrer dans la composition d'aliments, de nourriture pour animaux ou de ruches d'abeilles.

13. Élimination des résidus

Instructions pour l'élimination Aux termes de la RCRA, l'utilisateur du produit a la responsabilité de déterminer, au moment de la mise au rebut, si le produit répond aux critères de la RCRA en matière de déchets dangereux. Éliminer les matériaux conformément aux règlements environnementaux locaux, d'État, fédéraux et provinciaux.

14. Informations relatives au transport

Généralités Ce produit n'est pas considéré comme substance dangereuse par la réglementation des transports des USA (DOT, Ministère des Transports) ou du Canada (TDG, Transport des Marchandises Dangereuses).

Prescriptions du Ministere Americain des Transports (DOT)

Ce produit n'est pas considéré comme substance dangereuse par la réglementation des transports des USA (DOT, Ministère des Transports) ou du Canada (TDG, Transport des Marchandises Dangereuses).

Transport des Marchandises Dangereuses (TDG) Exigences

N'entre pas dans la réglementation des marchandises dangereuses.

15. Données réglementaires

Superfund Amendments and Reauthorization Act de 1986 (SARA)

Catégories de danger Risque immédiat - Non
Risque différé - Non
Danger d'incendie - Non
Danger lié à la Pression - Non
Danger de réactivité - Non

Substance extrêmement dangereuse selon la Section 302	Non
Substance chimique dangereuse selon la Section 311	Non
Section 313 hazardous chemical	Oui

Réglementations Fédérales des Etats-Unis

Les produits de bois traité sous pression avec le CAQ contiennent un composé d'ammonium quaternaire, un produit inscrit à l'inventaire de l'EPA. Ce produit est traité sous pression avec un produit de préservation du bois enregistré conformément à la FIFRA.

AVERTISSEMENT : Ce produit contient un composé chimique reconnu dans l'état de la Californie comme produit pouvant provoquer des cancers.

Copper complex expressed as Copper oxides (No CAS Breveté)

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities	5000 lb final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers); 2270 kg final RQ (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is larger than 100 micrometers)
U.S. - CERCLA/SARA - Section 313 - Emission Reporting	1.0 % de minimis concentration

Règlements du Canada

Ce produit a été classifié selon les critères du RPC et la FTSS contient tous les renseignements requis par le RPC.

Canada - SIMDUT - Liste de Divulgation des Ingrédients

Copper complex expressed as Copper oxides	Breveté	1 %
Monoéthanolamine	141-43-5	1 %

Statut de l'inventaire

Pays ou région	Nom de l'inventaire	Compliant w/inventory requirements (yes/no)
Canada	Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)	Oui
États-Unis et Porto Rico	Inventaire du TSCA (Toxic Substances Control Act)	Oui

16. Renseignements divers

Product list

Pressure Treated Lumber

Premium Southern Gold® Pressure Treated Lumber

Premium Southern Gold® Plus Water-Repellent Pressure Treated Lumber

Classification HMIS®

Santé: 1*
Inflammabilité: 1
Danger physique: 0
Protection individuelle: X

Classements NFPA

Santé: 1
Inflammabilité: 1
Instabilité: 0

Autres informations

MISE EN GARDE

RELATIVE AUX PRODUITS DE BOIS !
LE SCIAGE, LE PONÇAGE OU L'USINAGE DES PRODUITS DU BOIS PEUVENT PRODUIRE DE LA POUSSIÈRE DE BOIS QUI RISQUE DE S'ENFLAMMER OU D'EXPLOSER.

LA POUSSIÈRE DE BOIS PEUT CAUSER UNE IRRITATION DES POUMONS, DES VOIES RESPIRATOIRES SUPÉRIEURES, DES YEUX OU DE LA PEAU. CERTAINES ESSENCES DE BOIS PEUVENT CAUSER DES DERMATITES ET DES ALLERGIES RESPIRATOIRES. L'EXPOSITION À LA POUSSIÈRE PEUT CAUSER LE CANCER.

PRÉCAUTIONS
Éviter le contact de la poussière avec une source pour inflammation. Éviter l'inhalation fréquente ou prolongée de poussière de bois. Protéger les yeux contre les projections. Éviter le contact de la poussière avec la peau et laver les zones exposées.

PREMIERS SOINS
En cas d'inhalation, amener la personne affectée à l'air frais. En cas de contact, rincer les yeux et la peau avec de l'eau. Consulter un médecin si l'irritation persiste.

MANIPULATION ET ENTREPOSAGE
Éviter l'inhalation fréquente et prolongée de poussière de bois. Protéger les yeux contre les particules volatiles. Éviter le contact avec la peau et laver à fond les zones exposées. Changer de vêtements protecteurs et de gants dès l'apparition de signes de contamination.

Les produits du bois sont combustibles et, par conséquent, ils ne doivent pas être soumis à des températures supérieures à la température d'auto-inflammation. Arroser la poussière de bois provenant du sciage, du ponçage ou de l'usinage afin de réduire les possibilités d'inflammation ou de dispersion de la poussière dans l'air.

Pour des renseignements additionnels, consulter la fiche signalétique de Georgia-Pacific Treated Lumber LLC pour ce produit.

Avis de non-responsabilité

Les renseignements et les données contenus dans la présente fiche signalétique sont jugés exacts et ils ont été obtenus auprès de sources jugées fiables. Ils sont offerts à des fins d'examen, d'investigation et de vérification. L'acheteur assume tous les risques relatifs à l'utilisation, l'entreposage et la manutention du produit conformément aux lois et règlements fédéraux, de l'État et locaux applicables. Georgia-Pacific et ses filiales ne donnent aucune garantie, explicite ou implicite, relative à l'exactitude ou à l'intégralité des renseignements et des données présentés ici. Les garanties implicites de qualité marchande et de convenance à des fins particulières sont formellement exclues. Georgia-Pacific et ses filiales ne seront pas tenues responsable en ce qui a trait aux réclamations découlant de l'utilisation des renseignements et des données contenus dans la présente fiche signalétique, qu'il soit allégué ou non que les renseignements sont inexacts, incomplets ou autrement trompeurs.

Date en vigueur 29-Sep-2010

Supercedes 29-Jun-2009

Préparée par Georgia-Pacific LLC
404.652.5119

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/06/2016 Reviewed on 10/06/2016

1 Identification

· **Product identifier**

· **Trade name:** **PVA Bonding Agent J41**

· **Article number:** 83-69111
· **Application of the substance / the mixture**

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Dayton® Superior
4226 Kansas Avenue
Kansas City, KS 66106
Tel.: (866) 329-8724

Emergency Telephone Number: Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemicals. Within the U.S., Canada, or the U.S. Virgin Islands, call ChemTrec at (800) 424-9300, 24 hours a day. Or, outside these areas, call international number, +1 703 741-5970. Collect calls are accepted.

· **Information department:** Environmental, Health, and Safety department.

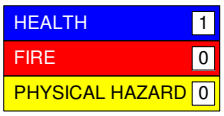
2 Hazard(s) identification

· **Classification of the substance or mixture** The product is not classified according to the Globally Harmonized System (GHS).

· **Label elements**
· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 0
Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:** Void
· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

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4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
In the event of persistent symptoms recieve medical treatment.
No special measures required.
· **After inhalation:**
Immediately move exposed person to fresh air. If breathing difficulty persists or develops get prompt medical attention.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** If symptoms persist consult doctor.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:**
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
· **Special hazards arising from the substance or mixture** No further relevant information available.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures** Not required.
· **Environmental precautions:**
Dilute with plenty of water.
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
· **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Do not take internally.

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· **Information about protection against explosions and fires:** *No special measures required.*

· **Conditions for safe storage, including any incompatibilities**
· **Storage:** *cool and dry*
· **Requirements to be met by storerooms and receptacles:** *No special requirements.*
· **Information about storage in one common storage facility:** *Not required.*
· **Further information about storage conditions:** *Keep receptacle tightly sealed.*
· **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** *No further data; see item 7.*

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
· **Additional information:** *The lists that were valid during the creation were used as basis.*

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
· **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye protection:** *Wear appropriate eye protection to prevent eye contact.*

9 Physical and chemical properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	*Liquid*
Color:	*According to product specification*
· **Odor:**	*Characteristic*
· **Odor threshold:**	*Not determined.*

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· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	140 °C (284 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	2.6 Vol %
Upper:	57.0 Vol %
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17 mm Hg)
· **Density at 20 °C (68 °F):**	1.1 g/cm³ (9.18 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	0.0 %
Water:	46.0 %
Solids content:	53.8 %
· **Other information**	No further relevant information available.
· **Volatile Organic Compounds:**	Contains less than 50 g/L.

10 Stability and reactivity

· **Reactivity** No decomposition if stored and applied as directed.
· **Chemical stability** No decomposition if stored and applied as directed
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** Keep away from heat and sources of ignition.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

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11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** No irritant effect known.
· **on the eye:** Irritating effect.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
The product is not subject to classification according to internally approved calculation methods for preparations:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Generally not hazardous for water
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Danger to drinking water if even extremely small quantities leak into the ground.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
Smaller quantities can be disposed of with household waste.
It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state, federal, and provincial environmental regulations.

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· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to Federal, State, and Local regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number** · **DOT, ADR, ADN, IMDG, IATA**	Not Regulated
· **UN proper shipping name** · **DOT, ADR, ADN, IMDG, IATA**	Not Regulated
· **Transport hazard class(es)** · **DOT, ADR, ADN, IMDG, IATA** · **Class**	Not Regulated
· **Packing group** · **DOT, ADR, IMDG, IATA**	Not Regulated
· **Environmental hazards:** · **Marine pollutant:**	No
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR** · **U.S. Domestic Ground Shipments:**	Same as listed for Standard Shipments above.
· **U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments:**	Same as listed for Standard Shipments above.
· **Emergency Response Guide (ERG) Number:**	Not determine
· **UN "Model Regulation":**	Not Regulated

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**
This product may contain 1 or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372. If so, the chemicals are listed below.

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to the State of California (Prop. 65) to cause cancer:**

None of the ingredients is listed.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 10/06/2016 Reviewed on 10/06/2016

Trade name: PVA Bonding Agent J41

(Contd. of page 6)

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** Void
· **Hazard pictograms** Void
· **Signal word** Void
· **Hazard statements** Void

· **National regulations:**

· **Water hazard class:** Generally not hazardous for water.
· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The provided information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.
This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environmental, Health & Safety Department
· **Contact:** Environmental, Health & Safety Manager
· **Date of preparation / last revision** 10/06/2016 / 62
· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit

CEMENT & CONCRETE PRODUCTS™

C1: Portland Cement Based Concrete Products

SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

The QUIKRETE® Companies
5 Concourse Parkway, Suite 1900
Atlanta, GA 30328

Emergency Telephone Number
INFOTRAC (800) 535-5053
Information Telephone Number
(800) 282-5828

SDS C1
Revision: Feb-18

QUIKRETE® Product Name	Item #(s)
Fence Post Mix	1005
Fiber-Reinforced Concrete Mix	1006
Crack Resistant Concrete Mix	1006-80
Pro-Finish Crack Resistant Concrete Mix	1006-68
QUIKRETE 5000 Concrete Mix	1007
QUIKRETE 6000 Concrete Mix	1007
Pro-Finish QUIKRETE 5000	1007-85
Lightweight Concrete Mix	1008
Basic Concrete Mix	1015
Maximum Yield Concrete Mix	1100-80
Concrete Mix	1101-10, -20, -40, -60, -80, -90
Green Concrete Mix	1101-63, -73
B-Crete	1101-81
Red-E-Crete Concrete mix	1101-91, -87; 1141-62, -63, -92, -93, Bulk NR810035
Countertop Mix	1106-80
Form & Pour Concrete Mix	1120-80/NR810065
Form & Pour Concrete Mix MS	1120-80/NR810065
All-Star Concrete Mix	1121
Rip Rap	1129
Rip Rap Scrim	1134-80
Handicrete Concrete Mix	1141-59, -60, -80
RiteMix Concrete	1171-60
Fiber Reinforced Deck Mix	1251-80, -81
All-Star Crack Resistant Concrete Mix	1470-03
All-Star 5000 Concrete Mix	1470-01
FlowCrete 5000 (Mix 801)	8080026/NR80026
Mix 801 Concrete Mix	NR81001

Product Use: Portland cement-based, aggregated products for general construction

See most current revision of this document at www.QUIKRETE.com.

SECTION II - HAZARD IDENTIFICATION

Hazard-determining components of labeling: Silica, Portland cement

2.1 Classification of the substance or mixture

Carcinogen – Category 1A
Skin Corrosion – Category 1B
Eye Damage – Category 1
Skin Sensitization – Category 1B
Specific Target Organ Toxicity Repeat Exposure – Category 1
Specific Target Organ Toxicity: Single Exposure – Category 3

2.2a Signal word DANGER!

2.2b Hazard Statements

May cause cancer through chronic inhalation
Causes severe skin burns and serious eye damage
May cause an allergic skin reaction
Causes damage to lungs through prolonged or repeated inhalation
May cause respiratory irritation
Harmful if swallowed.

2.2c Pictograms

2.2d Precautionary statements

Do not handle until all safety precautions have been read and understood.
Wear impervious gloves, such as nitrile. Wear eye protection, and protective clothing.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.
Use only in a well-ventilated area. Wear a NIOSH approved respirator (mask) such as N95 in poorly ventilated areas, when used for extended periods, when use is frequent, or when permissible exposure limits may be exceeded.
Do not breathe dust.

If swallowed: Rinse mouth. Do NOT induce vomiting.

If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If on skin (or hair): Remove immediately all contaminated clothing and wash before re-use. Rinse skin or hair with water.
If significant skin irritation or rash occurs: get medical advice or attention.

Immediately seek medical advice or attention if symptoms are significant or persist.

Store in a well-ventilated place. Keep container tightly closed.
Dispose of contents/containers in accordance with all regulations.

2.3 Additional Information
The Portland cement in this product can cause serious, potentially irreversible damage to skin, eye, respiratory and digestive tracts due to chemical (caustic) burns, including third degree burns. Burns from Portland cement may not cause immediate pain or discomfort. You cannot rely on pain to alert you to cement burns. Portland cement can cause dermatitis or sensitization. Therefore precautions must be taken to prevent all contact with Portland cement. Cement burns can become worse even after contact has ended. If there is contact with this product, immediately remove all product from body and thoroughly rinse with water. If you experience or suspect a cement burn or inflammation you should immediately see a health care professional.

Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer. Interaction of Portland cement with water or sweat releases a caustic solution which produces the burns or irritation. Any extended exposure should be treated as though a burn has occurred until determined otherwise.

Skin contact with Portland cement can also cause inflammation of the skin, referred to as dermatitis. Signs and symptoms of dermatitis can include itching, redness, swelling, blisters, scaling, and other changes in the normal condition of the skin. Signs and symptoms of burns include the above and whitening, yellowing, blackening, peeling or cracking of skin.

The Portland cement in this product may cause allergic contact dermatitis in sensitized individuals. This overreaction of the immune system can lead to severe inflammation. Sensitization may result from a single exposure to the low levels of Cr (VI) in Portland cement or repeated exposures over months or years. Sensitization is long lasting and, after sensitization, even very small quantities can trigger the dermatitis. Sensitization is uncommon. Individuals who experience skin problems, including seemingly minor ones, are advised to seek medical attention.

2.3a HNOC – Hazards not otherwise classified: Not applicable
2.3b Unknown Acute Toxicity: None

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	CAS No.	% by Weight
Sand, Silica, Quartz	14808-60-7	60-100*
Portland Cement	65997 15 1	10-30*
Fly Ash	68131-74-8	5-10*

*The concentrations ranges are provided due to batch-to-batch variability.
None of the constituents of this material are of unknown toxicity.

SECTION IV – FIRST AID MEASURES

4.1 Description of the first-aid measures
General information:
After inhalation: Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. In case of unconsciousness, place patient stably in side position for transportation.
After skin contact: Wash skin with cool water and pH-neutral soap or a mild detergent. If significant skin irritation or rash occurs: get medical advice or attention.
After eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
After swallowing: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed
Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated inhalation. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.
Skin contact: Skin burns and irritation may be caused by brief exposure, though often are caused by extended exposure of 15 minutes, an hour, or longer.
Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.
Ingestion: May be harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

4.3 Indication of immediate medical attention and special treatment needed:
Immediately seek medical advice or attention if symptoms are significant or persist.

SECTION V - FIRE FIGHTING MEASURES

5.1 Flammability of the Product: Non-flammable and non-combustible
5.2 Suitable extinguishing agents: Treat for surrounding material
5.3 Special hazards arising from the substance or mixture: None

5.3a Products of Combustion: None
5.3b Explosion Hazards in Presence of Various Substances: Non-explosive in presence of shocks

SECTION VI – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear personal protective equipment (See section VIII). Keep unprotected persons away.

6.2 Methods and material for containment and cleaning up:
Do not allow to enter sewers/ surface or ground water. Dispose of unwanted materials and containers properly in accordance with all regulations.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

7.1 Handling
Precautions for safe handling: Ensure good ventilation/exhaustion at the workplace. DO NOT BREATHE DUST. In dusty environments, the use of an OSHA, MSHA or NIOSH approved respirator and tight fitting goggles is recommended. Wear appropriate PPE (See section 8).Do not mix with other chemical products, except as indicated by the manufacturer. Do not get in eyes, on skin or clothing. Good housekeeping is important to prevent accumulation of dust.

7.2 Storage
Requirements to be met by storerooms and receptacles: No special requirements.
Information about storage in one common storage facility: Not required.
Further information about storage conditions: Keep out of the reach of children. Keep container tightly closed and prevent exposure to humidity. Do not allow water to contact the product until time of use to preserve product utility.

SECTION VIII – EXPOSURE CONTROL MEASURES / PERSONAL PROTECTION

8.1 Components with limit values that require monitoring at the workplace:

Hazardous Components	CAS No.	PEL (OSHA) mg/M^3	TLV (ACGIH) mg/M^3
Silica Sand, crystalline	14808-60-7	0.1	0.025 (resp)
Portland Cement	65997-15-1	5 (resp) 15 (total)	10 (resp)
Fly Ash	68131-74-8	N/A	N/A

8.2 Exposure Controls
Use ventilation adequate to keep exposures below recommended exposure limits.

8.3 General protective and hygienic measures
Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

8.3a Personal protective equipment
Protection of hands:
Wear gloves of adequate length to offer appropriate skin protection from splashes. Nitrile, Butyl and PVC gloves have been found to offer adequate protection for incidental contact. You cannot rely on pain to alert you to cement burns. Portland cement can cause dermatitis or sensitization.

Eye protection:
Wear approved eye protection (properly fitted dust- or splash-proof chemical safety glasses.

Respiratory protection:
Wear a NIOSH approved respirator (mask) such as N95 in poorly ventilated areas, when used for extended periods, when use is frequent, or when permissible exposure limits may be exceeded. Respirators should be selected by and used under the direction of a trained health and safety professional, following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2).

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

General Information

Appearance	Form: Granular Solid
	Color: Gray to gray-brown colored
	Odor: None
pH-value at 20°C (68 °F):	13 (10%)
Boiling point/Boiling range:	Not applicable
Flash point:	Not applicable
Auto igniting:	Product is not self-igniting
Vapor pressure at 21°C (70°F)	Not available
Density at 25°C (77 °F):	2.6 to 3.15

Solubility in / Miscibility with

Water:	Insoluble
VOC content:	0 g/L VOC

SECTION X – STABILITY AND REACTIVITY

10.1 Reactivity
No dangerous reaction known under conditions of normal use.
10.2 Chemical stability
Stable under normal storage conditions. Keep in dry storage.

10.3 Possibility of hazardous reaction
No dangerous reaction known under conditions of normal use.
10.4 Thermal decomposition / conditions to be avoided
No decomposition if used according to specifications.
10.5 Incompatible materials
Contact of silica with powerful oxidizing agents such as fluorine, chlorine trifluoride, manganese trioxide, or oxygen difluoride may cause fires
10.6 Hazardous Decomposition or By-products
Silica will dissolve in Hydrofluoric Acid and produce a corrosive gas – silicon tetrafluoride.

SECTION XI – TOXICOLOGICAL INFORMATION

11.1 Exposure Routes: Skin contact, skin adsorption, eye contact, inhalation, or ingestion.

11.2 Symptoms related to physical/chemical/toxicological characteristics:

Inhalation: May cause respiratory tract irritation. Causes damage to organs through prolonged or repeated exposure. This product contains crystalline silica. Prolonged or repeated inhalation of respirable silica from this product can cause silicosis.

Skin contact: Causes severe skin burns. Handling can cause dry skin, discomfort, irritation, and dermatitis. May cause sensitization by skin contact. Product becomes extremely alkaline when exposed to moisture, and can cause alkali burns and affect the mucous membranes.

Eye Contact: Causes serious eye damage. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Ingestion: Harmful if swallowed. Ingestion may cause discomfort and/or distress, nausea or vomiting.

11.3 Delayed, immediate and chronic effects of short-term and long-term exposure
Short Term

Skin Corrosion/Irritation: Causes severe skin burns.
Serious Eye Damage/Irritation: Causes severe eye damage.
Respiratory Sensitization: Not available
Skin Sensitization: May cause an allergic skin reaction.
Specific Target Organ Toxicity-Single Exposure: (Category 3) May cause respiratory irritation.
Aspiration Hazard: Not available

Long Term

Carcinogenicity: May cause cancer through chronic inhalation.
Germ Cell Mutagenicity: Not available
Reproductive Toxicity: Not available

Specific Target Organ Toxicity- Repeated Exposure: (Category 1) Causes damage to lungs through prolonged/repeated exposure
Synergistic/Antagonistic Effects: Not available.

SECTION XII – ECOLOGICAL INFORMATION

12.1 Ecotoxicity
May cause long-term adverse effects to the aquatic environment. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or un-neutralized

12.2 Persistence and degradability
No further relevant information available.

12.3 Bioaccumulative potential:
No further relevant information available.

12.4 Mobility in soil
No further relevant information available.

12.5 Other Adverse Effects
No further relevant information available.

SECTION XIII – DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method
The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302). Disposal must be made in accordance with local, state and federal regulations.

13.2 Other disposal considerations
Uncleaned packaging
Recommendation: Disposal must be made in accordance with local, state and federal regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

SECTION XIV – TRANSPORT INFORMATION

	DOT (U.S.)	TDG (Canada)
UN-Number	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated
Transport Hazard Class(es)	Not Regulated	Not Regulated
Packing Group (if applicable)	Not Regulated	Not Regulated

14.1 Environmental hazards:
Not Available

14.2 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code
Not available

14.3 Special precautions for user
Do not handle until all safety precautions have been read and understood.

SECTION XV – OTHER REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislations specific for the chemical

Canada
WHMIS Classification: Considered to be a hazardous material under the Hazardous Products Act as defined by the Hazardous Products Regulations and subject to the requirements of Health Canada's Workplace Hazardous Material Information (WHMIS). This document complies with the WHMIS requirements of the Hazardous Products Act (HPA) and the HPR.

15.2 US Federal Information

SARA 302/311/312/313 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302, 311, 312 or 313.
RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.
CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.
Emergency Planning and Community Right to Know Act (SARA Title III): Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.
FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).
NTP: Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.
OSHA Carcinogen: Crystalline silica (quartz) is not listed.

15.3 State Right to Know Laws

California Prop. 65 Components

WARNING: This product can expose you to chemicals including crystalline silica which is known to the State of California to cause cancer and hexavalent chromium compounds which are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

California Inhalation Reference Exposure Level (REL): California established a chronic REL of 3 µg for silica (crystalline, respirable). A chronic REL is an airborne level of a substance at or below which no adverse health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts Toxic Use Reduction Act: Silica, crystalline (respirable size, <10 microns) is “toxic” for purposes of the Massachusetts Toxic Use Reduction Act.

15.4 Global Inventories

DSL All components of this product are on the Canadian DSL list.

TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7. All constituents are listed in the TSCA inventory.

SECTION XVI – OTHER INFORMATION

Last Updated: February 7, 2018

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by The QUIKRETE Companies, LLC

End of SDS

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name: Merchant, rebar, structural, and select sheet steel grades
CAS Number: Not applicable
Synonyms: Carbon Steels
Use/Description: Bar and structural steel products, billets (sheet steel for Castrip®), grinding balls

Nucor Mill Locations **24 Hour Contact – CHEMTREC 1-800-424-9300**

Nucor Steel – South Carolina 300 Steel Mill Road Darlington, S.C. 29540 (843) 393-5841	Nucor Steel Kankakee, Inc. One Nucor Way Bourbonnais, IL 60914 (815) 939-5541	Nucor Steel Jackson, Inc. 3630 Fourth Street Flowood, MS 39232 (601) 939-1623	Nucor Steel – Nebraska 2911 East Nucor Road Norfolk, Nebraska 68701 (402) 644-0200
Nucor Steel – Auburn, Inc. 25 Quarry Road Auburn, N.Y. 13021 (315) 253-4561	Nucor Steel – Utah West Cemetery Road Plymouth, Utah 84330 (435) 458-2300	Nucor Steel Birmingham, Inc. 2301 F.L. Shuttlesworth Drive Birmingham, Alabama 35234 (205) 250-7400	Nucor Steel Seattle, Inc. 2424 SW Andover Seattle, WA 98106 (206) 933-2222
Nucor Steel – Texas U.S. Highway 79 South Jewett, Texas 75846 (903) 626-4461	Nucor Steel Marion, Inc. 912 Cheney Avenue Marion, Ohio 43302 (740) 383-4011	Nucor Steel – Berkeley 1455 Hagan Avenue Huger, SC 29450 (843) 336-6000	Nucor Yamato Steel/ Nucor Castrip Arkansas, LLC 5929 E. State Hwy 18 Armorel, AR 72310 (870) 762-5500
Nucor Steel Connecticut, Inc. 35 Toelles Road Wallingford, CT 06492 (203) 265-0615	Nucor Steel Kingman, LLC 3000 West Old Highway 66 Kingman, AZ 86413 (928) 718-7035		

For general product information, contact mill as listed above. For emergencies, use the 24 Hour Contact.

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
STEEL PRODUCTS AS SOLD BY NUCOR ARE NOT HAZARDOUS PER OSHA GHS 29 CFR 1910, 1915, 1926. However, individual customer processes, (such as welding, sawing, brazing, grinding, abrasive blasting, and machining) may result in the formation of fumes, dust (combustible or otherwise), and/or particulate that may present the following hazards:

OSHA Hazards: Carcinogen
Skin Sensitizer
Target Organ Effect – Lungs

GHS Classification: Carcinogenicity (Category 2)
Skin Sensitization (Category 1)
Specific Target Organ Toxicity-Repeated Exposure (Category 1)

Pictogram(s):

Signal Word: Danger

Hazard Statement(s)
H317: Dust/fumes may cause an allergic skin reaction.
H351: Dust/fumes suspected of causing cancer via inhalation.
H372: Inhalation of dust/fumes causes damage to respiratory tract through prolonged or repeated exposure.

Precautionary Statement(s)
P202: Do not handle until all safety precautions have been read and understood.
P261: Avoid breathing dust/fumes.
P281: Use personal protective equipment as required.
P308+P313: If exposed or concerned: Get medical advice/attention.

Potential Health Effects

Eye Contact
Dusts or particulates may cause mechanical irritation including pain, tearing, and redness. Scratching of the cornea can occur if eye is rubbed. Fumes may be irritating. Contact with the heated material may cause thermal burns.

Skin Contact
Dusts or particulates may cause mechanical irritation due to abrasion. Coated steel may cause skin irritation in sensitive individuals (see Section 16 for additional information.) Some components in this product are capable of causing an allergic reaction, possibly resulting in burning, itching and skin eruptions. Contact with heated material may cause thermal burns.

Inhalation
Dusts may cause irritation of the nose, throat, and lungs. Excessive inhalation of metallic fumes and dusts may result in metal fume fever, an influenza-like illness. It is characterized by a sweet or metallic taste in the mouth, accompanied by dryness and irritation of the throat, cough, shortness of breath, pulmonary edema, general malaise, weakness, fatigue, muscle and joint pains, blurred vision, fever and chills. Typical symptoms last from 12 to 48 hours.

Ingestion
Not expected to be acutely toxic via ingestion based on the physical and chemical properties of the product. Swallowing of excessive amounts of the dust may cause irritation, nausea, and diarrhea.

Potential Fire and Explosion Hazards
Under normal conditions, steel products do not present fire or explosion hazards, and dust generated by handling steel products is oxidized and not combustible. Processing of steel product by some individual customers may produce potentially combustible dust that may represent a fire or explosion hazard.

Chronic or Special Toxic Effects
Repeated exposure to fine dusts may inflame the nasal mucosa and cause changes to the lung. In addition, a red-brown pigmentation of the eye and/or skin may occur. Welding fumes have been associated with adverse health effects. Contains components that may cause cancer or reproductive effects. The following components are listed by NTP, OSHA, or IARC as carcinogens: Nickel, chromium (hexavalent), cobalt, lead, cadmium, antimony (trioxide), arsenic, beryllium. See Section 11, for additional, specific information on effects noted above.

Target Organs
Overexposure to specific components of this product that are generated in dusts or fumes may cause adverse effects to the following organs or systems: eyes, skin, liver, kidney, central nervous system, cardiovascular system, respiratory system.

Medical Conditions Aggravated by Exposure
Diseases of the skin such as eczema may be aggravated by exposure. Also, disorders of the respiratory system including asthma, bronchitis, and emphysema. Long-term inhalation exposure to agents that cause pneumoconiosis (e.g. dust) may act synergistically with inhalation of oxide fumes or dusts of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components		CAS No.	% Weight	Exposure Limits			
				ACGIH TLV (mg/m^3)		OSHA PEL (mg/m^3)	
Base Metal:							
Iron	(Fe)	7439-89-6	Balance	5	Oxide Dust/Fume	10	Oxide Dust/Fume
Alloying Elements							
Aluminum	(Al)	7429-90-5	<0.05	10 5	Dust Fume	15 5	Dust Respirable fraction
Antimony	(Sb)	7440-36-0	<0.9	0.5	As Antimony	0.5	As Antimony
Arsenic	(As)	7440-38-2	<0.09	0.01	As Arsenic (A1 Carcinogen)	0.01	As Arsenic
Beryllium	(Be)	7440-41-7	<0.09	0.002 0.01	As Beryllium (A1 Carcinogen) As Beryllium (STEL)	0.002 0.005	As Beryllium As Beryllium (Ceiling)
Boron	(B)	7440-42-8	<0.9	10	Oxide Dust	15	Oxide Dust
Cadmium	(Cd)	7440-43-9	<0.01	0.01 0.002	As Cadmium (A2 Carcinogen) Respirable fraction	0.005 0.0025	As Cadmium As Cadmium (Action Level)
Calcium	(Ca)	1305-78-8	<0.9	2	Oxide Dust	5	Oxide Dust
Carbon	(C)	7440-44-0	<1.2		Not Established		Not Established
Chromium	(Cr)	7440-47-3	0.01-1.2	0.5	Metal	1	Metal
Cobalt	(Co)	7440-48-4	<0.09	0.02	As Cobalt (A3 Carcinogen)	0.1	Metal/Dust/Fume
Copper	(Cu)	7440-50-8	<0.9	1 0.2	Dust Fume	1 0.1	Dust Fume
Lead	(Pb)	7439-92-1	<0.07	0.05	Dust / Fume (A3 Carcinogen)	0.05	Dust / Fume
Magnesium	(Mg)	7439-95-4	<0.9		Not Established		Not Established
Manganese	(Mn)	7439-96-5	0.2-2	0.2	Elemental Mn and Inorg Compounds	5	Fume (Ceiling)
Molybdenum	(Mo)	7439-98-7	<0.9	10	Insoluble Compounds	15	Insoluble Compounds
Niobium	(Nb)	7440-03-1	<0.9		Not Established		
Nickel	(Ni)	7440-02-0	<1.0	1.5	Metal	1	Metal and Insoluble Compounds
Nitrogen	(N)	7727-37-9	<0.9		Simple Asphyxiant		Simple Asphyxiant
Phosphorus	(P)	7723-14-0	<0.9	0.1	Phosphorus	0.1	Phosphorus
Selenium	(Se)	7782-49-2	<0.9	0.2	Selenium	0.2	Selenium
Silicon	(Si)	7440-21-3	<0.9	10	Dust	15	Dust
Sulfur	(S)	7446-09-05	<0.9	5.2 13	Sulfur Dioxide Sulfur Dioxide (STEL)	13	Sulfur Dioxide
Tin	(Sn)	7440-31-5	<0.9	2	Metal,Oxide and Inorganic Compounds	2	Inorganic Compounds
Titanium	(Ti)	7440-32-6	<0.9		Not Established		Not Established
Tungsten	(W)	7440-33-7	<0.9	5 10	Insoluble Compounds as W Insoluble Compounds as W (STEL)		Not Established
Vanadium	(V)	7440-62-2	<0.9	0.05	Oxide Dust/Fume	0.5 0.1	Oxide Dust (Ceiling) Oxide Fume (Ceiling)
Zinc	(Zn)	7440-66-6	0.0-0.10	10 5 10	Oxide Dust OxideFume Oxide Fume (STEL)	5 10	Oxide Fume Oxide Dust

NOTE: No permissible exposure limits (PEL) or threshold limit values (TLV) exist for steel over all. The above listing is a summary of elements used in alloying Nucor Steel Products. Various grades of steel will contain different combinations of these elements and/or trace materials. Exact specifications may be found by calling the division and asking for a specifications sheet.

4. FIRST AID MEASURES

Eye Contact - In case of overexposure to dusts or fumes, immediately flush eyes with plenty of water for at least 15 minutes occasionally lifting the eye lids. Get medical attention if irritation persists. Thermal burns should be treated as medical emergencies.
Skin Contact - In case of overexposure to dusts or particulates, wash with soap and plenty of water. Get medical attention if irritation develops or persists. If thermal burn occurs, flush area with cold water and get immediate medical attention.
Inhalation - In case of overexposure to dusts or fumes, remove to fresh air. Get immediate medical attention if symptoms described in this SDS develop.
Ingestion - Not considered an ingestion hazard. However, if excessive amounts of dust or particulates are swallowed, treat symptomatically and supportively. Get medical attention.
Notes to Physician - Inhalation of metal fume or metal oxides may produce an acute febrile state, with cough, chills, weakness, and general malaise, nausea, vomiting, muscle cramps, and remarkable leukocytosis. Treatment is symptomatic, and condition is self limited in 24-48 hours. Chronic exposure to dusts may result in pneumoconiosis of mixed type.

5. FIRE FIGHTING MEASURES

Flash Point (Method) - Not applicable
Flammable Limits (% volume in air) - Not applicable
Auto ignition Temperature - Not applicable
Extinguishing Media - For molten metal, use dry powder or sand. For steel dust use or dry sand, water, foam, argon or nitrogen.
Special Fire Fighting Procedures - Do not use water on molten metal. Do not use Carbon Dioxide (CO_2). Firefighters should not enter confined spaces without wearing NIOSH/MSHA approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.
Unusual Fire or Explosion Hazards - Steel products do not present fire or explosion hazards under normal conditions. Any non-oxidized fine metal particles/ dust generated by grinding, sawing, abrasive blasting, or individual customer processes may produce materials that the customer should test for combustibility and other hazards in accordance with applicable regulations. High concentrations of combustible metallic fines in the air may present an explosion hazard.

6. ACCIDENTAL RELEASE MEASURES

Precautions if Material is Spilled or Released - Emergency response is unlikely unless in the form of combustible dust. Avoid inhalation, eye, or skin contact of dusts by using appropriate precautions outlined in this SDS (see section 8). Fine turnings and small chips should be swept or vacuumed and placed into appropriate disposable containers. Keep fine dust or powder away from sources of ignition. Scrap should be reclaimed for recycling. Prevent materials from entering drains, sewers, or waterways. Specific standards and regulations may be applicable to materials generated by individual customer processes. As appropriate, these standards and regulations should be consulted for applicability.
Fire and Explosion Hazards - Some customer processes may generate combustible dust that may require specific precautions when cleaning spills or releases of dust.
Environmental Precautions - Some grades of steel may contain reportable quantities of alloying elements. See Section 15 for additional information.
Waste Disposal Methods - Dispose of used or unused product in accordance with applicable Federal, State, and Local regulations. Please recycle.

7. HANDLING AND STORAGE

Storage Temperatures - Stable under normal temperatures and pressures.
Precautions to be Taken in Handling and Storing - Store away from strong oxidizers. Dusts and/or powders, alone, or combined with process specific fluids, may form explosive mixtures with air. Applicable Federal, state and local laws and regulations may require testing dust generated from processing of steel

products to determine if it represents a fire or explosion hazard and to determine appropriate protection methods. Avoid breathing dusts or fumes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Operations with potential for generating high concentrations of airborne particulates or fumes should be evaluated and controlled as necessary.
Eye Protection - Use safety glasses. Dust resistant safety goggles are recommended under circumstances where particles could cause mechanical injury such as grinding or cutting. Face shield should be used when welding or cutting.
Skin - Appropriate protective gloves should be worn as necessary. Good personal hygiene practices should be followed including cleansing exposed skin several times daily with soap and water, and laundering or dry cleaning soiled work clothing.
Respiratory Protection - NIOSH/MSHA approved dust/fume/mist respirator should be used to avoid excessive exposure. See Section 3 for component material information exposure limits. If such concentrations are sufficiently high that this respirator is inadequate, or high enough to cause oxygen deficiency, use a positive pressure self-contained breathing apparatus (SCBA). Follow all applicable respirator use, fitting, and training standards and regulations.
Ventilation - Provide general and/or local exhaust ventilation to control airborne levels of dust or fumes below exposure limits.
Exposure Guidelines - No permissible exposure limits (PEL) or threshold limit values (TLV) exist for steel. See Section 3 for component materials. Various grades of steel will contain different combinations of these elements. Trace elements may also be present in minute amounts

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor – Silver grey to grey black with metallic luster.
Boiling Point - Not applicable
Melting Point - Approximately 2800 ^{o}F
pH - Not applicable
Specific Gravity (at 15.6^{o}C) - Not applicable
Density (at 15.6 ^{o}C) - Not applicable
Vapor Pressure - Not applicable
Vapor Density (air = 1) - Not applicable
% Volatile, by Volume - Not applicable
Solubility in Water - Insoluble.
Evaporation Rate (Butyl Acetate = 1) - Not applicable
Other Physical and Chemical Data - None

10. STABILITY AND REACTIVITY

Stability - Stable
Conditions to Avoid - Steel at temperatures above the melting point may liberate fumes containing oxides of iron and alloying elements. Avoid generation of airborne fume.
Hazardous Polymerization - Will not occur.
Incompatibility (Materials to Avoid) - Reacts with strong acids to form hydrogen gas. Do not store near strong oxidizers.
Hazardous Decomposition Products - Metallic fumes may be produced during welding, burning, grinding, and possibly machining or any situation with the potential for thermal decomposition. Refer to ANSI Z49.1

11. TOXICOLOGICAL INFORMATION

The primary component of this product is iron. Long-term exposure to iron dusts or fumes can result in a condition called siderosis which is considered to be a benign pneumoconiosis. Symptoms may include chronic bronchitis, emphysema, and shortness of breath upon exertion. Penetration of iron particles in the skin or eye may cause an exogenous or ocular siderosis which may be characterized by a red-brown

pigmentation of the affected area. Ingestion overexposures to iron may affect the gastrointestinal, nervous, and hematopoietic system and the liver. Iron and steel founding, but not iron or iron oxide, has been listed as carcinogenic (Group 1) by IARC.

When this product is welded, fumes are generated. Welding fumes may be different in composition from the original welding product, with the chief component being ordinary oxides of the metal being welded. Chronic health effects (including cancer) have been associated with the fumes and dusts of individual component metals (see above), and welding fumes as a general category have been listed by IARC as a carcinogen (Group 2B). There is also limited evidence that welding fumes may cause adverse reproductive and fetal effects. Evidence is stronger where welding materials contain known reproductive toxins, e.g., lead, which may be present in the coating material of this product.

Breathing fumes or dusts of this product may result in metal fume fever, which is an illness produced by inhaling metal oxides. These oxides are produced by heating various metals including cadmium, zinc, magnesium, copper, antimony, nickel, cobalt, manganese, tin, lead, beryllium, silver, chromium, aluminum, selenium, iron, and arsenic. The most common agents involved are zinc and copper.

This product may contain small amounts of manganese. Prolonged exposure to manganese dusts or fumes is associated with "manganism", a Parkinson-like syndrome characterized by a variety of neurological symptoms including muscle spasms, gait disturbances, tremors, and psychoses.

This product may contain small amounts of cadmium. Primary target organs for cadmium overexposure are the lung and the kidney. Because of its cumulative nature, chronic cadmium poisoning can cause serious disease which takes many years to develop and may continue to progress despite cessation of exposure. Progression of the disease may not reflect current exposure conditions. It is also capable of causing a painful osteomalacia called “Itai-Itai” in postmenopausal women, and has caused developmental effects and/or reproductive effects in male and female animals. Cadmium is a listed carcinogen by NTP, OSHA, and IARC (Group 1).

This product may contain small amounts of chromium. Prolonged and repeated overexposure to chromium dusts or fumes may cause skin ulcers, nasal irritation and ulceration, kidney damage and cancer of the respiratory system. Chromium is skin sensitizer. Cancer is generally attributed to the hexavalent (+6) form of chromium which is listed as a carcinogen by NTP and IARC (Group 1).

This product may contain small amounts of nickel. Prolonged and repeated contact with nickel may cause sensitization dermatitis. Inhalation of nickel compounds has caused lung damage as well as sinus, nasal and lung cancer in laboratory animals. Nickel is a listed carcinogen by NTP and IARC (Group 1).

This product may contain small amounts of vanadium. Adverse effects from dermal, inhalation or parenteral exposure to various vanadium compounds have been reported. The major target for vanadium pentoxide toxicity is the respiratory tract. Fumes or dust can cause severe eye and respiratory irritation, and systemic effects. Chronic bronchitis, green tongue, conjunctivitis, pharyngitis, rhinitis, rales, chronic productive cough, and tightness of the chest have been reported following overexposure. Allergic reactions resulting from skin and inhalation exposures have also been reported. A statistical association between vanadium air levels and lung cancer has been suggested, but vanadium currently is not regarded as a human carcinogen.

This product may contain small amounts of lead. Lead can accumulate in the body. Consequently, exposure to fumes or dust may produce signs of polyneuritis, diminished vision and peripheral neuropathy, such as tingling and loss of feeling in fingers, arms and legs. Lead is a known reproductive and developmental toxin. It is also associated with central nervous system disorders, anemia, kidney dysfunction and neurobehavioral abnormalities. The brain is a major target organ for lead exposure. Elemental lead is listed as an IARC 2B carcinogen.

The product may contain small amounts of copper. Copper dust and fumes can irritate the eyes, nose and throat causing coughing, wheezing, nosebleeds, ulcers and metal fume fever. Other effects from repeated inhalation of copper fumes include a metallic or sweet taste, and discoloration of skin, teeth or hair. Copper also may cause an allergic skin reaction. Overexposure to copper can affect the liver.

12. ECOLOGICAL INFORMATION

Aquatic Ecotoxicological Data - No specific information available on this product.
Environmental Fate Data - No specific information available on this product.

13. DISPOSAL CONSIDERATIONS

Recovery and reuse, rather than disposal, should be the ultimate goal of handling efforts. Dispose in accordance with federal, state, and local health and environmental regulations. Prevent materials from entering drains, sewers, or waterways.

14. TRANSPORT INFORMATION

DOT Proper Shipping Name - Not regulated
DOT Hazard Classification - Not regulated
UN/NA Number - Not applicable
DOT Packing Group - Not applicable
Labeling Requirements - Not applicable
Placards - Not applicable
DOT Hazardous Substance - Not applicable
DOT Marine Pollutant - Not applicable

15. REGULATORY INFORMATION

This product is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200. However, dusts and fumes from this product may be combustible or hazardous and require protection to comply with applicable Federal, state and local laws and regulations.

California Proposition 65: This product contains chemicals (antimony [oxide], arsenic, beryllium, chromium [hexavalent], cobalt, cadmium, lead, nickel) known to the State of California to cause cancer and chemicals (cadmium, lead) known to the State of California to cause birth defects or other reproductive harm.

Massachusetts Substance List: Aluminum, Antimony, Arsenic, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Magnesium, Manganese, Molybdenum, Nickel, Nitrogen, Phosphorus, Selenium, Silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zinc

Pennsylvania Hazardous Substance List: Aluminum, Antimony, Arsenic, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Magnesium, Manganese, Molybdenum, Nickel, Nitrogen, Phosphorus, Selenium, Silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zinc

New Jersey Hazardous Substance List: Aluminum, Antimony, Arsenic, Beryllium, Boron, Cadmium, Chromium, Cobalt, Copper, Lead, Magnesium, Manganese, Molybdenum, Nickel, Nitrogen, Phosphorus, Selenium, Silicon, Sulfur, Tin, Titanium, Tungsten, Vanadium, Zinc

Toxic Substances Control Act (TSCA)
Components of this product are listed on the TSCA Inventory.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)
Steel is not reportable, however, it contains hazardous substances that may be reportable if released in pieces with diameters less than or equal to 0.004 inches (RQ marked with a "*").

Chemical Name	Reportable Quantity (in lb)
Antimony	5000*
Arsenic	1*
Beryllium	10*
Cadmium	10*
Chromium	5000*
Copper	5000*

Chemical Name	Reportable Quantity (in lb)
Lead	10*
Nickel	100*
Phosphorus	1
Selenium	100*
Zinc	1000*

Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III
SECTION 311/312 HAZARD CATEGORIES: Immediate Health Effect, Delayed Health Effect

This product contains the following EPCRA Section 313 chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right – To – Know Act of 1986 (40 CFR 372):

SECTION 313 REPORTABLE INGREDIENTS:

Chemical Name	CAS Number	Concentration (% by weight)	Reportable
Aluminum	7429-90-5	<0.05	No – Less than 1%
Antimony	7440-36-0	<0.9	No – Less than 1%
Arsenic	7440-38-2	<0.09	No – Less than 0.1%
Beryllium	7440-41-7	<0.09	No – Less than 0.1%
Cadmium	7440-43-9	<0.01	No – Less than 0.1%
Chromium	7440-47-3	0.01-1.2	Yes – Greater than 0.1%
Cobalt	7440-48-4	<0.09	No – Less than 0.1%
Copper	7440-50-8	<0.9	No – Less than 1%
Lead	7439-92-1	<0.07	Yes
Manganese	7439-96-5	0.2-2	Yes – Greater than 1%
Nickel	7440-02-0	<1.0	Yes – Greater than 0.1%
Phosphorus	7723-14-0	<0.9	No – Less than 1%
Selenium	7782-49-2	<0.9	No – Less than 1%
Vanadium	7440-62-2	<0.9	No – Less than 1%
Zinc	7440-66-6	0-0.10	No – Less than 1%

Concentrations based on analytical data and process knowledge of typical products distributed by the facility.

16. OTHER INFORMATION

This SDS covers Nucor product as delivered from the Nucor facility, but does not include chemicals that may be applied by subsequent handlers and/or distributors of this product. This could include a variety of materials including oils, paints, galvanization, etc. that are not included in this SDS. Additionally, specialty orders may require application of coating material not listed in this SDS. SDSs for any Nucor-applied specialty coating will be provided separately. During welding, precautions should be taken for airborne contaminants that may originate from components of the welding rod. Arc or spark generated when welding or burning could be a source of ignition for combustible and/or flammable materials. The information in this Safety Data Sheet (SDS) was obtained from sources which we believe are reliable; however, the information is provided without any representation or warranty, expressed or implied, regarding the accuracy or correctness. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage, or expense arising out of or in any way connected with the handling, storage, use, or disposal of this product.

SAFETY DATA SHEET

Issue Date: August 9, 2017 **Revision Date: August 9, 2017** **Version: 2017.1**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Release

Other Means of Identification
SDS #: F6005

Recommended Use: Concrete Form Release Agent
Restrictions on Use: No Data

Supplier of the Safety Data Sheet including Address:
ChemMasters Inc.
300 Edwards Street
Madison, OH 44057

Telephone Numbers
Company Phone Number Phone: 800-486-7866, 440-428-2105
Fax: 440-428-7091

Emergency Telephone: ChemTrec 800-424-9300 (United States & Canada), International Call: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards:
Combustible liquid, may be harmful if swallowed and enters airways, may be harmful if inhaled, may cause respiratory irritation, may cause skin & eye irritation

Target Organs: Respiratory System

GHS Classification:
Acute toxicity, Oral – Category 5
Acute toxicity, Inhalation – Category 5
Aspiration Hazard – Category 2
Flammable Liquids – Category 4
Specific target organ toxicity – single exposure – Category 3, Respiratory System

Label Elements, including precautionary statements

Pictograms: 

Signal Word: WARNING

Hazard Statements:

H227	**Combustible Liquid**
H305	**May be Harmful if swallowed and enters airways**
H333	**May be Harmful if inhaled.**
H335	**May cause respiratory irritation.**

Precautionary Statement(s)

Prevention:

P210	**Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.**
P261	**Avoid breathing fume/mist/vapours/spray.**
P271	**Use only outdoors or in a well-ventilated area.**
P280	**Wear protective gloves/protective clothing/eye protection/face protection.**

Response:

P301+P310+P331	**IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting.**
P304+P340+P312	**IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.**
P370+P378	**In case of fire: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.**

Storage:

P403+P233	**Store in a well-ventilated place. Keep container tightly closed.**
P405	**Store Locked Up**

Disposal:

P501	**Dispose of contents/container in accordance with local/regional/national regulations.**

Hazards Not Otherwise Classified: May cause skin and eye irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component

Hydrocarbon Oil Mixture CAS#: 8042-47-5, 64742-46-7, 64742-53-6		85-100%
(Mineral Oil, Mineral Seal Oil, Distillates (petroleum), Hydro-treated Light Naphthenic)		
Petroleum Hydrocarbon Distillates	CAS#: 8052-41-3	0-10%
Tall Oil Fatty Acid	CAS#: 61790-12-3	<2.0%
Benzadehyde	CAS#: 100-52-7	<1.0%

Ingredients not listed on this safety data sheet are considered to be non-hazardous according to OSHA 1910.1200 or are not present above their cutoff levels. Where a range is displayed, the exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If not breathing, give artificial respiration. Consult a physician.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

Skin Contact: Wash off with soap and plenty of water. If skin irritation occurs, get medical advice or attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Water spray, alcohol-resistant foam, dry chemical, or carbon dioxide

Specific Hazards Arising from the Chemical
In a fire or if heated a pressure increase will occur and the container may burst.

Hazardous Combustion Products
Carbon dioxides & Carbon monoxide

Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus and full protective gear for firefighting.

Further Information
See Section 7 for safe handling and storage.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
In case of spill, evacuate the area and remove all ignition sources. Do not expose to heat, flames, or ignition sources. Material is slippery. Do not walk through spilled material. Wear appropriate personal protective equipment during any cleanup and response activities.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Material for Containment and Cleaning Up
Dike and contain spill with inert absorbent materials. Soak up with inert material and keep in suitable, closed containers for disposal. Dispose of in accordance with specified local/regional/national/international regulations for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for Safe Storage, Including any Incompatibilities
General information: Store in cool place. Keep container tightly closed in a dry and well ventilated place. Keep away from heat (<95 degrees F/<35 degrees C) and direct sunlight. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Safe Storage: Store and use away from heat, sparks, open flame or any other ignition source.
Incompatibilities: None Known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Component Exposure Limits

Mineral Oil; Mineral Seal Oil; Distillates (petroleum), Hydro-treated Light Naphthenic: Oil Mist
- ACGIH TLV: TWA 5 mg/m3, STEL: 10 mg/m3
- OSHA PEL: TWA 5 mg/m3
- NIOSH REL: TWA 5 mg/m3, STEL: 10 mg/m3

Petroleum Hydrocarbon Distillates, CAS# 8052-41-3:
- ACGIH TLV TWA: 100 ppm 8 hours
- OSHA PEL: TWA 500 ppm
- NIOSH REL: TWA 350 mg/m3, NIOSH Ceiling: 1800 mg/m3

Components of Petroleum Hydrocarbon Distillates, CAS# 8052-41-3:
- Ethyl Benzene, CAS# 100-41-4: ACGIH TLV: TWA 20 ppm
- N-Nonane, CAS# 111-84-2: ACGIH TLV: TWA 200 ppm
- Trimethyl Benzene (all isomers), CAS# 25551-13-7: ACGIH TLV: TWA 25 ppm
- Cumene, CAS# 98-82-8: ACGIH TWA 50 ppm 8 hr.

Appropriate Engineering Controls

Local Ventilation: Recommended
General Ventilation: Recommended

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: Use proper protection – Safety Glasses as a minimum

Skin and Body Protection: Wash at mealtime and end of shift. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.

Respiratory Protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

General Hygiene Considerations: Handle in accordance with good industrial hygiene and safety practice. Wash hands before & after breaks and work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State

Appearance: Liquid
Color: Colorless to Light Yellow
Odor: Mild Petroleum Solvent– Light cherry scent
Odor threshold: No Data

Property	Value	Remarks – Method
Vapor Pressure	Not Available	
Vapor Density	Not Available	
Relative Density	Not Available	
pH:	Not Relevant	
Melting/Freezing Point	Not Relevant	
Solubility	Not Available	
Evaporation Rate	Not Available	
Flash Point	168 Degrees F (75 Degrees C)	PMCC (D93)
Flammability Limits	Not Available	
Flammability (Solid, gas)	Not Relevant	
Auto Ignition Temperature	Not Available	
Initial Boiling Point/Boiling Range	Not Available	

Decomposition Temperature	Not Available	
Viscosity	Not Available	
Specific Gravity	0.87	Density: 7.28 lb./gal. +/- 0.1

10. STABILITY AND REACTIVITY

Chemical Stability:
This product is chemically stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None Known

Conditions to Avoid:
Store away from heat.

Incompatible Materials:
Strong acids and oxidizing agents

Hazardous Decomposition Products:
Carbon dioxides, Carbon monoxide

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Skin Contact, Eye Contact, Ingestion

Symptoms of Exposure: Product may cause chemical pneumonitis (aspiration of liquid) if swallowed and enters airways. Product may cause dizziness if inhaled. Product may cause respiratory irritation. Product may cause Skin & Eye Irritation.

Numerical measures of toxicity:

Inhalation LC50 (Inhalation of Dusts & Mists) Rat	5.7 mg/l 4 hr.
Inhalation LC50 Rat	21 mg/l 1 hr.
Oral LD50 Rat	>5000 mg/kg
Dermal LD50 Rabbit	>2000 mg/kg

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Carcinogenicity: IARC, ACGIH, NTP, OSHA
Product contains Ethyl Benzene which is classified by IARC as “possibly carcinogenic to humans” (Group 2B).
Product contains Cumene which is classified by IARC as “possibly carcinogenic to humans” (Group 2B).
Specific target organ toxicity: Single exposure – Category 3, Respiratory System,
Product may cause respiratory irritation.
Respiratory Irritation: If material is misted or sprayed, inhalation of mist may cause irritation of mucous membranes and the upper respiratory tract. Aspiration may lead to lipid pneumonia.

12. ECOLOGICAL INFORMATION

Eco toxicity: This product contains components that are potentially toxic to freshwater and saltwater ecosystems. This product will normally float on water. It may be harmful to aquatic organisms and may cause long term adverse effects in the aquatic environment.

Persistence and Degradability: Not Determined.

Bioaccumulation: Not Determined.

Mobility: Not Determined.

Other Adverse Effects: Not Determined.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes: This product is not a hazardous waste under RCRA. Dispose of in conformance with all federal, state and local regulations.

Contaminated Packaging: Dispose of as unused material.

14. TRANSPORT INFORMATION

D.O.T.:
U.S. DOT Bulk (Over 119 gallons), NA1993, Combustible Liquid N.O.S. (Mineral Spirits), Combustible Liquid, III.

U.S. DOT Non-Bulk (≤119 gallons), Not regulated

I.A.T.A.: Non-Bulk (≤119 gallons), Not a Dangerous Good

I.M.D.G.: Non-Bulk (≤119 gallons), Not a Dangerous Good
Marine Pollutant: Not listed in Appendix B to 49 CFR 172.101

15. REGULATORY INFORMATION

International Inventories
TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

US Federal Regulations
SARA 302 (Extremely Hazardous Substances): None Known
SARA 311/312 Hazard Categories: Acute Health Hazard, Chronic Health Hazard, Fire Hazard
SARA Section 313: This product contains the following components in concentrations greater than 0.1% for carcinogenic substances and/or 1.0% of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372: **None Known**

CWA (Clean Water Act): This product contains hydrocarbon oils and may be subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

Supplemental State Compliance Information
California:
This product contains chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm. <0.1% Ethyl Benzene, CAS# 100-41-4; <0.1% Cumene, CAS# 98-82-8

New Jersey Right To Know:

CAS Number	Component Name
8042-47-5	Mineral Oil
64742-53-6	Hydro-Treated Light Naphthenic Oil
8052-41-3	Petroleum Hydrocarbon Distillates
124-18-5	N-Decane
111-84-2	N-Nonane
95-63-6	1,2,4-Trimethylbenzene
100-41-4	Ethyl Benzene
98-82-8	Cumene

Massachusetts Right To Know:

CAS Number	Component Name
8042-47-5	Mineral Oil
64742-53-6	Hydro-Treated Light Naphthenic Oil

Pennsylvania Right To Know:

CAS Number	Component Name
8042-47-5	Mineral Oil
8052-41-3	Petroleum Hydrocarbon Distillates
124-18-5	N-Decane
111-84-2	N-Nonane
95-63-6	1,2,4-Trimethylbenzene
100-41-4	Ethyl Benzene
98-82-8	Cumene

U.S. EPA Label Information: No Data

16. OTHER INFORMATION

HMIS Classification:

Health hazard: **1**
Flammability: **2**
Physical Hazards: **0**

NFPA Rating:

Health hazard: **1**
Fire: **2**
Reactivity Hazard: **0**

Issuance Date: August 9, 2017
Revision Date: August 9, 2017
Revision Note: Reviewed and Updated
Date of Previous Version: March 24, 2017

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Issue Date: March 24, 2017 **Revision Date: March 24, 2017** **Version: 2017**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Safe-Cure 1000

Other Means of Identification
SDS #: F1610

Recommended Use: Concrete Curing Compound
Restrictions on Use: No Data

Supplier of the Safety Data Sheet including Address:
ChemMasters Inc.
300 Edwards Street
Madison, OH 44057

Telephone Numbers
Company Phone Number Phone: 800-486-7866, 440-428-2105
Fax: 440-428-7091

Emergency Telephone: ChemTrec 800-424-9300 (United States & Canada), International Call: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards:
Causes eye irritation, may be harmful if swallowed, may cause an allergic skin reaction, may cause skin irritation.

GHS Classification:
Eye damage/irritation – Category 2B
Acute Toxicity – Oral – Category 5
Sensitization – Skin – Category 1A

Label Elements, including precautionary statements

Pictograms: 

Signal Word: Warning

Hazard Statements:

H303	**May be harmful if swallowed.**
H320	**Causes eye irritation.**
H317	**May cause an allergic skin reaction.**

Precautionary Statement(s)

Prevention:

P261	**Avoid breathing dust/fume/gas/mist/vapours/spray.**
P264	**Wash hands and skin thoroughly after handling.**
P272	**Contaminated work clothing should not be allowed out of the workplace.**
P280	**Wear protective gloves/protective clothing/eye protection/face protection.**

Response:

P312	**Call a POISON CENTER/doctor if swallowed and you feel unwell.**
P305+P351+P338	**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
P337+P313	**If eye irritation persists: Get medical advice or attention.**
P302+P352	**IF ON SKIN: Wash with plenty of soap and water.**
P333+P313	**If skin irritation or rash occurs: Get medical advice or attention.**
P362+P364	**Take off contaminated clothing and wash it before reuse.**

Hazards not otherwise classified:

Product may cause skin irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component		
Water	CAS#: 7732-18-5	75-77%
Slack wax, petroleum	CAS# 64742-61-6	10-15%
Titanium Dioxide	CAS# 13463-67-7	3-5%
Surfactant Blend	Proprietary	≤ 5%
Mineral Filler - Non-Hazardous	Proprietary	< 2%

Ingredients not listed on this safety data sheet are considered to be non-hazardous according to OSHA 1910.1200 or are not present above their cutoff levels. Where a range is displayed, the exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: IF INHALED: Call a POISON CENTER/doctor if you feel unwell.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Ingestion: IF SWALLOWED: Not expected to be harmful under normal conditions of use. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a POISON CENTER/doctor if you feel unwell.

Skin Contact: Wash off with plenty of soap and water. If skin irritation or rash occurs: Get medical advice or attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Material is not combustible. Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide for the surrounding fire.

Specific Hazards Arising from the Chemical
No specific data available.

Hazardous Combustion Products
No specific data available.

Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus and full protective gear for firefighting.

Further Information
See Section 7 for safe handling and storage.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
In case of spill wear appropriate personal protective equipment during any cleanup and response activities. Avoid skin contact and inhalation.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Material for Containment and Cleaning Up
Dike and contain spill with inert absorbent materials. Soak up with inert material and keep in suitable, closed containers for disposal. Dispose of in accordance with specified local/regional/national/international regulations for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for Safe Storage, Including any Incompatibilities
General information: Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat. Keep from freezing. Store product above 50 degrees F/10 degrees C and below 95 degrees F/35 degrees C.

Safe Storage: No Additional Data

Incompatibilities: None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Component Exposure Limits
Titanium Dioxide:
PEL 15 mg/m3 OSHA 8 hr. TWA Total Dust; TLV 10 mg/m3 ACGIH TWA

Appropriate Engineering Controls
Local Ventilation: Recommended
General Ventilation: Recommended

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: Use proper protection – Safety Glasses as a minimum

Skin and Body Protection: Wash at mealtime and end of shift. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.

Respiratory Protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Wash hands before & after breaks and work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State
Appearance: Liquid
Color: White (Dries White)
Odor: Mild
Odor threshold: No Data

Property	Value	Remarks – Method
Vapor Pressure	Not Available	
Vapor Density	Not Available	
Relative Density	Not Available	
pH:	Not Available	
Melting/Freezing Point	32 Degrees F (0 Degrees C)	
Solubility	Not Available	
Evaporation Rate	Not Available	
Flash Point	>201 Degrees F (>94 Degrees C)	Closed Cup
Flammability Limits	Not Relevant	
Flammability (Solid, gas)	Not Relevant	
Auto Ignition Temperature	Not Available	
Initial Boiling Point/Boiling Range	≥212 Degrees F (>100 Degrees C)	
Decomposition Temperature	Not Available	
Viscosity	Not Available	
Specific Gravity	0.98 - 1.01	Density: 8.2 - 8.4 lb./gal.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Possibility of Hazardous Reactions: None Known

Conditions to Avoid: Keep from Freezing

Incompatible Materials: None Known

Hazardous Decomposition Products: Oxides of Carbon, Sulphur and Nitrogen

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Skin Contact, Eye Contact
(Ingestion is not a likely route of exposure under normal conditions of use.)

Symptoms of Exposure: Allergic skin reaction, skin and eye irritation, stomach or intestinal upset
Numerical measures of toxicity:

Ingredient: Titanium Dioxide
Acute Toxicity – Oral LD50 > 5,000 mg/Kg Rat
Acute Toxicity – Dermal LD50 > 10,000 mg/Kg Rabbit
Acute Toxicity – Inhalation LC50 > 6.8 mg/l Rat

Ingredient: Slack Wax, Petroleum
Acute Toxicity – Oral LD50 > 5,000 mg/Kg Rat
Acute Toxicity – Dermal LD50 > 2,000 mg/Kg Rabbit
Acute Toxicity – Inhalation LC50 N/A

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Product may be harmful if swallowed. Product may cause allergic skin reaction, skin and eye irritation

Carcinogenicity: IARC has characterized Titanium Dioxide as possibly carcinogenic to humans (Group 2B) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.

12. ECOLOGICAL INFORMATION

Eco toxicity: No Known significant effects or critical hazards.

Aquatic Eco-Toxicity Ingredient: Slack Wax, Petroleum
LC50 Fishes: > 100 mg/l 96 hrs.
LC50 Other Aquatic Organisms: >10,000 mg/l 96 hrs. Shrimp
EC50 Daphnia (Water Flea): >10,000 mg/l 48 hrs.

Persistence and Degradability: No Data Available

Bioaccumulation: No Data Available

Mobility: No Data Available

Other Adverse Effects: No Known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes: This product is a not a hazardous waste under RCRA. Dispose of in conformance with all federal, state and local regulations.

Contaminated Packaging: Dispose of as unused material.

14. TRANSPORT INFORMATION

D.O.T.: Not Regulated

I.M.D.G.: Not Regulated
Marine Pollutant: No

I.A.T.A.: Not Regulated

15. REGULATORY INFORMATION

International Inventories

TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

US Federal Regulations

SARA 302: None Known
SARA 311/312 Hazard Categories: Acute Health Hazard, Delayed (Chronic) Health Hazard
SARA 313 Hazard Categories: None Known

CWA (Clean Water Act): This product contains wax and may be subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of this product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

Supplemental State Compliance Information

California:

Warning: This product contains a chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

Titanium Dioxide CAS# 13463-67-7. The listing for titanium dioxide is for airborne, unbound particles of respirable size and does not cover titanium dioxide when it remains within a product matrix.

This product may contain trace amounts of other chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

Massachusetts Right To Know:

CAS Number	Component Name
13463-67-7	Titanium Dioxide

New Jersey Right To Know:

CAS Number	Component Name
13463-67-7	Titanium Dioxide

Pennsylvania Right To Know:

CAS Number	Component Name
13463-67-7	Titanium Dioxide

U.S. EPA Label Information: No Data

16. OTHER INFORMATION

HMIS Classification:

Health hazard:	**1**
Flammability:	**0**
Physical Hazards:	**0**

NFPA Rating:

Health hazard:	**1**
Fire:	**0**
Reactivity Hazard:	**0**

Issuance Date: March 24, 2017
Revision Date: March 24, 2017
Revision Note: Reviewed and Updated
Date of Previous Version: July 18, 2014

Disclaimer

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End of Safety Data Sheet

SAFETY DATA SHEET

Issue Date: June 22, 2017 **Revision Date: June 22, 2017** **Version: 2017**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Safe-Cure 2000

Other Means of Identification
SDS #: F1010

Recommended Use: Concrete Curing Compound
Restrictions on Use: No Data

Supplier of the Safety Data Sheet including Address:
ChemMasters Inc.
300 Edwards Street
Madison, OH 44057

Telephone Numbers
Company Phone Number Phone: 800-486-7866, 440-428-2105
Fax: 440-428-7091

Emergency Telephone: ChemTrec 800-424-9300 (United States & Canada), International Call: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards:
Causes eye irritation, May be harmful if swallowed, May cause an allergic skin reaction, May cause skin irritation.

GHS Classification:
Eye damage/irritation – Category 2B
Acute Toxicity – Oral – Category 5
Sensitization – Skin – Category 1A

Label Elements, including precautionary statements

Pictograms: 

Signal Word: Warning

Hazard Statements:

H303	**May be harmful if swallowed.**
H320	**Causes eye irritation.**
H317	**May cause an allergic skin reaction.**

Precautionary Statement(s)

Prevention:

P261	**Avoid breathing dust/fume/gas/mist/vapours/spray.**
P264	**Wash hands and skin thoroughly after handling.**
P272	**Contaminated work clothing should not be allowed out of the workplace.**
P280	**Wear protective gloves/protective clothing/eye protection/face protection.**

Response:

P312	**Call a POISON CENTER/doctor if swallowed and you feel unwell.**
P305+P351+P338	**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
P337+P313	**If eye irritation persists: Get medical advice or attention.**
P302+P352	**IF ON SKIN: Wash with plenty of soap and water.**
P333+P313	**If skin irritation or rash occurs: Get medical advice or attention.**
P362+P364	**Take off contaminated clothing and wash it before reuse.**

Hazards not otherwise classified: May cause skin irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component		
Water	CAS#: 7732-18-5	70-75%
Slack wax, petroleum	CAS# 64742-61-6	15-20%
Titanium Dioxide	CAS# 13463-67-7	3-5%
Resin – Non-Hazardous	Proprietary	1-3%
Surfactant Blend	Proprietary	≤ 5%
Mineral Filler - Non-Hazardous	Proprietary	< 2%

Ingredients not listed on this safety data sheet are considered to be non-hazardous according to OSHA 1910.1200 or are not present above their cutoff levels. Where a range is displayed, the exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: IF INHALED: Call a POISON CENTER/doctor if you feel unwell.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Ingestion: IF SWALLOWED: Not expected to be harmful under normal conditions of use. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Call a POISON CENTER/doctor if you feel unwell.

Skin Contact: Wash off with plenty of soap and water. If skin irritation or rash occurs: Get medical advice or attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Material is not combustible. Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide for the surrounding fire.

Specific Hazards Arising from the Chemical
No specific data available.

Hazardous Combustion Products
No specific data available.

Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus and full protective gear for firefighting.

Further Information
See Section 7 for safe handling and storage.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
In case of spill wear appropriate personal protective equipment during any cleanup and response activities. Avoid skin contact and inhalation.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Material for Containment and Cleaning Up
Dike and contain spill with inert absorbent materials. Soak up with inert material and keep in suitable, closed containers for disposal. Dispose of in accordance with specified local/regional/national/international regulations for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for Safe Storage, Including any Incompatibilities
General information: Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat. Keep from freezing. Store product above 50 degrees F/10 degrees C and below 95 degrees F/35 degrees C.

Safe Storage: No Additional Data

Incompatibilities: None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Component Exposure Limits
Titanium Dioxide:
PEL 15 mg/m3 OSHA 8 hr. TWA Total Dust; TLV 10 mg/m3 ACGIH TWA

Appropriate Engineering Controls
Local Ventilation: Recommended
General Ventilation: Recommended

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: Use proper protection – Safety Glasses as a minimum

Skin and Body Protection: Wash at mealtime and end of shift. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.

Respiratory Protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Wash hands before & after breaks and work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State
Appearance: Liquid
Color: White (Dries White)
Odor: Mild
Odor threshold: No Data

Property	Value	Remarks – Method
Vapor Pressure	Not Available	
Vapor Density	Not Available	
Relative Density	Not Available	
pH:	Not Available	
Melting/Freezing Point	32 Degrees F (0 Degrees C)	
Solubility	Not Available	
Evaporation Rate	Not Available	
Flash Point	>201 Degrees F (>94 Degrees C)	Closed Cup
Flammability Limits	Not Relevant	
Flammability (Solid, gas)	Not Relevant	
Auto Ignition Temperature	Not Available	
Initial Boiling Point/Boiling Range	≥212 Degrees F (>100 Degrees C)	
Decomposition Temperature	Not Available	
Viscosity	Not Available	
Specific Gravity	0.98 - 1.01	Density: 8.2 - 8.4 lb./gal.

10. STABILITY AND REACTIVITY

Chemical Stability:
Stable

Possibility of Hazardous Reactions:
None Known

Conditions to Avoid:
Keep from Freezing

Incompatible Materials:
None Known

Hazardous Decomposition Products
Oxides of Carbon, Sulphur and Nitrogen

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Skin Contact, Eye Contact
(Ingestion is not a likely route of exposure under normal conditions of use.)

Symptoms of Exposure:
Allergic skin reaction, skin and eye irritation, stomach or intestinal upset

Numerical measures of toxicity:

Ingredient: Titanium Dioxide

Acute Toxicity – Oral LD50 > 5,000 mg/Kg Rat
Acute Toxicity – Dermal LD50 > 10,000 mg/Kg Rabbit
Acute Toxicity – Inhalation LC50 > 6.8 mg/l Rat

Ingredient: Slack Wax, Petroleum

Acute Toxicity – Oral LD50 > 5,000 mg/Kg Rat
Acute Toxicity – Dermal LD50 > 2,000 mg/Kg Rabbit
Acute Toxicity – Inhalation LC50 N/A

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

May harmful if swallowed. May cause allergic skin reaction, skin and eye irritation

Carcinogenicity: IARC has characterized Titanium Dioxide as possibly carcinogenic to humans (Group 2B) through inhalation (not ingestion). It has not been characterized as a potential carcinogen by either NTP or OSHA.
Particles of titanium dioxide contained in this product are bound in resin. Product users would not be exposed to airborne, unbound particles of respirable size. Therefore the titanium dioxide is not on the list of chemicals known to the State of California to cause cancer.

12. ECOLOGICAL INFORMATION

Eco toxicity: No Known significant effects or critical hazards.

Aquatic Eco-Toxicity Ingredient: Slack Wax, Petroleum
LC50 Fishes: > 100 mg/l 96 hrs.
LC50 Other Aquatic Organisms: >10,000 mg/l 96 hrs. Shrimp
EC50 Daphnia (Water Flea): >10,000 mg/l 48 hrs.

Persistence and Degradability: No Data Available

Bioaccumulation: No Data Available

Mobility: No Data Available

Other Adverse Effects: No Known significant effects or critical hazards.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes: This product is a not a hazardous waste under RCRA. Dispose of in conformance with all federal, state and local regulations.

Contaminated Packaging: Dispose of as unused material.

14. TRANSPORT INFORMATION

D.O.T.: Not Regulated

I.M.D.G.: Not Regulated
Marine Pollutant: No

I.A.T.A.: Not Regulated

15. REGULATORY INFORMATION

International Inventories
TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

US Federal Regulations
SARA 302: None Known
SARA 311/312 Hazard Categories: Acute Health Hazard, Delayed (Chronic) Health Hazard
SARA 313 Hazard Categories: None Known

CWA (Clean Water Act): This product contains wax and may be subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of this product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

Supplemental State Compliance Information
California:
Warning: This product contains a chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.
Titanium Dioxide CAS# 13463-67-7. The listing for titanium dioxide is for airborne, unbound particles of respirable size and does not cover titanium dioxide when it remains within a product matrix.

This product may contain trace amounts of other chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

Massachusetts, New Jersey & Pennsylvania Right To Know:

CAS Number	Component Name
13463-67-7	Titanium Dioxide

U.S. EPA Label Information: No Data

16. OTHER INFORMATION

HMIS Classification:

Health hazard:	**1**
Flammability:	**0**
Physical Hazards:	**0**

NFPA Rating:

Health hazard:	**1**
Fire:	**0**
Reactivity Hazard:	**0**

Issuance Date: June 22, 2017
Revision Date: June 22, 2017
Revision Note: Reviewed and Updated
Date of Previous Version: July 30, 2014

Disclaimer
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End of Safety Data Sheet

SAFETY DATA SHEET

Issue Date: March 27, 2017 **Revision Date: March 27, 2017** **Version: 2017**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Safe-Cure Clear[DR]

Other Means of Identification
SDS #: F1020, 14-0032

Recommended Use: Concrete Curing Compound
Restrictions on Use: No Data

Supplier of the Safety Data Sheet including Address:
ChemMasters Inc.
300 Edwards Street
Madison, OH 44057

Telephone Numbers
Company Phone Number Phone: 800-486-7866, 440-428-2105
Fax: 440-428-7091

Emergency Telephone: ChemTrec 800-424-9300 (United States & Canada), International Call: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards:
Harmful if swallowed, may be harmful if inhaled, may cause respiratory irritation, causes eye irritation, may cause an allergic skin reaction, may cause skin irritation.

Target Organs: Eyes, Skin, Respiratory System

GHS Classification:
Eye damage/irritation – Category 2B
Acute Toxicity – Oral – Category 4
Acute Toxicity – Inhalation – Category 5
Sensitization – Skin – Category 1A
Specific target organ toxicity – single exposure – Category 3

Label Elements, including precautionary statements

Pictograms: 

Signal Word: WARNING

Hazard Statements:

H302	**Harmful if swallowed.**
H333	**May be Harmful if inhaled.**
H335	**May cause respiratory irritation.**
H320	**Causes eye irritation.**
H317	**May cause an allergic skin reaction.**

Precautionary Statement(s)

Prevention:

P261	**Avoid breathing fume/mist/vapours/spray.**
P264	**Wash hands and skin thoroughly after handling.**
P270	**Do not eat, drink or smoke when using this product.**
P271	**Use only outdoors or in a well-ventilated area.**
P272	**Contaminated work clothing should not be allowed out of the workplace.**
P280	**Wear protective gloves/protective clothing/eye protection/face protection.**

Response:

P301+P312	**IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.**
P330	**Rinse mouth.**
P304+P340+P312	**IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.**
P305+P351+P338	**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
P337+P313	**If eye irritation persists: Get medical advice or attention.**
P302+P352	**IF ON SKIN: Wash with plenty of soap and water.**
P333+P313	**If skin irritation or rash occurs: Get medical advice or attention.**
P362+P364	**Take off contaminated clothing and wash it before reuse.**

Storage:

P403+P233	**Store in a well-ventilated place. Keep container tightly closed.**
P405	**Store locked up.**

Disposal:

P501	**Dispose of contents/container in accordance with local/regional/national regulations.**

Hazards not otherwise classified: May cause skin irritation.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS#	EINECS	Wt. %
Water – Non Hazardous	7732-18-5	231-791-2	75-80%
Hydrocarbon Petroleum Resin - Non Hazardous*	Proprietary	Proprietary	5-10%
Petroleum Hydrocarbon Distillates	8052-41-3	232-489-3	5-10%
Aliphatic Carboxylic Acid	61790-12-3	263-107-3	1-5%
Surfactant/Emulsifier Blend – Non Hazardous*	Proprietary	Proprietary	≤ 3%
S-triazine-1,3,5-(2H,4H,6H)-Triethanol	4719-04-4	225-208-0	≤0.1%

* See Section 15 for additional information

Ingredients not listed on this safety data sheet are considered to be non-hazardous according to OSHA 1910.1200 or are not present above their cutoff levels. Where a range is displayed, the exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures
General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If not breathing, give artificial respiration. Consult a physician.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Ingestion: IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If conscious, rinse mouth with water.

Skin Contact: Wash off with soap and plenty of water. If skin irritation occurs, get medical advice or attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Material is not combustible. Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide for the surrounding fire.

Specific Hazards Arising from the Chemical
None Known

Hazardous Combustion Products
Carbon dioxides & Carbon monoxide

Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus and full protective gear for firefighting.

Further Information
See Section 7 for safe handling and storage.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
In case of spill wear appropriate personal protective equipment during any cleanup and response activities. Avoid skin contact and inhalation.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Material for Containment and Cleaning Up
Dike and contain spill with inert absorbent materials. Soak up with inert material and keep in suitable, closed containers for disposal. Dispose of in accordance with specified local/regional/national/international regulations for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for Safe Storage, Including any Incompatibilities
General information: Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep away from heat. Keep from freezing. Store product above 50 degrees F/10 degrees C and below 95 degrees F/35 degrees C.
Safe Storage: No Additional Data
Incompatibilities: None Known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Component Exposure Limits
Petroleum Hydrocarbon Distillates, CAS# 8052-41-3:
ACGIH TLV TWA: 100 ppm 8 hours
OSHA PEL: TWA 500 ppm
NIOSH REL: TWA 350 mg/m3, NIOSH Ceiling: 1800 mg/m3
Components of Petroleum Hydrocarbon Distillates, CAS# 8052-41-3:
Ethyl Benzene, CAS# 100-41-4: ACGIH TLV: TWA 20 ppm
N-Nonane, CAS# 111-84-2: ACGIH TLV: TWA 200 ppm
Trimethyl Benzene (all isomers), CAS# 25551-13-7: ACGIH TLV: TWA 25 ppm
Cumene, CAS# 98-82-8: ACGIH TWA 50 ppm 8 hr.

Appropriate Engineering Controls
Local Ventilation: Recommended
General Ventilation: Recommended

Individual Protection Measures, such as Personal Protective Equipment
Eye/Face Protection: Use proper protection – Safety Glasses as a minimum

Skin and Body Protection: Wash at mealtime and end of shift. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.

Respiratory Protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.

General Hygiene Considerations:
Handle in accordance with good industrial hygiene and safety practice. Wash hands before & after breaks and work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State
Appearance: Liquid
Color: White – Light Yellow (Dries Clear)
Odor: Mild Petroleum Solvent
Odor threshold: No Data

Property	Value	Remarks – Method
Vapor Pressure	Not Available	
Vapor Density	Not Available	
Relative Density	Not Available	
pH:	8.9 +/- 0.1	
Melting/Freezing Point	32 Degrees F (0 Degrees C)	
Solubility	Not Available	
Evaporation Rate	Not Available	
Flash Point	>212 Degrees F (>100 Degrees C)	PMCC (D93)
Flammability Limits	Not Relevant	
Flammability (Solid, gas)	Not Relevant	

Auto Ignition Temperature	Not Relevant
Initial Boiling Point/Boiling Range	212 Degrees F

Decomposition Temperature	Not Available	
Viscosity	Not Available	
Specific Gravity	0.98-0.99	Density: 8.20 lb./gal. +/- 0.1

10. STABILITY AND REACTIVITY

Chemical Stability: This product is chemically stable under recommended storage conditions.

Possibility of Hazardous Reactions:
None Known

Conditions to Avoid: Keep from Freezing

Incompatible Materials: None Known

Hazardous Decomposition Products: Carbon dioxides, Carbon monoxide

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Skin Contact, Eye Contact
(Ingestion is not a likely route of exposure under normal conditions of use.)

Symptoms of Exposure: Allergic skin reaction, respiratory, skin and eye irritation, stomach or intestinal upset

Numerical measures of toxicity:

Petroleum Hydrocarbon Distillates, CAS# 8052-41-3:
- ACGIH TLV TWA: 100 ppm 8 hours
- OSHA PEL: TWA 500 ppm
- NIOSH REL: TWA 350 mg/m3, NIOSH Ceiling: 1800 mg/m3

Components of Petroleum Hydrocarbon Distillates, CAS# 8052-41-3:
- Ethyl Benzene, CAS# 100-41-4: ACGIH TLV: TWA 20 ppm
- N-Nonane, CAS# 111-84-2: ACGIH TLV: TWA 200 ppm
- Trimethyl Benzene (all isomers), CAS# 25551-13-7: ACGIH TLV: TWA 25 ppm
- Cumene, CAS# 98-82-8: ACGIH TWA 50 ppm 8 hr.

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Carcinogenicity: IARC, ACGIH, NTP, OSHA
Contains Naphthlene which is classified by IARC as “possibly carcinogenic to humans” (Group 2B).
Contains Ethyl Benzene which is classified by IARC as “possibly carcinogenic to humans” (Group 2B).
Contains Cumene which is classified by IARC as “possibly carcinogenic to humans” (Group 2B).
Specific target organ toxicity: Single exposure – Category 3, Respiratory System,
May cause respiratory irritation.
Respiratory Irritation: If material is misted/sprayed, inhalation of mist may cause irritation of mucous membranes and the upper respiratory tract.

12. ECOLOGICAL INFORMATION

Eco toxicity: Not determined.

Persistence and Degradability: Not Determined.

Bioaccumulation: Not Determined.

Mobility: Not Determined.

Other Adverse Effects: Not Determined.

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes: This product is not a hazardous waste under RCRA. Dispose of in conformance with all federal, state and local regulations.

Contaminated Packaging: Dispose of as unused material.

14. TRANSPORT INFORMATION

D.O.T.: Not Regulated

I.M.D.G.: Not Regulated
Marine Pollutant: No

I.A.T.A.: Not Regulated

15. REGULATORY INFORMATION

International Inventories
TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

US Federal Regulations
SARA 302 (Extremely Hazardous Substances): None Known
SARA 311/312 Hazard Categories: Acute Health Hazard, Chronic Health Hazard
SARA Section 313: This product contains the following components in concentrations greater than 0.1% for carcinogenic substances and/or 1.0% of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372: **None Known**

CWA (Clean Water Act): This product contains petroleum hydrocarbon distillates and may be subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

Supplemental State Compliance Information
California: This product contains chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.
<0.1% Naphthalene, CAS# 91-20-3
<0.1% Ethyl Benzene, CAS# 100-41-4
<0.1% Cumene, CAS# 98-82-8

State Right To Know:

CAS Number	Component Name	State
8052-41-3	Petroleum Hydrocarbon Distillates	New Jersey, Pennsylvania
124-18-5	N-Decane	New Jersey, Pennsylvania
111-84-2	N-Nonane	New Jersey, Pennsylvania
95-63-6	1,2,4-Trimethylbenzene	New Jersey, Pennsylvania
100-41-4	Ethyl Benzene	New Jersey, Pennsylvania
98-82-8	Cumene	New Jersey, Pennsylvania
91-20-3	Naphthalene	New Jersey, Illinois, Minnesota, Pennsylvania, Rhode Island, New York, Massachusetts.

U.S. EPA Label Information: No Data

Europe


Harmful/Irritant

Risk Phrases:
R20 Harmful by inhalation
R22 Harmful if swallowed
R37 Irritating to respiratory system
R38 Irritating to skin
R43 May cause sensitization by skin contact

Safety Phrases:
S1 Keep locked up
S2 Keep out of reach of children
S7 Keep container tightly closed
S9 Keep container in a well – ventilated place
S35 This material and its container must be disposed of in a safe way

S20/21 When using, do not eat, drink or smoke
S23 Do not breathe vapour/spray
S24/25 Avoid contact with skin and eyes

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S27/28 After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of soap and water
S64 If swallowed, rinse mouth with water (only if the person is conscious)

EINECS: To the best of our knowledge all constituents of this product are listed in the European Inventory of Existing Chemical Substances.
REACH: To the best of our knowledge all constituents of this product have been pre-registered under REACH regulations.

*** Hydrocarbon Petroleum Resin:** Per our supplier, this proprietary resin does not pose any human exposure hazard or environmental hazard and is subject to "Point 9.3 of Annex VI to Directive 67/548/EEC which contains provisions that preparations containing polymers or elastomers need not be labeled in accordance with Article 10 or Annex V B.9 of the Directive, if they do not present a hazard to human health by inhalation, ingestion or contact with the skin, or to the aquatic environment in the form in which they are placed on the market …", 99/45/EC 7.2.5.

*** Proprietary Surfactant/Emulsifier:**
EINECS: To the best of our knowledge all ingredients of this blend are listed in the European Inventory of Existing Chemical Substances.
This blend does not pose any human exposure hazard or environmental hazard

16. OTHER INFORMATION

HMIS Classification:

Health hazard:	**1**
Flammability:	**0**
Physical Hazards:	**0**

NFPA Rating:

Health hazard:	**1**
Fire:	**0**
Reactivity Hazard:	**0**

Issuance Date: March 27, 2017
Revision Date: March 27, 2017
Revision Note: Reviewed and Updated
Date of Previous Version: September 29, 2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Issue Date: March 27, 2017 **Revision Date: March 27, 2017** **Version: 2017**

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Safe-Cure & Seal 309

Other Means of Identification
SDS #: F1210

Recommended Use: Concrete Curing and Sealing
Restrictions on Use: No Data

Supplier of the Safety Data Sheet including Address:
ChemMasters Inc.
300 Edwards Street
Madison, OH 44057

Telephone Numbers
Company Phone Number Phone: 800-486-7866, 440-428-2105
Fax: 440-428-7091

Emergency Telephone: ChemTrec 800-424-9300 (United States & Canada), International Call: 1-703-527-3887

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards:

Causes eye irritation, may be harmful if swallowed, causes mild skin irritation, may be harmful if inhaled, may cause respiratory irritation.

GHS Classification:
Eye damage/eye irritation – Category 2B
Acute toxicity, Oral – Category 5
Acute toxicity, Inhalation – Category 5
Skin Corrosion/Irritation: Category 3
Specific Target Organ toxicity – single exposure: Category 3

Label Elements, including precautionary statements

Pictograms: 

Signal Word: WARNING

Hazard Statements:

H303	**May be harmful if swallowed**
H316	**Causes mild skin irritation.**
H320	**Causes eye irritation.**
H333	**May be harmful if inhaled.**
H335	**May cause respiratory irritation.**

Precautionary Statement(s)

Prevention:

P261	**Avoid breathing dust/fume/gas/mist/vapours//spray.**
P264	**Wash hands and skin thoroughly after handling.**
P271	**Use only outdoors or in a well-ventilated area.**

Response:

P305+P351+P338	**IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**
P337+P313	**If eye irritation persists: Get medical advice or attention.**
P301+P312	**If swallowed: Call a POISON CENTER/doctor if you feel unwell.**
P332+P313	**If skin irritation occurs: Get medical advice or attention.**
P304+P340+P312	**IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.**

Storage:

P403+P233	**Store in a well-ventilated place. Keep container tightly closed.**
P405	**Store locked up.**

Disposal:

P501	**Dispose of contents/container in accordance with local/regional/national regulations.**

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component		
Water – Non Hazardous	CAS#: 7732-18-5	83-84%
Polymer – Non Hazardous	CAS#: Not Available	14-15%
Diethylene glycol butyl ether	CAS#: 112-34-5	<1%
Ethylene glycol butyl ether	CAS#: 111-76-2	<1%
Tetrahydro-1,4-oxazine	CAS#: 110-91-8	<1%

Ingredients not listed on this safety data sheet are considered to be non-hazardous according to OSHA 1910.1200 or are not present above their cutoff levels. Where a range is displayed, the exact percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Inhalation: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. If not breathing, give artificial respiration. Consult a physician.

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Ingestion: IF SWALLOWED: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If conscious, rinse mouth with water. Call a POISON CENTER/doctor if you feel unwell.

Skin Contact: Wash off with soap and plenty of water. If skin irritation occurs: Get medical advice or attention.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Product is not combustible. Use water spray (fog), alcohol-resistant foam, dry chemical, or carbon dioxide for surrounding fire.

Specific Hazards Arising from the Chemical
None Known

Hazardous Combustion Products
Carbon dioxides, Formaldehyde, Nitrogen compounds

Protective Equipment and Precautions for Firefighters
Wear self-contained breathing apparatus and full protective gear for firefighting.

Further Information
See Section 7 for safe handling and storage.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures
In case of spill wear appropriate personal protective equipment during any cleanup and response activities. Avoid skin contact and inhalation.

Environmental Precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and Material for Containment and Cleaning Up
Dike and contain spill with inert absorbent materials. Soak up with inert material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for Safe Handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for Safe Storage, Including any Incompatibilities
General information: Keep at a temperature not exceeding 38 Degrees C (100 Degrees F). Do not allow material to freeze. Keep container tightly closed in a dry and well ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Safe Storage: No Additional Data

Incompatibilities: None known

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines
Component Exposure Limit
Ethylene glycol butyl ether: ACGIH TWA 20 ppm, OSHA TWA 25 ppm
Tetrahydro-1,4-oxazine: ACGIH TWA 20 ppm, OSHA TWA 20 ppm

Appropriate Engineering Controls
Local Ventilation: Recommended
General Ventilation: Recommended

Individual Protection Measures, such as Personal Protective Equipment

Eye/Face Protection: Use proper protection – Safety Glasses as a minimum

Skin and Body Protection: Wash at mealtime and end of shift. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc.). Use chemical protective gloves as a minimum and wash skin promptly upon any skin contact.

Respiratory Protection: Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators.
Note: Trace amounts of monomers may be released during use of this material. Use adequate ventilation to keep vapour concentrations below applicable standard.

General Hygiene Considerations
Handle in accordance with good industrial hygiene and safety practice. Wash hands before & after breaks and work day.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State
Appearance: Liquid
Color: White (Dries Clear)
Odor: Mild, Slight Ammonia
Odor threshold: No Data

Property	Value	Remarks – Method
Vapor Pressure	Not Available	
Vapor Density	Not Available	
Relative Density	Not Available	
pH:	8-9	
Melting/Freezing Point	Freezing Point 32 Degrees F (0 Degrees C)	
Solubility	Miscible in water	
Evaporation Rate	Not Available	
Flash Point	≥212 Degrees F (>100 Degrees C)	Closed Cup
Flammability Limits	Not Relevant	
Flammability (Solid, gas)	Not Relevant	
Auto Ignition Temperature	Not Available	
Initial Boiling Point/Boiling Range	Boiling Point 212 Degrees F (100 Degrees C)	
Decomposition Temperature	Not Available	
Viscosity	Not Available	
Specific Gravity	1.01 +/- 0.01	Density: 8.38 lb./gal. +/- 0.1

10. STABILITY AND REACTIVITY

Chemical Stability: Stable

Possibility of Hazardous Reactions:
No Data Available.

Conditions to Avoid: None known

Incompatible Materials: None known

Hazardous Decomposition Products
Carbon dioxides, Formaldehyde, Nitrogen compounds

11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Skin Contact, Eye Contact, Ingestion

Symptoms of Exposure:

Ingestion may cause nausea, vomiting and diarrhea.
Exposure causes mild skin irritation. Exposure causes eye irritation.
Depending on concentration of residual monomers (typically <0.1%), vapors can collect above the liquid in closed containers. These vapors may result in eye and upper respiratory tract irritation.

Numerical measures of toxicity: No Data Available

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure

Carcinogenicity: IARC, ACGIH, NTP, OSHA
No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen.
Specific target organ toxicity: Single exposure – Category 3, Respiratory System,
May cause respiratory irritation.

12. ECOLOGICAL INFORMATION

Eco toxicity: No Data Available

Persistence and Degradability: No Data Available

Bioaccumulation: No Data Available

Mobility: No Data Available

Other Adverse Effects: No Data Available

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes: This product is not expected to be a hazardous waste under RCRA. Dispose of in conformance with all federal, state and local regulations.

Contaminated Packaging: Dispose of as unused material.

14. TRANSPORT INFORMATION

D.O.T.: Not Regulated

I.M.D.G.: Not Regulated
Marine Pollutant: No

I.A.T.A.: Not Regulated

15. REGULATORY INFORMATION

International Inventories
TSCA: All chemical substances in this material are included on or exempted from listing on the TSCA Inventory of Chemical Substances.

US Federal Regulations
SARA 302: None Known
SARA 311/312 Hazard Categories: Acute Health Hazard
SARA 313 Hazard Components:
112-34-5, Diethylene glycol butyl ether, 0.7%
111-76-2, Ethylene glycol butyl ether, 0.7%

CWA (Clean Water Act): None Known

Supplemental State Compliance Information
California:
This product does not contain any chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer, birth defects or other reproductive harm.

New Jersey Right To Know:

CAS Number	Component Name
110-91-8	Tetrahydro-1,4-oxazine
112-34-5	Diethylene glycol butyl ether
111-76-2	Ethylene glycol butyl ether

Pennsylvania Right To Know:

CAS Number	Component Name
110-91-8	Tetrahydro-1,4-oxazine
112-34-5	Diethylene glycol butyl ether
111-76-2	Ethylene glycol butyl ether

Massachusetts Right To Know:

110-91-8	Tetrahydro-1,4-oxazine
111-76-2	Ethylene glycol butyl ether

U.S. EPA Label Information: No Data

16. OTHER INFORMATION

HMIS Classification:

Health hazard:	**1**
Flammability:	**0**
Physical Hazards:	**0**

NFPA Rating:

Health hazard:	**1**
Fire:	**0**
Reactivity Hazard:	**0**

Issuance Date: March 27, 2017
Revision Date: March 27, 2017
Revision Note: Reviewed and Updated
Date of Previous Version: June 25, 2014

Disclaimer

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End of Safety Data Sheet

SAFETY DATA SHEET (SDS): SAND & GRAVEL

SECTION I –IDENTIFICATION

PRODUCT IDENTIFIER	TRADE NAME	OTHER SYNONYMS
Natural Sand & Gravel, Gravel	Gravel Sand	Construction Aggregate, River Rock, Pea Gravel, Course Aggregate

RECOMMENDED USE AND RESTRICTION ON USE
Used for construction purposes
This product is not intended or designed for and should not be used as an abrasive blasting medium or for foundry applications.

MANUFACTURER/SUPPLIER INFORMATION
Martin Marietta Materials
2710 Wycliff Road
Raleigh, North Carolina 27607
Phone: 919-781-4550

For additional health, safety or regulatory information and other emergency situations, call 919-781-4550

SECTION II – HAZARD(S) IDENTIFICATION

HAZARD CLASSIFICATION:
Category 1A Carcinogen
Category 1 Specific Target Organ Toxicity (STOT) following repeated exposures
Category 1 Eye Damage
Category 1 Skin Corrosive

SIGNAL WORD: DANGER

HAZARD STATEMENTS:
May cause cancer by inhalation.
Causes damage to lungs, kidneys and autoimmune system through prolonged or repeated exposure by inhalation.
Causes severe skin burns and serious eye damage.

PRECAUTIONARY STATEMENTS
Do not handle until the safety information presented in this SDS has been read and understood.
Do not breathe dusts or mists. Do not eat, drink or smoke while manually handling this product. Wash skin thoroughly after manually handling.
If swallowed: Rinse mouth and do not induce vomiting.
If on skin (or hair): Rinse skin after manually handling and wash contaminated clothing if there is potential for direct skin contact before reuse.
If inhaled excessively: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, and continue rinsing.
If exposed, concerned, unwell or irritation of the eyes, skin, mouth or throat/nasal passage persist: Get medical attention.
Wear eye protection and respiratory protection following this SDS, NIOSH guidelines and other applicable regulations. Use protective gloves if manually handling the product.

Avoid creating dust when handling, using or storing. Use with adequate ventilation to keep exposure below recommended exposure limits.

Dispose of product in accordance with local, regional, national or international regulations.

Please refer to Section XI for details of specific health effects of the components.

SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT(S) CHEMICAL NAME	CAS REGISTRY NO	% by weight (approx)
Silicon Dioxide, SiO_2 (1)	7631-86-9	0-100
Aluminum Oxide, Al_2O_3	1344-28-1	0-16
Ferrous Oxide, FeO	1345-25-1	0-3
Ferric Oxide, Fe_2O_3	1309-37-1	0-5
Magnesium Oxide, MgO	1309-48-4	0-22
Calcium Oxide, CaO	1305-78-8	0-43
Sodium Oxide, Na_2O	1313-59-3	0-2
Potassium Oxide, K_2O	12136-45-7	0-4
Calcium Carbonate, $CaCO_3$	471-34-1	0-48

(1): The composition of SiO_2 may be up to 100% crystalline silica

SECTION IV – FIRST-AID MEASURES

INHALATION: If excessive inhalation occurs, remove to fresh air. Dust in throat and nasal passages should clear spontaneously. Contact a physician if irritation persists or develops later.

EYES: Immediately flush eye(s) with plenty of clean water for at least 15 minutes, while holding the eyelid(s) open. Occasionally lift the eyelid(s) to ensure thorough rinsing. Remove contact lenses, if present and easy to do, and continue rinsing. Beyond flushing, do not attempt to remove material from the eye(s). Contact a physician if irritation persists or develops later.

SKIN: Rinse skin with soap and water after manually handling and wash contaminated clothing if there is potential for direct skin contact. Contact a physician if irritation persists or develops later.

INGESTION: If swallowed, rinse mouth and do not induce vomiting. If gastrointestinal discomfort occurs, persists or develops later, get medical attention.

SIGNS AND SYMPTOMS OF EXPOSURE: There are generally no signs or symptoms of exposure to respirable crystalline silica. Often, chronic silicosis has no symptoms. The symptoms of chronic silicosis, if present, are shortness of breath, wheezing, cough and sputum production. The symptoms of acute silicosis which can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as 6 months, are the same as those associated with chronic silicosis; additionally, weight loss and fever may also occur. The symptoms of scleroderma, an autoimmune disease, include thickening and stiffness of the skin, particularly in the fingers, shortness of breath, difficulty swallowing and joint problems.

Direct skin and eye contact with dust may cause irritation by mechanical abrasion. Some components of the product are also known to cause corrosive effects to skin, eyes and mucous membranes. Ingestion of large amounts may cause gastrointestinal irritation and blockage. Inhalation of dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits. Repeated excessive exposure may cause pneumoconiosis, such as silicosis and other respiratory effects.

SECTION V – FIRE-FIGHTING MEASURES

EXTINGUISHING AGENT
Not flammable; use extinguishing media compatible with surrounding fire.

UNUSUAL FIRE AND EXPLOSION HAZARD
Contact with powerful oxidizing agents may cause fire and/or explosions (see Section X of this SDS). While individual components are known to react vigorously with water to produce heat, this is not expected from the sand & gravel.

SPECIAL FIRE FIGHTING PROCEDURES	HAZARDOUS COMBUSTION PRODUCTS
None known	None known

SECTION VI – ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED
Persons involved in cleaning should first follow the precautions defined in Section VII of the SDS. Spilled materials, where dust can be generated, may overexpose cleanup personnel to respirable crystalline silica-containing dust and other components that may pose inhalation hazards. Do not dry sweep spilled material. Collect the material using a method that does not produce dust such as a High-Efficiency Particulate Air (HEPA) vacuum or thoroughly wetting down the dust before cleaning up. Wear appropriate personal protective equipment as specified in Section VIII including appropriate respirators during and following clean up or whenever airborne dust is present to ensure worker exposures remain below occupational exposure limits (OELs - Refer to Section VIII).

Place the dust in a covered container appropriate for disposal. Dispose of the dust according to federal, state and local regulations.

This product is not subject to the reporting requirements of SARA Title III Section 313, and 40 CFR 372.

SECTION VII – HANDLING AND STORAGE

This product is not intended or designed for and should not be used as an abrasive blasting medium or for foundry applications. Follow protective controls set forth in Section VIII of this SDS when handling this product. Dust containing respirable crystalline silica and other components that may be corrosive/irritant may be generated during processing, handling and storage. Use good housekeeping procedures to prevent the accumulation of dust in the workplace.

Do not breathe dust. Avoid contact with skin and eyes. Do not store near food or beverages or smoking materials.
Do not stand on piles of materials; it may be unstable.

Use adequate ventilation and dust collection equipment and ensure that the dust collection system is adequate to reduce airborne dust levels to below the appropriate OELs. If the airborne dust levels are above the appropriate OELs, use respiratory protection during the establishment of engineering controls. Refer to Section VIII - Exposure Controls/Personal Protection for further information.

In accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, 1915.99, 1917.28, 1918.90, 1926.59, 1928.21), state, and/or local right-to-know laws and regulations, familiarize your employees with this SDS and the information contained herein. Warn your employees, your customers and other third parties (in case of resale or distribution to others) of the potential health risks associated with the use of this product and train them in the appropriate use of personal protective equipment and engineering controls, which will reduce their risks of exposure.

See also ASTM International standard practice E 1132-06, "Standard Practice for Health Requirements Relating to Occupational Exposure to Respirable Crystalline Silica."

For safe handling and use of this product for Hydraulic Fracturing, please see the OSHA/NIOSH Hazard Alert Worker Exposure to Silica during Hydraulic Fracturing DHHS (NIOSH) Publication No. 2012-166 (2012).
http://www.osha.gov/dts/hazardalerts/hydraulic_frac_hazard_alert.pdf

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

Airborne OELs for Components of Sand & Gravel:

COMPONENT(S) CHEMICAL NAME	MSHA/OSHA PEL	ACGIH TLV-TWA	NIOSH REL
Silicon Dioxide, SiO_2	(R) 10 mg/m^3 /(% SiO_2 +2) §	(R) 0.025 mg/m^3 #	(R) 0.05 mg/m^3 #
Aluminum Oxide, Al_2O_3	(T) 15 mg/m^3 , (R) 5 mg/m^3	(1) (R) 1 mg/m^3	-
Ferrous Oxide, FeO	-	-	-
Ferric Oxide, Fe_2O_3	(2) 10 mg/m^3	(R) 5 mg/m^3	(3) 5 mg/m^3
Magnesium Oxide, MgO	(4) 15 mg/m^3	(I) 10 mg/m^3	-
Calcium Oxide, CaO	5 mg/m^3	2 mg/m^3	2 mg/m^3
Sodium Oxide, Na_2O (5)	2 mg/m^3	(C) 2 mg/m^3	(C) 2 mg/m^3
Potassium Oxide, K_2O	-	(6) (C) 2 mg/m^3	(6) (C) 2 mg/m^3
Calcium Carbonate, $CaCO_3$	(T) 15 mg/m^3 , (R) 5 mg/m^3	-	(T) 10 mg/m^3 , (R) 5 mg/m^3

§: Crystalline silica is normally measured as respirable dust. The OSHA/MSHA standard also presents a formula for calculation of the PEL based on total dust: 30 mg/m^3 / (% SiO_2 +2). The OSHA/MSHA PEL listed is for dust containing crystalline silica (quartz) and is based on the silica content of the respirable dust sample. The OSHA/MSHA PEL for crystalline silica as tridymite and cristobalite is one-half the PEL for crystalline silica (quartz).
The ACGIH and NIOSH limits are for crystalline silica (quartz), independent of the dust concentration. The ACGIH TLV for crystalline silica as cristobalite is equal to the TLV for crystalline silica as quartz. In 2005, ACGIH withdrew the TLV for crystalline silica as tridymite. Refer to Section X for thermal stability information for crystalline silica (quartz).
(1): Limits based on Aluminum Metal and Insoluble Compounds.
(2): As Iron Oxide Fume.
(3): Dust and fume, as Iron
(4): As Magnesium Oxide Fume Total Particulate.
(5): Based on Sodium Hydroxide.
(6): Based on Potassium Hydroxide.
(R): Respirable Fraction.
(T): Total Dust.
(I): Inhalable Fraction.
(C): Ceiling Limit

Airborne OELs for Inert/Nuisance Dust:

Standard	Respirable Dust	Total Dust
MSHA/OSHA PEL (as Inert or Nuisance Dust)	5 mg/m^3	15 mg/m^3
ACGIH TLV (as Particles Not Otherwise Specified)	3 mg/m^3	*10 mg/m^3
NIOSH REL (Particulates Not Otherwise Regulated)	-	-

Note: The limits for Inert Dust are provided as guidelines. Nuisance dust is limited to particulates not known to cause systemic injury or illness.
* The TLV provided is for inhalable particles not otherwise specified.

ENGINEERING CONTROLS

Ventilation: Use local exhaust, general ventilation or natural ventilation adequate to maintain exposures below appropriate exposure limits.

Other control measures: Respirable dust and crystalline silica levels should be monitored regularly. Dust and crystalline silica levels in excess of appropriate exposure limits should be reduced by implementing feasible engineering controls, including (but not limited to) dust suppression (wetting), ventilation, process enclosure and enclosed employee work stations.

EYE/FACE PROTECTION

Safety glasses with side shields should be worn as minimum protection. Dust goggles should be worn when excessively (visible) dusty conditions are present or are anticipated. If irritation persists, get medical attention immediately. There is potential for severe eye irritation if exposed to excessive concentrations of dust for those using contact lenses.

SKIN PROTECTION

Use appropriate protective gloves if manually handling the product.

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION, CONTD.

RESPIRATORY PROTECTION
Respirator Recommendations:

For respirable crystalline silica levels that exceed or are likely to exceed appropriate exposure limits, a NIOSH-approved particulate filter respirator must be worn. Respirator use must comply with applicable MSHA or OSHA standards, which include provisions for a user training program, respirator repair and cleaning, respirator fit testing, and other requirements. For additional information contact NIOSH at 1-800-356-4674 or visit website: http://www.cdc.gov/niosh/npg (search for crystalline silica). See also ANSI standard Z88.2 (latest revision) "American National Standard for Respiratory Protection," 29 CFR 1910.134 and 1926.103, and 42 CFR 84.

NIOSH recommendations for respiratory protection include:
Up to 0.5 mg/m^3:
(APF = 10) Any particulate respirator equipped with an N95, R95, or P95 filter (including N95, R95, and P95 filtering facepieces) except quarter-mask respirators. The following filters may also be used: N99, R99, P99, N100, R100, P100.
Up to 1.25 mg/m^3:
(APF = 25) Any powered, air-purifying respirator with a high-efficiency particulate (100-series) filter.
(APF = 25) Any supplied-air respirator operated in a continuous-flow mode
Up to 2.5 mg/m^3:
(APF = 50) Any air-purifying, full-facepiece respirator with an N100, R100, or P100 filter.
(APF = 50) Any powered, air-purifying respirator with a tight-fitting facepiece and a high-efficiency particulate filter
Up to 25 mg/m^3:
(APF = 1000) Any supplied-air respirator operated in a pressure-demand or other positive-pressure mode

Emergency or planned entry into unknown concentrations or IDLH conditions (50 mg/m^3 for crystalline silica-quartz): A self-contained breathing apparatus (SCBA) that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode or any supplied-air respirator that has a full-face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus.

Escape from unknown or IDLH conditions: An air-purifying, full-face piece respirator with a high-efficiency particulate (100-series) filter or any appropriate escape-type, self-contained breathing apparatus.

If the workplace airborne crystalline silica concentration is unknown for a given task, conduct air monitoring to determine the appropriate level of respiratory protection to be worn. Consult with a certified industrial hygienist, your insurance risk manager or the OSHA Consultative Services group for detailed information. Ensure appropriate respirators are worn, as needed, during and following the task, including clean up or whenever airborne dust is present, to ensure worker exposures remain below OELs.

GENERAL HYGIENE CONSIDERATIONS
There are no known hazards associated with this material when used as recommended. Following the guidelines in this SDS are recognized as good industrial hygiene practices. Avoid breathing dust. Avoid skin and eye contact. Wash dust-exposed skin with soap and water before eating, drinking, smoking and using toilet facilities. Wash work clothes after each use.

SECTION IX— PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE Sand & Gravel is a mixture of angular, round or broken light or multicolored particles.	ODOR AND ODOR THRESHOLD Odorless and not applicable
pH AND VISCOSITY Not applicable	MELTING POINT/FREEZING POINT Not applicable
BOILING POINT AND RANGE Not applicable	FLASH POINT AND FLAMMABILITY Not applicable
FLAMMABILITY/EXPLOSIVE LIMITS AND AUTOIGNITION TEMPERATURE Not applicable	EVAPORATION RATE AND DECOMPOSITION TEMPERATURE Not applicable
VAPOR PRESSURE AND VAPOR DENSITY IN AIR Not applicable	SPECIFIC GRAVITY. 2.3-2.8
SOLUBILITY IN WATER Negligible	PARTITION COEFFICIENT: N-OCTANOL/WATER Not applicable

SECTION X – STABILITY AND REACTIVITY	
STABILITY Stable	CONDITIONS TO AVOID Contact with incompatible materials (see below).
THERMAL STABILITY If crystalline silica (quartz) is heated to more than 870°C (1598°F), it can change to a form of crystalline silica known as tridymite, and if crystalline silica (quartz) is heated to more than 1470°C (2678°F), it can change to a form of crystalline silica known as cristobalite.	
INCOMPATIBILITY (Materials to avoid) Contact with powerful oxidizing agents such as fluorine, boron trifluoride, chlorine trifluoride, manganese trifluoride, and oxygen difluoride may cause fire and/or explosions. Some components of sand & gravel may react vigorously with water.	
HAZARDOUS DECOMPOSITION PRODUCTS Silica dissolves in hydrofluoric acid producing a corrosive gas - silicon tetrafluoride.	
HAZARDOUS POLYMERIZATION Not known to polymerize	

SECTION XI – TOXICOLOGICAL INFORMATION

Health Effects: The information below represents an overview of health effects caused by overexposure to one or more components in sand & gravel.

Primary routes(s) of exposure: ■ Inhalation ☐ Skin ■ Ingestion

EYE CONTACT: Direct contact with dust may cause irritation by mechanical abrasion or corrosive action. Conjunctivitis may occur.

SKIN CONTACT: Direct contact may cause irritation by mechanical abrasion. Some components of material are also known to cause corrosive effects to skin and mucous membranes.

SKIN ABSORPTION: Not expected to be a significant route of exposure.

INGESTION: Small amounts (a tablespoonful) swallowed during normal handling operations are not likely to cause injury. Ingestion of large amounts may cause gastrointestinal irritation and blockage.

INHALATION: Dust may irritate nose, throat, mucous membranes and respiratory tract by mechanical abrasion. Coughing, sneezing, chest pain, shortness of breath, inflammation of mucous membrane, and flu-like fever may occur following exposures in excess of appropriate exposure limits.

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
Inhaling respirable dust and/or crystalline silica may aggravate existing respiratory system disease(s) (e.g., bronchitis, emphysema, chronic obstructive pulmonary disease) and/or dysfunctions. Exposure to dust may aggravate existing skin and/or eye conditions. Smoking and obstructive/restrictive lung diseases may also exacerbate the effects of excessive exposure to this product.

This product is a mixture of components. The composition percentages are listed in Section III. Toxicological information for each component is listed below:

Silicon Dioxide: It is comprised of amorphous and crystalline forms of silica. In some batches, crystalline silica may represent up to 100% of silicon dioxide.

Exposure route: Eyes, respiratory system.

Target organs: Eyes, skin, respiratory system.

ACGIH, MSHA, and OSHA have determined that adverse effects are not likely to occur in the workplace provided exposure levels do not exceed the appropriate exposure limits. Lower exposure limits may be appropriate for some individuals including persons with pre-existing medical conditions as described under medical conditions aggravated by exposure.

A. SILICOSIS
The major concern is silicosis (lung disease), caused by the inhalation and retention of respirable crystalline silica dust. Silicosis leads to conditions such as lung fibrosis and reduced pulmonary function. The form and severity in which silicosis manifests itself, depends in part on the type and extent of exposure to silica dusts: chronic, accelerated and acute forms are recognized. In later stages the critical condition may become disabling and potentially fatal. Restrictive and/or obstructive changes in lung function may occur due to exposure. A risk associated with silicosis is development of pulmonary tuberculosis (silico-tuberculosis). Respiratory insufficiencies due to massive fibrosis and reduced pulmonary function, possibly with accompanying heart failure, are other potential causes of death due to silicosis.

Chronic or Ordinary Silicosis is the most common form of silicosis and can occur after many years of exposure to levels above the OELs for airborne respirable crystalline silica dust. Not all individuals with silicosis will exhibit symptoms (signs) of the disease. Symptoms of silicosis may include (but are not limited to): Shortness of breath; difficulty breathing with or without exertion; coughing; diminished work capacity; diminished chest expansion; reduction of lung volume; heart enlargement and/or failure. It is further defined as either simple or complicated silicosis.

Simple Silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF).

Complicated Silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Although there may be no symptoms associated with complicated silicosis or PMF, the symptoms, if present, are shortness of breath, wheezing, cough and sputum production. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease (cor pumonale) secondary to the lung disease.

Accelerated Silicosis can occur with exposure to high concentrations of respirable crystalline silica over a relatively short period; the lung lesions can appear within five (5) years of the initial exposure. The progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that the lung lesions appear earlier and the progression is more rapid.

Acute Silicosis can occur with exposures to very high concentrations of respirable crystalline silica over a very short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough and weight loss. Acute silicosis is a rapidly progressive, incurable lung disease and is typically fatal.

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

B. CANCER

IARC - The International Agency for Research on Cancer ("IARC") concluded that there is "*sufficient evidence* in humans for the carcinogenicity of crystalline silica in the form of quartz or cristobalite", there is "*sufficient evidence* in experimental animals for the carcinogenicity of quartz dust" and that there is "*limited evidence* in experimental animals for the carcinogenicity of tridymite dust and cristobalite dust." The overall IARC evaluation was that "crystalline silica inhaled in the form of quartz or cristobalite dust is *carcinogenic to humans* (*Group 1*)." The IARC evaluation noted that not all industrial circumstances studied evidenced carcinogenicity. The monograph also stated that "Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100C, "Silica Dust, Crystalline, in the Form of Quartz or Cristobalite" (2012).

NTP - In its Eleventh Annual Report on Carcinogens, concluded that respirable crystalline silica is known to be a human carcinogen, based on sufficient evidence of carcinogenicity from studies in humans indicating a causal relationship between exposure to respirable crystalline silica and increased lung cancer rates in workers exposed to crystalline silica dust.

OSHA - Crystalline silica is not on the OSHA carcinogen list.

CALIFORNIA PROPOSITION 65 - Crystalline silica in October 1996 was listed on the Safe Drinking Water and Toxic Enforcement ACT of 1986 as a chemical known to the state to cause cancer or reproductive toxicity.

There have been many articles published on the carcinogenicity of crystalline silica, which the reader should consult for additional information; the following are examples of recently published articles: (1) "Dose-Response Meta-Analysis of Silica and Lung Cancer", *Cancer Causes Control*, (20):925-33 (2009); (2) "Occupational Silica Exposure and Lung Cancer Risk: A Review of Epidemiological Studies 1996-2005', *Ann Oncol*, (17) 1039-50 (2006); (3) "Lung Cancer Among Industrial Sand Workers Exposed to Crystalline Silica", *Am J Epidemiol*, (153) 695-703 (2001); (4) "Crystalline Silica and The Risk of Lung Cancer in The Potteries", *Occup Environ Med*, (55) 779-785 (1998); (5) "Is Silicosis Required for Silica-Associated Lung Cancer?", *American Journal of Industrial Medicine*, (37) 252- 259 (2000); (6) " Silica, Silicosis, and Lung Cancer: A Risk Assessment", *American Journal of Industrial Medicine*, (38) 8-18 (2000); (7) "Silica, Silicosis, and Lung Cancer: A Response to a Recent Working Group Report", *Journal of Occupational and Environmental Medicine*, (42) 704-720 (2000).

C. AUTOIMMUNE DISEASES

There is evidence that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis may be associated with the increased incidence of several autoimmune disorders, -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis and diseases affecting the kidneys. For a review of the subject, the following may be consulted: (1) "Antinuclear Antibody and Rheumatoid Factor in Silica-Exposed Workers", *Arh Hig Rada Toksikol*, (60) 185-90 (2009); (2) "Occupational Exposure to Crystalline Silica and Autoimmune Disease", *Environmental Health Perspectives*, (107) Supplement 5, 793-802 (1999); (3) "Occupational Scleroderma", *Current Opinion in Rheumatology*, (11) 490-494 (1999); (4) "Connective Tissue Disease and Silicosis", *Am J Ind Med*, (35), 375-381 (1999).

D. TUBERCULOSIS

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to persons with tuberculosis. The following may be consulted for further information: (1) "Tuberculosis and Silicosis: Epidemiology, Diagnosis and Chemoprophylaxis", *J Bras Pneumol*, (34) 959-66 (2008); (2) *Occupational Lung Disorders*, Third Edition, Chapter 12, entitled "Silicosis and Related Diseases", Parkes, W. Raymond (1994); (3) "Risk of Pulmonary Tuberculosis Relative to Silicosis and Exposure to Silica Dust in South African Gold Miners," *Occup Environ Med*, (55) 496-502 (1998); (4) "Occupational Risk Factors for Developing Tuberculosis", *Am J Ind Med*, (30) 148-154 (1996).

E. KIDNEY DISEASE

There is evidence that exposure to respirable crystalline silica (without silicosis) or that the disease silicosis is associated with the increased incidence of kidney diseases, including end stage renal disease. For additional information on the subject, the following may be consulted: (1) "Mortality from Lung and Kidney Disease in a Cohort of North American Industrial Sand Workers: An Update", *Ann Occup Hyg*, (49) 367-73 (2005); (2) "Kidney Disease and Silicosis", *Nephron*, (85) 14-19 (2000); (3) "End Stage Renal Disease Among Ceramic Workers Exposed to Silica", *Occup Environ Med*, (56) 559-561 (1999); (4) "Kidney Disease and Arthritis in a Cohort Study of Workers Exposed to Silica", *Epidemiology*, (12) 405-412 (2001).

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

F. NON-MALIGNANT RESPIRATORY DISEASES

NIOSH has cited the results of studies that report an association between dusts found in various mining operations and non-malignant respiratory disease, particularly among smokers, including bronchitis, emphysema, and small airways disease. *NIOSH Hazard Review – Health Effects of Occupational Exposure to Respirable Crystalline Silica*, published in April 2002, available from NIOSH, 4676 Columbia Parkway, Cincinnati, OH 45226, or at http://www.cdc.gov/niosh/02-129A.html.

Respirable dust containing newly broken particles has been shown to be more hazardous to animals in laboratory tests than respirable dust containing older silica particles of similar size. Respirable silica particles which had aged for sixty days or more showed less lung injury in animals than equal exposures of respirable dust containing newly broken pieces of silica.

Aluminum Oxide:

Exposure route: Inhalation, ingestion, eye/skin contact.

Target organs: Respiratory system, gastrointestinal system, eyes, skin.

Acute effect: Inhalation or ingestion of high concentrations of this substance may cause gastrointestinal and/or upper respiratory tract irritation. Eye and skin irritant.

Chronic effect/carcinogenicity: Aluminum oxide is not classifiable as a human carcinogen. On occasion workers chronically exposed to aluminum-containing dusts or fumes have developed severe pulmonary reactions including fibrosis, emphysema and pneumothorax. Long-term exposure may have effects on the central nervous system.

Sodium Oxide:

Exposure route: Inhalation, ingestion, eye/skin contact.

Target organs: Respiratory system, gastrointestinal system, eyes, skin.

Acute effect: Corrosive – Sodium oxide reacts violently with water to form sodium hydroxide. Causes burns of skin, eyes, respiratory and gastrointestinal tracts, extremely destructive to mucous membranes.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

Iron Oxide: (Ferrous and Ferric Oxides)

Exposure route: Inhalation, ingestion, skin

Target organs: Respiratory system, skin, eyes, neurological system

Acute effect: Major findings: stupor, shock, acidosis, hematemesis, bloody diarrhea or coma. Minor findings: vomiting, diarrhea, mild lethargy. Benign pneumoconiosis with X-ray shadows indistinguishable from fibrotic pneumoconiosis. Experimental work in animals exposed by intratracheal injection or by inhalation to iron oxide mixed with less than 5% silica has shown no evidence of fibrosis produced in lung tissue.

Chronic effect/carcinogenicity: Irritability, nausea or vomiting, and normocytic anemia. When exposed to levels greater than 50 to 100 milligram per day, it can result in pathological deposition of iron in the body tissues causing fibrosis of the pancreas, diabetes mellitus, and liver cirrhosis. Workers exposed to iron oxide fume and silica may develop a “mixed dust pneumoconiosis.” Not classifiable as human carcinogen.

Potassium Oxide:

Exposure route: Inhalation, ingestion, eye/skin contact.

Target organs: Respiratory system, gastrointestinal system, eyes, skin.

Acute effect: Corrosive – Potassium oxide reacts violently with water to produce potassium hydroxide. If inhaled, causes sore throat, cough, burning sensation and shortness of breath. Contact with skin produces pain and blisters. Severe deep burns, redness and pain occur with eye contact. Ingestion results in burning sensations, abdominal pain, shock or collapse.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

SECTION XI – TOXICOLOGICAL INFORMATION, CONTD.

Calcium Oxide:
Exposure route: Inhalation, ingestion, skin/eye contact.

Target organs: Eyes, skin, respiratory system.

Acute effect: Direct contact with tissues, can result in burns and severe irritation because of its high reactivity and alkalinity. Major complaints of workers exposed to lime consist of irritation of the skin and eyes, although inflammation of the respiratory passages, ulceration and perforation of the nasal septum, and even pneumonia has been attributed to inhalation of the dust.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

Magnesium Oxide:
Exposure route: Inhalation, eye/skin contact.

Target organs: Eyes, respiratory system.

Acute effect: Magnesium oxide dust caused slight irritation of the eyes and nose, conjunctivitis, inflammation of the mucous membrane, and coughing up discolored sputum after industrial exposures amongst workers exposed to an unspecified concentration of MgO.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen.

Calcium Carbonate:
Exposure route: Inhalation, skin/eye contact.

Target organs: Eyes, skin, respiratory system.

Acute effect: Irritation of the eyes, skin and respiratory system and cough. It has been reported that there may be a silicosis risk when using impure sand & gravel containing in excess of 3% quartz. However, it is claimed that pure calcium carbonate does not cause pneumoconiosis. Adverse health effects have generally not been reported in literature among workers using $CaCO_3$.

Chronic effect/carcinogenicity: Not classifiable as human carcinogen

Acute Toxicity Estimates for Sand & Gravel – Not Available

SECTION XII – ECOLOGICAL INFORMATION

No data available for this product**.**

SECTION XIII – DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD
Collect and reuse clean materials. Dispose of waste materials only in accordance with applicable federal, state, and local laws and regulations.
The above information applies to Martin Marietta Materials product only as sold. The product may be contaminated during use and it is the responsibility of the user to assess the appropriate disposal method in that situation.

SECTION XIV – TRANSPORT INFORMATION

DOT HAZARD CLASSIFICATION
None

PLACARD REQUIRED
None

LABEL REQUIRED
Label as required by the OSHA Hazard Communication standard {29 CFR 1910.1200(f)}, and applicable state and local regulations.

SECTION XV – REGULATORY INFORMATION

OSHA: Crystalline Silica is not listed as a carcinogen.
SARA Title III: Section 311 and 312: Immediate health hazard and delayed health hazard.
TSCA.: All components of the product appear on the EPA TSCA chemical substance inventory.
RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.
CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 40 CFR §302.4
EPCRA (Emergency Planning and Community Right to Know Act): Crystalline silica (quartz) is not an extremely hazardous substance under regulations of the Emergency Planning and Community Right to Know Act, 40 CFR Part 355, Appendices A and B and is not a toxic chemical subject to the requirements of Section 313.
Clean Air Act: Crystalline silica (quartz) mined and processed by Martin Materials was not processed with or does not contain any Class I or Class II ozone depleting substances.
FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3).(The FDA standard primarily applies to products containing silica used in the coatings of food contact surfaces).
California Proposition 65: Respirable crystalline silica (quartz) is classified as a substance known to the state of California to be a carcinogen.
Massachusetts Toxic Use Reduction Act: Respirable crystalline silica is considered toxic per the Massachusetts Toxic Use Reduction Act when used in abrasive blasting and molding.
Pennsylvania Worker and Community Right to Know Act: Quartz is considered hazardous for purposes of the Act, but it is not a special hazardous substance or an environmental hazardous substance.

SECTION XVI – OTHER INFORMATION

DEFINITIONS OF ACRONYMS/ABBREVIATIONS

ACGIH: American Conference of Governmental Industrial Hygienists
ANSI: American National Standards Institute
APF: Assigned Protection Factor
California REL: California Inhalation Reference Exposure Limit
CAS: Chemical Abstracts Service
CERCLA: Comprehensive Environmental Response, Compensation and Liability Act
CFR: US Code of Federal Regulations
DHHS: Department of Health and Human Services
EPA: Environmental Protection Agency
EPCRA: Emergency Planning and Community Right to Know Act
FDA: Food and Drug Administration
GHS: Globally Harmonized System
HEPA: High-Efficiency Particulate Air
IARC: International Agency for Research on Cancer
IDLH: Immediately Dangerous to Life and Health
MSHA: Mine Safety and Health Administration
NIOSH: National Institute for Occupational Safety and Health, US Department of Health and Human Services
NIOSH REL: NIOSH Recommended Exposure Limit
NTP: National Toxicology Program
OEL: Occupational Exposure Limit
OSHA: Occupational Safety and Health Administration, US Department of Labor

SECTION XVI – OTHER INFORMATION, CONTD.

DEFINITIONS OF ACRONYMS/ABBREVIATIONS, CONTD.

PEL: Permissible Exposure Limit
PMF: Progressive Massive Fibrosis
RCRA: Resource Conservation and Recovery Act
SARA Title III: Title III of the Superfund Amendments and Reauthorization Act, 1986
SDS: Safety Data Sheet
STOT: Specific Target Organ Toxicity
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act
TWA: Time-Weighted Average
User's Responsibility: The OSHA Hazard Communication Standard 29 CFR 1910.1200 requires that this SDS be made available to your employees who handle or may be exposed to this product. Educate and train your employees regarding applicable precautions. Instruct your employees to handle this product properly.

Disclaimer: The information contained in this document applies to this specific material as supplied and Martin Marietta Materials believes that the information contained in this SDS is accurate. The suggested precautions and recommendations are based on recognized good work practices and experience as of the date of publication. They are not necessarily all-inclusive or fully adequate in every circumstance as not all use circumstances can be anticipated. It may not be valid for this material if it is used in combination with other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for one's own particular use. Since the actual use of the product described herein is beyond our control, Martin Marietta Materials, assumes no liability arising out of the use of the product by others. Appropriate warnings and safe handling procedures should be provided to handlers and users. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulation, rules or insurance requirement. However, product must not be used in a manner which could result in harm.

An electronic version of this SDS is available at www.martinmarietta.com . More information on the effects of crystalline silica exposure may be obtained from OSHA (phone number: 1-800-321-OSHA; website: http://www.osha.gov) or from NIOSH (phone number: 1-800-35-NIOSH; website: http://www.cdc.gov/niosh).

DATE OF PREPARATION 3/2015 (Combines Martin Marietta Materials MSDS for Sand & Gravel and TXI MSDS for Gravel)
REPLACES 11/2007 (MMM MSDS) and 02/2014 (TXI MSDS)

SAFETY DATA SHEET

1. Identification

Material name: SBR LATEX
Material: 067 55

Recommended use and restriction on use

Recommended use: Coatings
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol:	No symbol
Signal Word:	No signal word.
Hazard Statement:	not applicable
Precautionary Statement:	not applicable

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Composition Comments: The components are not hazardous or are below required disclosure limits.

4. First-aid measures

Ingestion: Rinse mouth thoroughly.

Inhalation: Move to fresh air.

Skin Contact: Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

Eye contact: Rinse immediately with plenty of water.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Get medical attention if symptoms occur.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: No data available.

Methods and material for containment and cleaning up: Dam and absorb spillages with sand, earth or other non-combustible material. Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

7. Handling and storage

Precautions for safe handling: Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. Store in original tightly closed container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of vapors and mist. Mechanical ventilation or local exhaust ventilation may be required.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: Wear goggles/face shield.

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and chemical properties

Appearance

Physical state:	liquid
Form:	liquid
Color:	White
Odor:	Mild
Odor threshold:	No data available.
pH:	9 - 11
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	> 100 °C > 212 °F
Flash Point:	No data available.

Evaporation rate:	Slower than Ether
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	Vapors are heavier than air and may travel along the floor and in the bottom of containers.
Relative density:	1.0
Solubility(ies)	
Solubility in water:	Soluble
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid:	Avoid heat or contamination.
Incompatible Materials:	Strong acids. Strong bases.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Moderately irritating to skin with prolonged exposure.
Eye contact:	Eye contact is possible and should be avoided.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Not listed.

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

None present or none present in regulated quantities.

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

Other Regulations:

Regulatory VOC (less water and exempt solvent):	0 g/l
VOC Method 310:	0.00 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.

China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	07/29/2015
Version #:	1.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

SAFETY DATA SHEET

Issue Date 01-March-2016 **Revision Date** 01-March-2016. **Version** 1.2 US

LY PROTECTOR **Lythic™ Protector - Concrete Clear Sealer**

1. IDENTIFICATION

Product identifier

Product Name Lythic™ Protector - Concrete Clear Sealer

Other means of identification

Product Code LY PROTECTOR

Recommended use of the chemical and restrictions on use

Recommended Use For industrial use

Details of the supplier of the safety data sheet

Supplier Address	**Manufacturer Address**
Solomon Colors, Inc.	Solomon Colors, Inc.
4050 Color Plant Road	4050 Color Plant Road
Springfield, IL	Springfield, IL
62702	62702

Company Phone Number 800-624-0261 (US & Canada); 217-522-3112 (Outside North America)

24 Hour Emergency Phone Number 800-373-7542

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Skin irritation	Category 2	H315
Eye irritation	Category 2A	H319

2.2 Label elements

Statutory basis Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

Symbol(s)

Signal word Warning

Hazard statement H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

Precautionary statement:
Prevention
P264 - Wash skin thoroughly after handling.
P280 - Wear eye protection/ face protection.
P280 - Wear protective gloves.

Precautionary statement: Reaction	P302 + P352 - IF ON SKIN: Wash with plenty of water/ soap. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332 + P313 - If skin irritation occurs: Get medical advice/ attention. P337 + P313 - If eye irritation persists: Get medical advice/ attention. P362 + P364 - Take off contaminated clothing and wash it before reuse.
2.3 Other hazards	None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

• Water	<= 65%
CAS-No.	7732-18-5
Remarks	Not a hazardous substance or mixture.
• Silicon dioxide, amorphous	< 2%
CAS-No.	7631-86-9
Remarks	Not a hazardous substance or mixture.
• 2-aminoethanol	1%
CAS-No.	141-43-5
Acute toxicity (Oral)	Category 4
Acute toxicity (Dermal)	Category 4
Skin corrosion	Category 1B
Serious eye damage	Category 1

4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation	If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention.
Skin contact	Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly wash clothing, shoes and protective equipment before reuse or discard. Get medical attention if irritation develops or persists.
Eye contact	Flush eyes with water at least 15 minutes. Get medical attention if eye irritation develops or persists.
Ingestion	If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms None known

4.3. Indication of any immediate medical attention and special treatment needed

None known.

Hazards None known.

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media:	Water spray, foam, CO2, dry powder., Adapt fire-extinguishing measures to surroundings
Unsuitable extinguishing media:	Do not use full-force water jet in order to avoid dispersal and spread of the fire.

5.2. Special hazards arising from the substance or mixture
None known.
The product itself does not burn.

5.3. Advice for firefighters
As in any fire, wear self-contained positive-pressure breathing apparatus, (MSHA/NIOSH approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures
Use personal protective equipment.

6.2. Environmental precautions
Obey relevant local, state, provincial and federal laws and regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

6.3. Methods and material for containment and cleaning up
Absorb spill with inert material, then place in a chemical waste container.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling
Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Do not swallow product. Keep container tightly closed. Wash thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice. FOR INDUSTRIAL USE ONLY General mechanical room ventilation is expected to be satisfactory if handled at low temperatures or in covered equipment. Local ventilation is needed in the presence of airborne mists.

7.2. Conditions for safe storage, including any incompatibilities
Storage
Keep containers tightly closed in a dry, cool place.
Further information
Product may freeze if stored below 32°F. Product damage will occur if frozen.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

• Silicon dioxide, amorphous		
CAS-No.	7631-86-9	
Control parameters	20millions of particles per cubic foot of air	Time Weighted Average (TWA):(Z3)
Control parameters	0.8 mg/m3	Time Weighted Average (TWA):(Z3)
	The exposure limit is calculated from the equation, 80/(%SiO2), using a value of 100% SiO2. Lower values of % SiO2 will give higher exposure limits.	

8.2. Exposure controls
Personal protective equipment
Respiratory protection
A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 or applicable federal/provincial requirements must be followed whenever workplace conditions warrant respirator use. NIOSH's "Respirator Decision Logic" may be useful in determining the suitability of various types of respirators.

Hand protection
Use impermeable gloves.
The rupture time and material thickness data are guideline values! Exact rupture time / material thickness data can be obtained from the protective glove manufacturer. Suitability for specific workplaces should be clarified with protective glove manufacturers. The above mentioned hand protection is based on knowledge of the chemistry and anticipated uses of this product but it may not be appropriate for all workplaces. A hazard assessment should be conducted prior to use to ensure suitability of gloves for specific work environments and processes prior to use. Use impermeable gloves.

Skin and body protection
A safety shower and eye wash fountain should be readily available. To identify additional Personal Protective Equipment (PPE) requirements, it is recommended that a hazard assessment in accordance with the OSHA PPE Standard (29CFR1910.132) be conducted before using this product.

Hygiene measures
To ensure ideal skin protection: use super fatted soaps and skin cream for skin care. Wash contaminated clothing before re-use.

Protective measures
Handle in accordance with good industrial hygiene and safety practice. If there is the possibility of skin/eye contact, the indicated hand/eye/body protection should be used. If the workplace threshold limit value is exceeded and/or the substance is released, use appropriate respiratory protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	liquid
Colour	milky-white
Form	liquid
Odour	mild
Odour Threshold	no data available
pH	9 - 10
Freezing point	0 °C
Boiling point/range	100 °C
Flash point	Will not flash
Evaporation rate	no data available
Flammability (solid, gas)	no data available
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Vapour pressure	23.33 hPa (20 °C) similar to water
Relative vapour density	no data available
Relative density	1.01 - 1.03
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Autoignition temperature	no data available
Thermal decomposition	> 2000 °C
Viscosity, dynamic	no data available
Viscosity, kinematic	no data available

9.2. Other information
no data available

10. STABILITY AND REACTIVITY

10.1. Reactivity
Stable under recommended storage conditions.

10.2. Chemical stability
No dangerous reaction known under conditions of normal use.

10.3. Possibility of hazardous reactions
Possibility of hazardous reactions
See Sect. 10.1 Reactivity.

10.4. Conditions to avoid
Do not mix with other material unless advised by supplier. Freezing conditions will damage product.

10.5. Incompatible materials
Acidic, Cationic, and salt materials may gel the product

10.6. Hazardous decomposition products
None known.
Stable under normal conditions. Product will not undergo hazardous polymerization.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute oral toxicity	Acute toxicity estimate : > 5000 mg/kg Method: Calculation method
Acute dermal toxicity	Acute toxicity estimate : > 5000 mg/kg Method: Calculation method
Carcinogenicity assessment	Contains no carcinogenic substances as defined by NTP, IARC and/or OSHA.
Further information	No toxicological tests have been conducted with the product itself.

Toxicological information on components
Silicon dioxide, amorphous

Acute oral toxicity	LD50 Rat: > 31600 mg/kg
Acute dermal toxicity	LD50 Rabbit: > 2000 mg/kg

12. ECOLOGICAL INFORMATION

12.1. Toxicity
No ecotoxicological data is available for this product.

Toxicity in aquatic invertebrates	EC50 Daphnia magna: > 10000 mg/l / 24 h Test substance: Silicon dioxide, derived from chemical synthesis Method: OECD 202
Toxicity to algae	IC 50 Desmodesmus subspicatus (green algae): > 10000 mg/l / 72 h Test substance: Silicon dioxide, derived from chemical synthesis Method: OECD 201

12.2. Persistence and degradability

Biodegradability	Inorganic product, Test of the biodegradability cannot be carried out.

12.3. Bioaccumulative potential

Bioaccumulation	Not to be expected.

12.4. Mobility in soil

Mobility	No remarkable mobility in soil is to be expected.

12.5. Other adverse effects

Further Information	The data we have at our disposal do not necessitate identification concerning environmental hazard.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods
Product
Waste must be disposed of in accordance with federal, state, provincial and local regulations.
Since empty containers retain product residue, follow MSDS and label warnings even after container is emptied.

Uncleaned packaging
Packaging material should be recycled or disposed of in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

Not dangerous according to transport regulations.

14.1. UN number: --
14.2. UN proper shipping name: --
14.3. Transport hazard class(es): --
14.4. Packing group: --
14.5 Environmental hazards (Marine pollutant):--
14.6. Special precautions for user: Yes
Not dangerous according to transport regulations.

15. REGULATORY INFORMATION

US Federal Regulations

OSHA

If listed below, chemical specific standards apply to the product or components:

- None listed

Clean Air Act Section (112)

If listed below, components present at or above the de minimus level are hazardous air pollutants:

- None listed

CERCLA Reportable Quantities

If listed below, a reportable quantity (RQ) applies to the product based on the percent of the named component:

- None listed

SARA Title III Section 311/312 Hazard Categories

The product meets the criteria only for the listed hazard classes:

- Acute Health Hazard

SARA Title III Section 313 Reportable Substances

If listed below, components are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

- None listed

Toxic Substances Control Act (TSCA)

If listed below, non-proprietary substances are subject to export notification under Section 12 (b) of TSCA:

- None listed

State Regulations

California Proposition 65

A warning under the California Drinking Water Act is required only if listed below:

- None listed

An employer using HMIS/NFPA labeling must through training ensure that its employees are fully aware of the hazards of the chemicals used.

HMIS Ratings

Health : 2
Flammability : 0
Physical Hazard : 0

NFPA Ratings

Health : 2
Flammability : 0
Reactivity : 0

16. OTHER INFORMATION

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's name and address:

ARDEX Engineered Cements
400 Ardex Park Dr.
Aliquippa, PA 15001 USA

Supplier's name and address:

Refer to Manufacturer

Information Telephone No.	:	(888) 512-7339 or (724) 203-5000
Website Address	:	http://www.ardexamericas.com
24 Hr Emergency Telephone #	:	**CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)**
Product Identifier	:	**ARDEX FEATHER FINISH®**
Product ID No.	:	70012141
Trade Name/Synonyms	:	SD-F
Material Use	:	Cement-based Finishing Underlayment
Uses Advised Against	:	No information available.

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification

according to 29 CFR 1910.1200 (OSHA HCS 2012) / HPR (WHMIS 2015)
Skin Irritation 2
Eye Dam. 1
Carc. 1
STOT RE 1

GHS Pictograms

Signal Word

Danger

Hazard Statements

Causes skin irritation.
Causes serious eye damage.
May cause cancer by inhalation.
Causes damage to lungs through prolonged or repeated inhalation.

Precautionary Statements

Obtain special instructions before use. (See Section 7.) Do not handle until all safety precautions have been read and understood. Do not breathe dust. Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection. Wash contaminated clothing before reuse. Protect from sunlight. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards Not Otherwise Classified

None

% With Unknown Acute Toxicity : Up to 40% by weight of this product consists of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Limestone	1317-65-3	30 – 60
Calcium sulfate	7778-18-9	10 – 30
Vinyl acetate copolymer	24937-78-8	10 – 30
Cellulose	9004-34-6	1 - 5
Portland cement	65997-15-1	1 - 5
Crystalline silica, quartz**	14808-60-7	0.1 – 0.25

The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.

**Note: Crystalline Silica (Quartz) is not intentionally added to this product, but is a naturally occurring component in Limestone (Calcium Carbonate). Exposure monitoring tests using typical occupational procedures found no measurable respirable crystalline silica in the breathing space of a worker mixing this product during an 8-hour work shift.

SECTION 4 – FIRST AID MEASURES

General : Get medical attention if you feel unwell.

Inhalation : Not expected to cause symptoms.

Skin contact : Remove contaminated clothing. Flush affected skin with water. If irritation persists: seek medical attention/advice.

Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

Ingestion : Rinse mouth. Do NOT induce vomiting. Get medical advice/attention if you feel unwell.

Notes for Physician : Treat symptomatically.

Signs and symptoms of short-term (acute) exposure

Inhalation : Symptoms may include coughing and irritation.

Skin : Symptoms may include redness and itching.

Eyes : Direct contact may strongly irritate or burn the eyes. Could cause blindness.

Ingestion : Symptoms such as gastric pain, nausea, vomiting, and diarrhea may occur.

Indication of need for immediate medical attention or special treatment

: In case of accident or ailment, seek medical advice immediately (show label or SDS if possible).

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide, dry chemical powder, foam.

Unsuitable extinguishing media : Water. Contact with water may cause hydration and formation of caustic alkaline material.

Hazardous combustion products : Calcium oxide, calcium oxalate, vinyl acetate, acetic acid, formic acid, formaldehydes, carbon monoxide, and carbon dioxide.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.

Environmental precautions : Do not allow material to enter drains or contaminate ground water system.

Fire hazards/conditions of flammability

: Not flammable under normal conditions of use.

Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)

: Not flammable.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions : Restrict access to area until completion of clean-up.

Protective equipment : Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Emergency Procedures : If a spill/release exceeding the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002). Outside of the U.S. call the emergency number listed in Section 1.

US CERCLA Reportable quantity (RQ): None reported.

Methods and materials for containment and cleaning up

: Ventilate area of release. Stop spill or leak at source if safely possible. Contain material, preventing it from entering sewer lines or waterways. Using HEPA vacuum, or other dustless methods, gather up spilled material and place in suitable container for later disposal (see Section 13).

Prohibited materials : Avoid adding water, material becomes alkaline when wet.

Environmental precautions : Do not allow product to enter drains or waterways. Do not allow material to contaminate ground water system.

Reference to other sections : See Section 13 for disposal information.

SECTION 7 – HANDLING AND STORAGE

Special instructions : Mixing the product according to the directions in the Technical Data Sheet will not produce measurable levels of airborne respirable crystalline silica, per NIOSH 7500 exposure monitoring.

Safe handling procedures : See Section 8 for additional information on Permissible Exposure Levels for individual components and recommendations for Personal Protection Equipment (PPE). Avoid breathing dust. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

Storage requirements : Store in a cool, dry, well-ventilated area. Store away from heat and open flame. Avoid storing in direct sunlight. Store in original container.

Incompatible materials : See Section 10.

Special packaging materials : Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits : No exposure limits have been established for the product itself. Below are exposure limits for the components in the product.

Threshold Limit Values for the Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TWA	STEL	PEL	STEL
Limestone	1317-65-3	TLV Withdrawn In 2007	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av
Calcium sulfate	7778-18-9	10 mg/m^3 (inhalable)	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av
Portland cement	65997-15-1	1 mg/m^3 (respirable, no asbestos and	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av

		< 1% crystalline silica)			
Cellulose	9004-34-6	10 mg/m^3	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av
Vinyl acetate copolymer	24937-78-8	10 mg/m^3 (Total dust); 3 mg/m^3 (respirable)	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av
Crystalline silica, quartz	14808-60-7	0.025 mg/m^3 (respirable fraction)	N/Av	0.05 mg/m^3 (respirable) (final rule limit)	N/Av

Engineering Controls : Exposure monitoring during typical working conditions, measured exposures below OSHA PELs, without using general ventilation or local exhaust ventilation.

Personal Protection Equipment

Eye / face protection : Safety glasses or goggles must be worn when using this product.

Skin protection : Use protective clothing that provide comprehensive protection (e.g. cotton, rubber). For hands, use protective gloves that provides comprehensive protection (e.g. rubber).

Respiratory protection : Under normal working conditions, exposures to crystalline silica from this product will be below the OSHA Action Level (0.025 mg/m^3 TWA). Furthermore, total respirable particulates were also below OSHA's PEL for normal working conditions, based on NIOSH 7500 exposure monitoring.

Site safety equipment : An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations : Avoid contact with eyes, skin and clothing. Avoid breathing dust. Do not eat, drink or smoke when using this product. Clean all equipment and clothing at end of each work shift.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	solid	**Appearance**	gray powder
Odor	No odor	**Odor threshold**	N/Av
pH	10 – 11	**Specific gravity**	2.7 – 3.1
Boiling point	N/Ap	**Coefficient of water/oil distribution**	N/Av
Melting/Freezing point	N/Av	**Solubility in water**	< 55 g/L
Vapor pressure (mm Hg @ 20°C / 68°F)	N/Av	**Evaporation rate (*n*-Butyl acetate = 1)**	N/Ap
Vapor density (Air = 1)	N/Av	**Volatiles (% by weight)**	N/Av
Volatile organic compounds (VOCs)	0 g/L		
Particle size	N/Av	**Flammability classification**	Not flammable
Flash point	N/Av	**Lower flammable limit (% by vol)**	Not available
Flash point method	N/Av	**Upper flammable limit (% by vol)**	Not available
Auto-ignition temperature	N/Av	**Decomposition temperature**	Not available
Viscosity	Not available	**Oxidizing properties**	Not available

Explosion data: Sensitivity to mechanical impact / static discharge

: Not expected to be sensitive to mechanical impact or static discharge.

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

Reactivity : Contact with water may cause hydration and formation of caustic calcium hydroxide.

Stability : Stable under the recommended storage and handling conditions prescribed.

Hazardous reactions : Hazardous polymerization does not occur.

Conditions to avoid : Excessive heat.

Materials to avoid and incompatibility
: Oxidizing agents.

Hazardous decomposition products
: None known, refer to hazardous combustion products in Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of exposure : *Inhalation:* YES *Skin Absorption:* NO *Skin and Eyes:* YES *Ingestion:* YES

Symptoms of exposure : See Section 4.

Calculated Acute Toxicity Estimates for the Product

Inhalation : Not Available

Oral : Not Available

Dermal : Not Available

Toxicological data : There are insufficient data for estimating the product's acute toxicity. Several components become caustic in the presence of water. See below for individual ingredient acute toxicity data.

Acute Toxicity Parameters for the Ingredients	CAS #	LC50, Inhalation mg/L, Rat, 4 hr	LD50, Oral mg/kg, rat	LD50, Dermal mg/kg, rabbit
Limestone	1317-65-3	N/Av	6,450	N/Av
Calcium sulfate	7778-18-9	N/Av	> 3,000	NAv
Portland cement	65997-15-1	N/Av	N/Av	N/Av
Cellulose	9004-34-6	> 5.8	> 2,000	> 2,000
Vinyl acetate copolymer	24937-78-8	N/Av	> 1,000	N/Av
Crystalline silica, quartz	14808-60-7	N/Av	N/Av	N/Av

Skin corrosion or irritation : Causes skin irritation. Prolonged exposure to wet product may cause skin burns.

Serious eye damage / eye irritation : Causes eye burns. May cause blindness.

Respiratory or skin sensitization : Portland cement may cause an allergic skin reaction, in hypersensitive individuals possibly due to trace amounts of chromium.

Germ cell mutagenicity : None known.

Carcinogenic status : This product contains trace amounts of Crystalline silica. Crystalline silica (respirable size) is classified as carcinogenic by inhalation by IARC (Group 1), ACGIH (Group A2), NTP (Group 1) and OSHA (OSHA Select carcinogen). No other components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive toxicity : None known.

Specific Target Organ Toxicity, Single Exposure
: May cause respiratory irritation.

Specific Target Organ Toxicity, Repeated Exposure
: May cause lung damage upon repeated or prolonged exposure.

Aspiration hazard : None known.

Additional information : N/Av

SECTION 12 – ECOLOGICAL INFORMATION

Environmental effects : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Ecotoxicological : No data is available on the product itself.

Ecotoxicity	:	No data available.
Biodegradability	:	No data available.
Bioaccumulative potential	:	No data available.
Mobility in soil	:	No data available.
PBT and vPvB assessment	:	No data available.
Other adverse effects	:	No data available.

SECTION 13 – DISPOSAL CONSIDERATION

Handling for disposal	:	Handle waste according to recommendations in Section 7.
Methods of disposal	:	Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.
Packaging	:	Handle contaminated packaging in the same manner as the product.
RCRA	:	For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 – TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	**None**	This product is not regulated according to Canadian TDG regulations.	**None**	**None**	**None**
TDG Additional Information	**None**				
49 CFR/DOT	**None**	This product is not regulated according to US DOT regulations.	**None**	**None**	**None**
49 CFR/DOT Additional Information	**None**				

IATA	:	Not regulated for Air Transport
IMDG	:	Not regulated for Ocean Transport

SECTION 15 – REGULATORY INFORMATION

Canadian Information:

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all of the information required by the HPR.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non- Domestic Substances List (NDSL).

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:
Immediate (Acute) Health Hazard
Chronic Health Hazard.

Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above *de minimus* concentrations.

U.S. State Right To Know Laws
California Proposition 65: Warning! This product contains a chemical known to the State of California to cause cancer.

Other State Right to Know Laws:

Ingredient on State RTK Law?	CAS #	CA	MA	MN	NJ	PA	RI
Limestone	1317-65-3	No	YES	No	YES	YES	YES
Portland cement	65997-15-1	No	YES	No	YES	YES	YES
Calcium sulfate	7778-18-9	No	YES	No	YES	YES	No
Cellulose	9004-34-6	No	YES	No	YES	YES	YES
Crystalline silica, quartz	14808-60-7	No	YES	YES	YES	YES	YES

SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
Health: *3 *Flammability* 0 *Physical Hazard* 1 PPE: B
Gloves, safety glasses

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation
DSL: Domestic Substances List
EPA: Environmental Protection Agency
GHS: Globally Harmonized System
HPR: Hazardous Products Regulations
IARC: International Agency for Research on Cancer
Inh: Inhalation
N/Av: Not Available
N/Ap: Not Applicable
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure Limit
RCRA: Resource Conservation and Recovery Act
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

Disclaimer of Liability

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. Safe work practices must be employed when working with any materials. It is important that the end user determines the adequacy of the safety procedures employed during the use of this product.
No warranty of any kind is given or implied. ARDEX Engineered Cements will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

Prepared By:
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15001

(724) 203-5000
Visit our Website: http://www.ardexamericas.com

Revision date: **:** 13-Nov-2017

End of Document

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Manufacturer's name and address:

ARDEX Engineered Cements
400 Ardex Park Dr.
Aliquippa, PA 15001 USA

Supplier's name and address:

Refer to Manufacturer

Information Telephone No.	:	(888) 512-7339 or (724) 203-5000
Website Address	:	http://www.ardexamericas.com
24 Hr Emergency Telephone #	:	**CHEM-TEL: 1-800-255-3924 OR 1-813-248-0585 (call collect)**
Product Identifier	:	**ARDEX K 15®**
Product ID No.	:	70011601
Trade Name/Synonyms	:	K 15
Material Use	:	Premium Self-Leveling Underlayment
Uses Advised Against	:	No information available.

SECTION 2 – HAZARDS IDENTIFICATION

GHS Classification per 29 CFR 1910.1200 (OSHA HCS 2012) and HPR (WHMIS 2015)

Skin corrosion/irritation, Category 1A
Serious eye damage/eye irritation, Category 1
Carcinogenicity, Category 1A
Specific target organ toxicity, single exposure; Respiratory tract irritation, Category 3
Specific target organ toxicity, repeated exposure, Category 1.

GHS Pictograms

Signal Word

Danger

Hazard Statements

Causes severe skin burns and eye damage.
May cause cancer by inhalation.
May cause respiratory irritation.
Causes damage to lungs through prolonged or repeated inhalation.

Precautionary Statements

Obtain special instructions before use. (See Section 7.) Do not handle until all safety precautions have been read and understood. Do not breathe dust. Use only outdoors or in a well-ventilated area. Wash hands and exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection. Wash contaminated clothing before reuse. Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Store locked up. Dispose of contents / container in accordance with federal, state, and local laws. Do not allow product to enter drains.

Hazards Not Otherwise Classified

None

% With Unknown Acute Toxicity : Up to 58% by weight of this product consists of ingredients with unknown acute toxicity.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS #	% (by weight)
Crystalline silica, quartz	14808-60-7	30 – 60
Limestone	1317-65-3	10 – 30
Calcium aluminate cement	65997-16-2	10 – 30
Calcium sulfate	7778-18-9	5 – 10
Portland cement	65997-15-1	1 – 5
Vinyl acetate copolymer	24937-78-8	1 – 5

The exact percentages of the ingredients have been withheld by the manufacturer as trade secrets.

SECTION 4 – FIRST AID MEASURES

General : Call a Poison Center or doctor if you feel unwell.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: call a doctor/physician.

Skin contact : Remove/Take off immediately all contaminated clothing. Flush affected skin with gently flowing lukewarm water for at least 20 minutes. Seek immediate medical attention/advice.

Eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

Ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell.

Notes for Physician : Treat symptomatically.

Signs and symptoms of short-term (acute) exposure

Inhalation : Symptoms may include coughing and shortness of breath.

Skin : Symptoms may include redness and itching. Contact with wet material, or moist areas of skin, causes skin burns. Skin thickening, cracking, or fissuring may occur.

Eyes : Direct contact may strongly irritate or burn the eyes. Could cause blindness.

Ingestion : Symptoms such as gastric pain, nausea, vomiting, and diarrhea may occur.

Effects of long-term (chronic) exposure

: Prolonged inhalation may cause adverse lung effects with symptoms including coughing and shortness of breath. Repeated or prolonged inhalation of fine dusts may cause severe scarring of the lungs, a disease called silicosis, and alveolar proteinosis (lower lung disease).

Indication of need for immediate medical attention or special treatment

: Difficulty breathing persists after removing the person to fresh air.

Any burn to the skin.

Any exposure to the eye which causes irritation.

Ingestion.

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media : Carbon dioxide, dry chemical powder, foam.

Unsuitable extinguishing media : Water. Contact with water may cause hydration and formation of caustic alkaline material.

Hazardous combustion products : Calcium oxide, calcium oxalate, vinyl acetate, acetic acid, formic acid, formaldehydes, carbon monoxide, and carbon dioxide.

Special fire-fighting procedures/equipment

: Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. After fires have been extinguished, carefully clean all equipment and surfaces exposed to fumes.

Environmental precautions : Do not allow material to enter drains or contaminate ground water system.

Fire hazards/conditions of flammability

: Not flammable under normal conditions of use.

Flammability classification (OSHA 29 CFR 1910.1200, WHMIS 2015)

: Not flammable

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Personal precautions : Restrict access to area until completion of clean-up. All persons dealing with clean-up should wear the appropriate chemically protective equipment.

Protective equipment : Refer to Section 8 on this Safety Data Sheet, EXPOSURE CONTROLS / PERSONAL PROTECTION, for additional information on acceptable personal protective equipment.

Emergency Procedures : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002). Outside of the U.S. call the emergency number listed in Section 1.

US CERCLA Reportable quantity (RQ): None reported.

Methods and materials for containment and cleaning up

: Ventilate area of release. Eliminate all ignition sources. Stop spill or leak at source if safely possible. Contain material, preventing it from entering sewer lines or waterways. Using HEPA vacuum, or other dustless methods, gather up spilled material and place in suitable container for later disposal (see Section 13). Avoid adding water, material becomes alkaline when wet. Notify the appropriate authorities as required.

Prohibited materials : Avoid adding water, material becomes alkaline when wet.

Environmental precautions : Do not allow product to enter drains or waterways. Do not allow material to contaminate ground water system.

Reference to other sections : See Section 13 for disposal information.

SECTION 7 – HANDLING AND STORAGE

Special instructions : Mixing the product according to the directions in the Technical Data Sheet will produce airborne dusts, including crystalline silica. Wear a dust mast (N-95 or higher) while mixing. Use ventilation to control levels of dust in the work area.

Safe handling procedures : Corrosive! Wear chemically resistant protective equipment during handling. Use in a well-ventilated area. Training the workers on the potential health hazards associated with product dust is important. Secondary inhalation exposures could occur when cleaning equipment, or when removing or laundering the clothing. Do not breathe dust. Avoid contact with skin, eyes and clothing. Avoid wet or humid conditions. Keep away from acids and incompatibles. Avoid and control operations which create dust. Keep containers tightly closed when not in use. Wash thoroughly after handling.

Storage requirements : Store in a cool, dry, well-ventilated area. Store away from heat and open flame. Avoid storing in direct sunlight. Store in original container. Keep tightly closed when not in use. Do not reuse empty container without commercial cleaning or reconditioning.

Incompatible materials : See Section 10.

Special packaging materials : Always keep in containers made of the same materials as the supply container.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible Exposure Limits : No exposure limits have been established for the product itself. Below are exposure limits for the components in the product.

Threshold Limit Values for the Ingredients	CAS #	ACGIH TLV		OSHA PEL	
		TWA	STEL	PEL	STEL
Limestone	1317-65-3	TLV Withdrawn In 2007	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av
Calcium aluminate cement	65997-16-2	1 mg/m^3 (as Aluminum metal and insoluble compounds)	N/Av	N/Av	N/Av
Calcium sulfate	7778-18-9	10 mg/m^3 (inhalable)	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av
Portland cement	65997-15-1	1 mg/m^3 (respirable, no asbestos and < 1% crystalline silica)	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av
Vinyl acetate copolymer	24937-78-8	10 mg/m^3 (Total dust); 3 mg/m^3 (respirable)	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av
Crystalline silica, quartz	14808-60-7	0.025 mg/m^3 (respirable fraction)	N/Av	0.05 mg/m^3 (respirable) (final rule limit)	N/Av

Engineering Controls : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits. Ventilation should effectively remove and prevent buildup of any dust generated from the handling of this product.

Personal Protection Equipment

Eye / face protection : Safety glasses or chemical goggles must be worn when using this product. Additionally, a face shield is recommended if splashing is possible.

Skin protection : Wear chemical resistant protective clothing and impervious gloves. Glove materials such as nitrile rubber or Viton (fluorocarbon rubber) are recommended.

Body protection : Where extensive exposure to product is possible, use resistant coveralls, apron and boots to prevent contact.

Respiratory protection : If work process generates excessive quantities of dust, or exposures in excess of any PEL, wear an appropriate particulate respirator (dust mask). Mask should be rated at N-95 or higher.

Site safety equipment : An eyewash station and safety shower should be made available in the immediate working area.

General hygiene considerations : Avoid contact with eyes, skin and clothing. Do not breathe dust. Do not eat, drink or smoke when using this product. Clean all equipment and clothing at end of each work shift.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: solid	**Appearance**	: gray powder
Odor	: No odor	**Odor threshold**	: N/Av
pH	: 10 – 12	**Specific gravity**	: 2.7 – 3.1

Boiling point	: N/Ap	**Coefficient of water/oil distribution**	: N/Av
Melting/Freezing point	: N/Av	**Solubility in water**	: < 55 g/L
Vapor pressure (mm Hg @ 20°C / 68°F)	: N/Av	**Evaporation rate (*n*-Butyl acetate = 1)**	: N/Ap
Vapor density (Air = 1)	: N/Av	**Volatiles (% by weight)**	: N/Av
Volatile organic compounds (VOCs)	: 0 g/L		
Particle size	: N/Av	**Flammability classification**	: Not flammable
Flash point	: N/Av	**Lower flammable limit (% by vol)**	: Not available
Flash point method	: N/Av	**Upper flammable limit (% by vol)**	: Not available
Auto-ignition temperature	: N/Av	**Decomposition temperature**	: Not available
Viscosity	: Not available	**Oxidizing properties**	: Not available

Explosion data: Sensitivity to mechanical impact / static discharge

: Not expected to be sensitive to mechanical impact or static discharge.

SECTION 10 – REACTIVITY AND STABILITY INFORMATION

Reactivity : Contact with water may cause hydration and formation of caustic calcium hydroxide.

Stability : Stable under the recommended storage and handling conditions prescribed.

Hazardous reactions : Hazardous polymerization does not occur.

Conditions to avoid : High temperatures.

Materials to avoid and incompatibility

: Oxidizing agents.

Hazardous decomposition products

: None known, refer to hazardous combustion products in Section 5.

SECTION 11 – TOXICOLOGICAL INFORMATION

Routes of exposure : *Inhalation:* YES *Skin Absorption:* NO *Skin and Eyes:* Yes *Ingestion:* YES

Symptoms of exposure : See Section 4.

Calculated Acute Toxicity Estimates for the Product

Inhalation : Not Available

Oral : Not Available

Dermal : Not Available

Toxicological data : There are insufficient data for estimating the product's acute toxicity. Several components become caustic in the presence of water, and therefore should not be inhaled, ingested, or allowed to contact skin. See below for individual ingredient acute toxicity data.

Acute Toxicity Parameters for the Ingredients	CAS #	LC50, Inhalation mg/L, Rat, 4 hr	LD50, Oral mg/kg, rat	LD50, Dermal mg/kg, rabbit
Limestone	1317-65-3	N/Av	6,450	N/Av
Calcium aluminate cement	65997-16-2	N/Av	N/Av	N/Av
Calcium sulfate	7778-18-9	N/Av	> 3,000	NAv
Portland cement	65997-15-1	N/Av	N/Av	N/Av
Vinyl acetate copolymer	24937-78-8	N/Av	> 1,000	N/Av
Crystalline silica, quartz	14808-60-7	N/Av	N/Av	N/Av

Skin corrosion or irritation : Causes skin corrosion when wet.

Serious eye damage / eye irritation : Causes eye burns. May cause blindness.

Respiratory or skin sensitization : Portland cement may cause an allergic skin reaction, in hypersensitive individuals possibly due to trace amounts of chromium.

Germ cell mutagenicity : None known.

Carcinogenic status : This product contains Crystalline silica. Crystalline silica (respirable size) is classified as carcinogenic by inhalation by IARC (Group 1), ACGIH (Group A2), NTP (Group 1) and OSHA (OSHA Select carcinogen). No other components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

Reproductive toxicity : None known.

Specific Target Organ Toxicity, Single Exposure

: May cause respiratory irritation.

Specific Target Organ Toxicity, Repeated Exposure

: May cause lung damage upon repeated or prolonged exposure.

Aspiration hazard : None known.

Additional information : N/Av

SECTION 12 – ECOLOGICAL INFORMATION

Environmental effects : The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Ecotoxicological : No data is available on the product itself.

- **Ecotoxicity** : No data available.
- **Biodegradability** : No data available.
- **Bioaccumulative potential** : No data available.
- **Mobility in soil** : No data available.
- **PBT and vPvB assessment** : No data available.
- **Other adverse effects** : No data available.

SECTION 13 – DISPOSAL CONSIDERATION

Handling for disposal : Handle waste according to recommendations in Section 7.

Methods of disposal : You must test your waste using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes. Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

Packaging : Handle contaminated packaging in the same manner as the product.

RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14 – TRANSPORTATION INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	**None**	This product is not regulated according to Canadian TDG regulations.	**None**	**None**	**None**
TDG Additional Information	**None**				
49 CFR/DOT	**None**	This product is not regulated according to US DOT regulations.	**None**	**None**	**None**
49 CFR/DOT Additional	**None**				

Information	

SECTION 15 – REGULATORY INFORMATION

Canadian Information:

This product has been classified according to the hazard criteria of the Hazardous Products Regulations (HPR). This SDS contains all of the information required by the HPR.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on either the Domestic Substances List (DSL) or the Non- Domestic Substances List (NDSL).

US Federal Information:

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): None reported.

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes:
Immediate (Acute) health hazard
Chronic Health Hazard.
Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds or the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This material is not subject to SARA notification requirements, since it does not contain any Toxic Chemical constituents above *de minimus* concentrations.

U.S. State Right To Know Laws
California Proposition 65: Warning! This product contains a chemical known to the State of California to cause cancer. It contains Crystalline silica, quartz.

Other State Right to Know Laws:

Ingredient on State RTK Law?	CAS #	CA	MA	MN	NJ	NY	PA	RI
Crystalline silica, quartz	14808-60-7	No	Yes	Yes	Yes	No	Yes	Yes
Limestone	1317-65-3	No	Yes	No	Yes	No	Yes	Yes
Calcium aluminate cement	65997-16-2	No	No	No	No	No	No	No
Calcium sulfate	7778-18-9	No	Yes	No	Yes	No	Yes	No
Portland cement	65997-15-1	No	Yes	No	Yes	No	Yes	Yes
Vinyl acetate copolymer	24937-78-8	No	No	No	No	No	No	No

SECTION 16 – OTHER INFORMATION

HMIS Rating : * - Chronic Hazard 0 - Minimal 1 – Slight 2 – Moderate 3 – Serious 4 – Severe
Health: *3 *Flammability* 0 *Physical Hazard* 1 PPE: G
Gloves, safety glasses, and dust respirator

Legend : ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
DOT: Department of Transportation

DSL: Domestic Substances List
EPA: Environmental Protection Agency
GHS: Globally Harmonized System
HPR: Hazardous Products Regulations
IARC: International Agency for Research on Cancer
Inh: Inhalation
N/Av: Not Available
N/Ap: Not Applicable
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
SARA: Superfund Amendments and Reauthorization Act
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TSCA: Toxic Substance Control Act
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification System

Disclaimer of Liability

The Information presented herein is supplied as a guide to those who handle or use this product and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive. The manner and conditions of use and handling may involve other and additional considerations. Safe work practices must be employed when working with any materials. It is important that the end user makes a determination regarding the adequacy of the safety procedures employed during the use of this product.
No warranty of any kind is given or implied. ARDEX Engineered Cements will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

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Revision date: **:** 26-Aug-2016

End of Document

SAFETY DATA SHEET

Issue Date 17-May-2016 **Revision Date** 17-May-2016 **Version** 2

LY DENSIFIER **Lythic™ Densifier - Concrete Floor Hardener**

1. IDENTIFICATION

Product identifier

Product Name Lythic™ Densifier - Concrete Floor Hardener

Other means of identification

Product Code LY DENSIFIER
Document Lythic Densifier Concentrate, Lythic Densifier RTU

Recommended use of the chemical and restrictions on use

Recommended Use Restricted to professional users.
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Supplier Address	**Manufacturer Address**
Solomon Colors, Inc.	Solomon Colors, Inc.
4050 Color Plant Road	4050 Color Plant Road
Springfield, IL	Springfield, IL
62702	62702

Company Phone Number 800-624-0261 (US & Canada); 217-522-3112 (Outside North America)
24 Hour Emergency Phone Number 800-373-7542

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Cloudy liquid **Physical state** Liquid **Odor** Slight

Precautionary Statements - Prevention

Do not handle until all safety precautions have been read and understood
Do not get in eyes, on skin, or on clothing
Wash face, hands and any exposed skin thoroughly after handling

Precautionary Statements - Response
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
May cause eye irritation. May cause: tearing, redness, discomfort.
If eye irritation persists: Get medical advice/attention
IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
Inhalation of aerosol or fine spray mist may cause serious respiratory problems.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Absorb spillage to prevent material damage
Collect spillage

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Colloidal Silica	Proprietary	5-40	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact Wash skin with soap and water.

Inhalation Remove to fresh air.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Colloidal Silica	-	(vacated) TWA: 6 mg/m³ <1% Crystalline silica TWA: 20 mppcf : (80)/(% SiO2) mg/m³ TWA	IDLH: 3000 mg/m³ TWA: 6 mg/m³

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state Liquid
Appearance Cloudy liquid
Color White
Odor Slight
Odor threshold No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point/freezing point	0 °C / 32 °F	
Boiling point / boiling range	100 °C / 212 °F	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	1.00 - 1.20	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	

Oxidizing properties	No information available

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Acidic, Cationic, and salt materials may gel the product.
Possibility of Hazardous Reactions
None under normal processing.
Conditions to avoid
Do not mix with other material unless advised by supplier. Freezing conditions will damage product.
Incompatible materials
None known based on information supplied.
Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available

Inhalation No data available.

Eye contact No data available.

Skin Contact No data available.

Ingestion No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Colloidal Silica	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Colloidal Silica	-	Group 3	Reasonably Anticipated	X

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 5056 mg/kg
ATEmix (dermal) 2022 mg/kg
ATEmix (inhalation-dust/mist) 0.6 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Colloidal Silica	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static	7600: 48 h Ceriodaphnia dubia mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.

14. TRANSPORT INFORMATION

DOT	Not regulated
TDG	Not regulated
MEX	Not regulated
ICAO (air)	Not regulated
IATA	Not regulated
IMDG	Not regulated
RID	Not regulated
ADR	Not regulated
ADN	Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Colloidal Silica	X	X	X

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Reactivity 0	Physical and Chemical Properties -	HMIS	Health hazards 0
Flammability 0	Physical hazards 0	Personal protection X		

Issue Date 17-May-2016
Revision Date 17-May-2016
Revision Note
No information available

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Issue Date 17-May-2016 **Revision Date** 17-May-2016 **Version** 2

LY XL DENSIFIER **Lythic™ XL Densifier - Concrete Floor Hardener**

1. IDENTIFICATION

Product identifier

Product Name Lythic™ XL Densifier - Concrete Floor Hardener

Other means of identification

Product Code LY XL DENSIFIER
Document Lythic Densifier XL Concentrate, Lythic Densifier XL RTU

Recommended use of the chemical and restrictions on use

Recommended Use Restricted to professional users.
Uses advised against Consumer use

Details of the supplier of the safety data sheet

Supplier Address	**Manufacturer Address**
Solomon Colors, Inc.	Solomon Colors, Inc.
4050 Color Plant Road	4050 Color Plant Road
Springfield, IL	Springfield, IL
62702	62702

Company Phone Number 800-624-0261 (US & Canada); 217-522-3112 (Outside North America)
24 Hour Emergency Phone Number 800-373-7542

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Cloudy liquid **Physical state** Liquid **Odor** Slight

Precautionary Statements - Prevention

Obtain special instructions before use
Do not get in eyes, on skin, or on clothing
Wash face, hands and any exposed skin thoroughly after handling

Precautionary Statements - Response
IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
May cause eye irritation. May cause: tearing, redness, discomfort.
If eye irritation persists: Get medical advice/attention
IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
Inhalation of aerosol or fine spray mist may cause serious respiratory problems.
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Absorb spillage to prevent material damage
Collect spillage

Precautionary Statements - Storage
Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other Information

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Colloidal Silica	Proprietary	5-40	*

*The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice — In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye contact — Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin Contact — Wash skin with soap and water.

Inhalation — Remove to fresh air.

Ingestion — Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms — No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians — Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Caution: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the chemical
No information available.

Explosion data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Colloidal Silica	-	(vacated) TWA: 6 mg/m³ <1% Crystalline silica TWA: 20 mppcf : (80)/(% SiO2) mg/m³ TWA	IDLH: 3000 mg/m³ TWA: 6 mg/m³

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin and body protection Wear protective gloves and protective clothing.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid		
Appearance	Cloudy liquid	**Odor**	Slight
Color	White	**Odor threshold**	No information available

Property	Values	Remarks • Method
pH	No information available	
Melting point/freezing point	0 °C / 32 °F	
Boiling point / boiling range	100 °C / 212 °F	
Flash point	No information available	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Specific Gravity	1.00 - 1.20	
Water solubility	No information available	
Solubility in other solvents	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	No information available
Density	No information available
Bulk density	No information available

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical stability
Acidic, Cationic, and salt materials may gel the product.
Possibility of Hazardous Reactions
None under normal processing.
Conditions to avoid
Do not mix with other material unless advised by supplier. Freezing conditions will damage product.
Incompatible materials
None known based on information supplied.
Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information No data available

Inhalation No data available.

Eye contact No data available.

Skin Contact No data available.

Ingestion No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Colloidal Silica	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	> 2.2 mg/L (Rat) 1 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Colloidal Silica	-	Group 3	Reasonably Anticipated	X

Reproductive toxicity No information available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Aspiration hazard No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	12833 mg/kg
ATEmix (dermal)	5133 mg/kg
ATEmix (inhalation-dust/mist)	1.4 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Colloidal Silica	440: 72 h Pseudokirchneriella subcapitata mg/L EC50	5000: 96 h Brachydanio rerio mg/L LC50 static	7600: 48 h Ceriodaphnia dubia mg/L EC50

Persistence and degradability
No information available.

Bioaccumulation
No information available.

Other adverse effects No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

14. TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

ICAO (air) Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Colloidal Silica	X	X	X

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Reactivity 0	Physical and Chemical Properties -	HMIS	Health hazards 0
Flammability 0	Physical hazards 0	Personal protection X		

Issue Date 17-May-2016
Revision Date 17-May-2016
Revision Note
No information available

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

CHARLOTTE PIPE AND FOUNDRY COMPANY

SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

COMMON NAME:	PVC Pipe and Fittings
CHEMICAL NAME:	Not Applicable. Formulation, see section 3.
FORMULA:	Mixture
PRODUCT CAS NO.:	Mixture, see section 3.
Recommended Use:	Drain Waste Vent and Pressure Pipe and Fittings
SUPPLIER:	Charlotte Pipe and Foundry Company (Plastics Division)
ADDRESS:	4210 Old Charlotte Highway
CITY, STATE, ZIP:	Monroe, NC 28110
PHONE:	+1-704-372-3650 **EMERGENCY PHONE:** +1-704-372-3650

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Toxic and irritating gases and fumes may be given off during burning or thermal decomposition. Avoid generating dust. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

GHS Status	This material is hazardous in accordance with the hazard communication standard, 29 CFR 1910.1200
Classification of the substance or mixture	Skin irritation – Category 2 Eye irritation – Category 2 A Specific target organ toxicity – single exposure – Category 3
GHS label pictogram	Warning
Signal word	Warning
Hazard statements	Causes serious eye irritation.

CHARLOTTE PIPE AND FOUNDRY COMPANY

SAFETY DATA SHEET

	Causes skin irritation. May cause respiratory irritation
Precautionary statements	
Prevention	Avoid breathing dust/fume/gas/mist.
Response	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Storage	Keep away from intense heat, flames.
Disposal	Dispose of in accordance with local regulations.
Hazards not otherwise classified	None known.
Relevant routes of exposure	Skin, eyes, inhalation.
Inhalation	Melted product is flammable and produces intense heat and dense smoke during burning. Irritating gases and fumes may be given off during burning or thermal decomposition.
Skin contact	Gases and fumes evolved during thermal processing or decomposition can cause skin irritation.
Eye contact	Dust can cause eye irritation. Gases and fumes evolved during thermal processing or decomposition can cause eye irritation.
Ingestion	No data available.

3. HAZARDOUS INGREDIENTS: COMPOSITION/INFORMATION

INGREDIENT	% WEIGHT	PEL-OSHA	TLV-ACGIH	NIOSH REL
Polyvinyl chloride CAS 9002-86-2	>80%	None established Particulates not otherwise classified: 15 mg/m3	1 mg/m3 (respirable fraction) Particulates not otherwise classified: 10 mg/m3 (inhalable fraction)	None established
Titanium dioxide CAS 13463-67-7	0-5%	15 mg/m3, total dust	10 mg/m3 TWA	None established

4. FIRST AID MEASURES

EYE CONTACT: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Consult a physician.
SKIN CONTACT: Rinse with water. Remove contaminated clothing and shoes. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes before reuse.

INHALATION: If vapors from excessive heating, burning or decomposition products are inhaled: remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing, such as collar, tie, belt, or waistband. In case of inhalation of decomposition

products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance.

INGESTION: Wash out mouth with water. Remove dentures, if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Loosen tight clothing, such as collar, tie, belt, or waistband. Consult a physician.

Notes to physician: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under surveillance for 48 hours

Specific treatments: None known

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES		
FLASH POINT: No data.	Decomposition products may be combustible.	
FLAMMABLE LIMITS:	LEL: No Data	UEL: No data

EXTINGUISHING MEDIA: Water, foam, dry chemical. Do not use CO2 on Class A fires, as a lack of cooling capacity may result in re-ignition.

FIRE AND EXPLOSION HAZARDS: Solid does not readily release flammable vapors. Thermoplastic polymers can burn. Smoke, Carbon Monoxide, Carbon Dioxide, Aldehydes, Hydrogen Chloride, Tin. Irritating and/or toxic substances will be emitted during burning, combustion, or decomposition. Run-off water from firefighting may have corrosive effects.

PROTECTIVE MEASURES FOR FIRE FIGHTERS: Firefighters must wear a NIOSH-approved, full-facepiece self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout or bunker gear with additional chemical protective clothing as necessary to protect against thermal decomposition products.

SPECIAL PROTECTIVE ACTIONS FOR FIRE FIGHTERS: If there is a fire, promptly isolate the scene by removing all persons from the vicinity of the incident. No action shall be taken involving any personal risk or without suitable training

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency measures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with decomposition products or fumes from burning or excessive heating, take note of information in Section 8 on suitable and unsuitable materials. See also information in “for non-emergency personnel.”
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains, and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

Methods and materials for containment and clean-up	
Small spill	Avoid dust generation. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. See Section 1 for emergency contact information.
Large spill	Move containers from spill area. Approach release from upwind. Prevent entry into sewers, waterways, basements, and confined areas. Avoid dust generation. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. See Section 1 for emergency contact information.

7. HANDLING AND STORAGE

Conditions for safe storage, including any incompatibilities	Store in a dry place away from direct sunlight, heat, and incompatible materials. Avoid intense heat and flames.
Precautions for safe handling	
Protective measures	Put on appropriate personal protective equipment (see Section 8). Do not handle until all safety precautions have been read and understood. Do not get particles, vapors or fumes in eyes, on skin, or on clothing. Do not ingest. If during normal use, the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator.
Advice on general occupational hygiene	Employees must wash hands and face before eating, drinking, or smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also section 8 for additional information on hygiene measures.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation, or other engineering controls to keep worker exposure to airborne contaminants below recommended and statutory limits.

RESPIRATORY PROTECTION: Cutting or sanding this product can generate dust. Used a properly fitted particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product, and the safe working limits of the respirator. A NIOSH-approved N95 single use or P95 multiple use respirator will protect the employee from at least 95% of airborne particles. Follow the respirator manufacture's instructions for proper use. If adhesives or other substances are used with this product, refer to the product manufacturer's safety data sheet for applicable respiratory protective measures.

SKIN PROTECTION: Chemical-resistant, impervious gloves complying with an approved standard should be worn when handling this or any chemical product, if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures containing several substances, the protection time of the gloves cannot be accurately estimated. If adhesives or other substances are used with this product, refer to the product manufacturer's safety data sheet for applicable skin protective measures.

BODY PROTECTION: Personal protective equipment for the body should be selected on the task being performed and the risks involved, and should be approved by a specialist before handling this product. If adhesives or other substances are used with this product, refer to the product manufacturer's safety data sheet for applicable skin protective measures.

EYE/FACE PROTECTION: Safety eyewear complying with an approved standard must be used when a risk assessment indicates this is necessary to avoid exposure to dust. Particulates and dust can be formed when cutting, grinding or sanding this product. If contact with dust or particulates is possible, the following should be worn unless the assessment indicates a

higher degree of protection: safety glasses with side shields. If adhesives or other substances are used with this product, refer to the product manufacturer's safety data sheet for applicable eye and face protective measures.

9. PHYSICAL AND CHEMICAL PROPERTIES	
APPEARANCE:	Solid. White/grey
ODOR:	Not applicable.
ODOR THRESHOLD:	Not available
BOILING POINT:	Not available
FLASH POINT:	Not applicable
FLAMMABILITY:	Melted product is flammable.
AUTOIGNITION TEMPERATURE:	Not applicable
DECOMPOSITION TEMPERATURE:	Not available
LOWER/UPPER EXPLOSION LIMITS:	Not available
VAPOR PRESSURE:	Not available
LIQUID DENSITY:	Not available
SPECIFIC GRAVITY:	Approximately 1.4
MELTING POINT:	Not available
pH:	Not available
SOLUBILITY:	Insoluble
% VOLATILE:	Not available
VISCOSITY:	Not available

10. STABILITY AND REACTIVITY	
Stability:	Stable at normal temperatures and pressures.
Reactivity:	Stable at normal temperatures and pressures.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition.
Incompatible materials/conditions:	Consult the Charlotte Pipe and Foundry chemical resistance guide.
Hazardous decomposition products:	Hydrogen chloride, carbon oxides, small amounts of benzene and aromatic and aliphatic hydrocarbons, phosgene.
Hazardous polymerization:	Not available.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

No toxicological data is available for the finished product.

SENSITIZATION: No data available.

MUTAGENICITY: No data available.

DEVELEPMENTAL: No data available.

Fertility: No data available.

CARCINOGENICITY: On the date of preparation of this SDS, this product does not contain ingredients classified by the International Agency for Research on Cancer, National Toxicology Program Report, or OSHA at 29 CFR 1910, Subpart Z, as a carcinogen.

REPRODUCTIVE TOXICITY: Not available

TERATOGENICITY: Not available

SPECIFIC TARGET ORGANS – SINGLE EXPOSURE: Not available

SPECIFIC TARGET ORGANS – REPEATED EXPOSURE: Not available

ASPIRATION HAZARD: Not available

INFORMATION ON THE LIKELY ROUTES OF EXPOSURE:

Potential acute health effects

Eye contact	No known significant effects or critical hazards. Dust can cause eye irritation.
Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact	Skin irritant.
Ingestion	No known significant effects or critical hazards.

Symptoms related to the physical, chemical, and toxicological characteristics

Eye contact	No data available.
Inhalation	No data available
Skin contact	Adverse symptoms may include irritation.
Ingestion	No data available

Immediate, delayed and chronic effects from short term exposure

Short term exposure

Potential immediate effects	No data available.
Potential delayed effects	No data available

Long term exposure

Potential immediate effects	No data available.
Potential delayed effects	No data available

Potential chronic effects

General	No data available.
Carcinogenicity	Not listed by OSHA, IARC or NTP. See section 11.

CHARLOTTE PIPE AND FOUNDRY COMPANY

SAFETY DATA SHEET

12. ECOLOGICAL INFORMATION

Numerical measures of toxicity
No data available

Persistence and degradability
Does not biodegrade over time.

Bioaccumulative potential
No data available

Mobility in soil
No data available.

Other adverse effects: No known significant or critical hazards.

13. DISPOSAL CONSIDERATIONS

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste should not be disposed of to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste and packaging should be recycled when possible. Incineration or landfill should only be considered when recycling is not feasible. This material must be disposed of in a safe way.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME:	Not Regulated
HAZARD CLASS:	Not Regulated
IDENTIFICATION NUMBER:	Not Regulated
SHIPPING LABEL:	Not Regulated
PACKING GROUP:	Not Regulated

15. REGULATORY INFORMATION

United States	TSCA 8(b): All ingredients are listed on the U.S. Toxic Substances Control Act inventory. Airborne unbound particles of titanium dioxide of respirable size are listed as being carcinogenic per California Proposition 65.

16. OTHER INFORMATION

Date of Preparation: 11 December 2013

Key To Acronyms:

CAS: Chemical Abstracts Service

CHARLOTTE PIPE AND FOUNDRY COMPANY

SAFETY DATA SHEET

CFR:	Code of Federal Regulations
HEPA	High-Efficiency Particulate Air (filter)
IARC:	International Agency for Research on Cancer
LD50	Lethal dose to 50% of exposed laboratory animals
LC50	Lethal concentration to 50% of exposed laboratory animals
LEL:	Lower Explosive Limit
mg/l	Milligrams per liter
NIOSH:	National Institute for Occupational Safety and Health (US)
NTP:	National Toxicology Program
OSHA:	Occupational Safety and Health Administration (US)
PEL:	Permissible Exposure Limit
TSCA	Toxic Substances Control Act
TLV:	Threshold Limit Value – American Conference of Governmental Industrial Hygienists (ACGIH)
TWA:	Time Weighted Average
UEL:	Upper Explosive Limit
ug/ m^3	Micrograms per cubic meter

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NO WARRANTY OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, OR WARRANTY OR GUARANTY OF ANY OTHER KIND, EXPRESS OR IMPLIED, IS MADE REGARDING PERFORMANCE, SAFETY, SUITABILITY, STABILITY OR OTHERWISE FOR THE ABS MATERIALS AS REPRESENTED IN THIS MSDS SHEET. Charlotte Pipe and Foundry assumes no liability whatsoever for the use of or reliance upon this information. The information and data contained in this MSDS has been compiled from information believed to be accurate and is offered for your consideration, investigation and verification. Buyer assumes all risk of use, storage, handling and disposal of the product in compliance with applicable federal, state, and local laws and regulations.

SAFETY DATA SHEET

Lucas Red "N" Tacky NLGI # 2 grease

Section 1. Identification

GHS product identifier : Lucas Red "N" Tacky NLGI # 2 grease

Other means of identification : Not available.

Product number : 10005, 10027, 10028, 10029, 10574

Relevant identified uses of the substance or mixture and uses advised against

Engine oil.

Supplier's details :
Lucas Oil Products, Inc
302 North Sheridan Street
Corona, California 92880-2067
Toll Free: (800) 342-2512
Tel: (951) 270-0154
Fax: (951) 270-1902
Website: www.LucasOil.com

Emergency telephone number (with hours of operation) :
(951) 493-1149
(951) 847-5949
Markn@lucasoil.com

7:00A.M. to 5:00P.M. Monday thru Friday

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture :
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
AQUATIC HAZARD (LONG-TERM) - Category 3

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :
Causes serious eye damage.
Harmful to aquatic life with long lasting effects.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Wear eye or face protection. Avoid release to the environment. Wash hands thoroughly after handling.

Section 2. Hazards identification

Response : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Storage : Not applicable.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Product code : Not available.

Ingredient name	%	CAS number
Zinc Alkyldithiophosphate	1 - 5	68649-42-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician.

Inhalation : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Skin contact : Get medical attention immediately. Call a poison center or physician. Wash contaminated skin with soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Chemical burns must be treated promptly by a physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Skin contact : No known significant effects or critical hazards.

Ingestion : May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : No specific data.

Section 5. Fire-fighting measures

Special protective actions for fire-fighters : No special precaution is required.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Using a vacuum with HEPA filter will reduce dust dispersal. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

None.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/ or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid. [Grease.]

Color : Red.

Odor : Mild. Petroleum oil.

Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : Not available.

Section 9. Physical and chemical properties

Flash point	:	Not available.
Burning time	:	Not available.
Burning rate	:	Not available.
Evaporation rate	:	Not available.
Flammability (solid, gas)	:	Not available.
Lower and upper explosive (flammable) limits	:	Not available.
Vapor pressure	:	Not available.
Vapor density	:	Not available.
Relative density	:	0.9
Solubility	:	Negligible at 25°C
Solubility in water	:	0 g/l
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
SADT	:	Not available.
Viscosity	:	Kinematic (100°C (212°F)): 0.19 cm^2/s (19 cSt)

Section 10. Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is stable.
Possibility of hazardous reactions	:	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	:	Excessive heat.
Incompatible materials	:	Reactive or incompatible with the following materials: strong oxidizers.
Hazardous decomposition products	:	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Zinc Alkyldithiophosphate	Eyes - Irritant	Rabbit	-	-	-

Sensitization

Skin	:	There is no data available.
Respiratory	:	There is no data available.

Section 11. Toxicological information

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye damage.

Inhalation : May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.

Skin contact : No known significant effects or critical hazards.

Ingestion : May cause burns to mouth, throat and stomach.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

There is no data available.

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Zinc Alkyldithiophosphate	Acute EC50 1 to 5 mg/L Acute EC50 1 to 1.5 mg/L Chronic LC50 1 to 5 mg/L	Algae Crustaceans Fish	96 hours 48 hours 96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

Mobility in soil

Soil/water partition coefficient (K_{OC}) : There is no data available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: Zinc Alkyldithiophosphate

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): All components are listed or exempted.

Clean Water Act (CWA) 307: Zinc Alkyldithiophosphate

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

Section 15. Regulatory information

SARA 311/312

Classification : Immediate (acute) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Zinc Alkyldithiophosphate	1 - 5	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Zinc Alkyldithiophosphate	68649-42-3	1 - 5
Supplier notification	Zinc Alkyldithiophosphate	68649-42-3	1 - 5

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : The following components are listed: Distillates (petroleum), hydrotreated heavy naphthenic; Distillates (petroleum), solvent-dewaxed heavy paraffinic; Zinc Alkyldithiophosphate

Pennsylvania : The following components are listed: Zinc Alkyldithiophosphate

California Prop. 65

No products were found.

International regulations

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: Not determined.
Korea inventory: All components are listed or exempted.
Malaysia Inventory (EHS Register): Not determined.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.
Taiwan inventory (CSNN): Not determined.

Chemical Weapons Convention List Schedule I Chemicals : Not listed

Chemical Weapons Convention List Schedule II Chemicals : Not listed

Chemical Weapons Convention List Schedule III Chemicals : Not listed

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 2 * **Flammability :** 0 **Physical hazards :** 0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks Although HMIS® ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 2 **Flammability :** 0 **Instability :** 0

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

History

Date of issue mm/dd/yyyy : 02/15/2014

Version : 1

Revised Section(s) : Not applicable.

Prepared by : KMK Regulatory Services Inc.

Key to abbreviations : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL 73/78 = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Safety Data Sheet

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Products: **Right-Joint Fibre Expansion Joint**
Manufacturer **: RIGHT POINTE COMPANY**
Address : 234 Harvestore Drive
: P.O. BOX 467
: DeKalb, IL 60115
Telephone : 888-755-5700
Fax : 815-754-5702

In case of emergency, dial (800) 424-9300 (CHEMTREC)

SECTION 2 - HAZARDOUS IDENTIFICATION/EXPOSURE LIMITS

HMIS
| Health | **|1|**
| Flammability | **|0|**
| Reactivity | **|0|**
| Personal Protection | **| |**

Product is classified as non-hazardous per OSHA 1910-1200. Fibre Expansion Joint is defined by OSHA as an "article." A manufactured item that is formed to a specific shape or design during manufacture that does not release or result in exposure to a hazardous chemical under normal use conditions.

SECTION 3 - HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20 °C)	LEL @ 24 °C
Petroleum Asphalt	8052-42-4	35-40	No	N/A	N/A

Under the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 (SARA) and 40 CFR part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are Identified under the heading "SARA 313." *N/A = Not Applicable*

SECTION 4 - EMERGENCY AND FIRST AID PROCEDURES

Eye Contact: Flush eyes with water to remove fibers.
Skin Contact: Flush with water to remove fibers. Wash affected areas with soap and water if available.
Inhalation: Not anticipated to be an exposure route. If a dust exposure occurs, remove victim from exposure source and treat symptomatically.
Ingestion: Not anticipated to be an exposure route.

SECTION 5 - FIRE AND EXPLOSION HAZARDS

Flash Point: >400 °F
Extinguishing Media: Water fog, foam, dry chemical.
Chemical/Combustion Hazards: Stacked material will retain heat and has the potential to reignite.
Precautions/Personal Protective Equipment: Avoid smoke inhalation. Use appropriate respiratory protection.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spill Or Leak Procedures: Not applicable. Product is solid.

SECTION 7 - HANDLING AND STORAGE

Safe Handling Procedures: Avoid direct contact.
Safe Storage: None.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

	OSHA				ACGIH			
Chemical Name:	PEL	PEL/Ceiling	PEL/STEL	Skin	TLV	TLV/Ceiling	TLV/STEL	Skin
Petroleum Asphalt	5 mg/m³*	N/E	N/E	No	0.5 mg/m³*	N/E	N/E	N/E

Engineering Controls: None required under normal use conditions.
Personal Protective Equipment: Safety glasses, chemical-resistant gloves. *N/E = Not Established* **: Asphalt Fumes*

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N/A	**Vapor Density:** N/A	**% Volatile By Volume:** N/E
Evaporation Rate: N/A	**Ph Level:** N/A	**% Volatile By Weight:** N/A
Weight Per Gallon: N/A	**Product Appearance:** Black Board	**Voc Content:** N/A

SECTION 10 - STABILITY/REACTIVITY

Stability: Stable
Hazardous Polymerization: Will not occur.
Conditions and Materials to Avoid: None recognized.
Hazardous Decomposition Products: None recognized.

SECTION 11 - TOXICOLOGICAL INFORMATION

Eye Contact: Direct contact may cause mild irritation.
Skin Contact: Direct contact may cause slight skin irritation.
Inhalation: Not anticipated to be an exposure route.
Ingestion: Not anticipated to be an exposure route.
Signs and Symptoms: Symptoms of eye irritation include tearing, reddening, and swelling. Symptoms of skin irritation include redness and swelling. Gastrointestinal irritation symptoms include nausea, vomiting, and abdominal discomfort.
Aggravated Medical Conditions: None recognized.
Other Health Effects: Wood dust is listed by the IARC as a human carcinogen (Group 1)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: N/E **Degradability:** N/E **Bioaccumulative Potential:** N/E
Soil Mobility: N/E **Other Adverse Effects:** N/E

SECTION 13 - WASTE DISPOSAL INFORMATION

Waste Disposal Information: Product is classified as a non-hazardous waste.

SECTION 14 - TRANSPORATION INFROMATION

Hazardous/Non Hazardous: Not regulated by DOT.
UN Number: None. **Hazard Class:** N/A **Packing Group:** N/A
Un Proper Shipping Name: N/A
Environmental Hazards: None recognized.
Bulk Transportation Information: None
Special Precautions: None

SECTION 15 - REGULATORY INFORMATION

Other Regulatory Considerations: None recognized.

SECTION 16 - OTHER INFORMATION

PREPARATION DATE: 3-01-2015

Right Pointe Company believes this information is accurate but not all-inclusive in all circumstances. It is the responsibility of the user to determine suitability of the material for their purposes. No warranty, expressed or implied, is given.

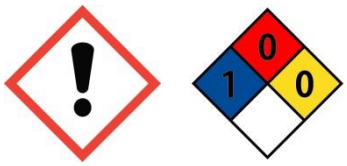
1. IDENTIFICATION

GHS Product Identifier:	White Water Wax, White Water Wax 1315, City White
Version #:	01
Issue Date:	4/21/2015
Recommended Use:	Concrete Curing Compound
Recommended Restrictions:	Not Available
Manufacturer:	Right Pointe Company
Manufacturer Address:	234 Harvestore Drive Dekalb, IL 60115 USA
Contact Name:	Philippe Gauthier
Telephone:	815-754-5700
Email:	Philippeg@rightpointe.com
CHEMTREC:	800-424-9300

2. HAZARDS IDENTIFICATION

GHS Classification

Physical Hazards:	Not Applicable
Health Hazards:	Possible eye, respiratory, and skin irritant.
Environmental Hazards:	Not Established
Hazard Pictogram(s):	



Storage:	Ensure containers are sealed when not in use.
Disposal:	Observe all pertinent local, state and federal regulations on disposal of water-based chemical compounds

3. COMPOSITION/INFORMATION ON INGREDIENTS

	Hazardous Components	CAS #	Percent
1	Titanium Dioxide	13463-67-7	1-5 %

4. FIRST AID MEASURES

First Aid Procedures

Eye	Flush eyes with water for 15 minutes or until irritation subsides. Seek medical attention if irritation develops and persists.
Skin	Wash contact areas with soap and water. Seek medical attention if irritation develops and persists.
Inhalation	Remove afflicted to fresh air. Seek medical attention if breathing problems occur.
Ingestion	Do not induce vomiting. Dilute with fluids such as milk or water. Seek medical attention.
Notes to Physician:	In case of ingestion, the decision of whether or not to induce vomiting should be made by the attending physician. Certain pre-existing conditions may make workers particularly susceptible to the effects of this chemical: asthma, allergies, impaired pulmonary function.
General Advice:	If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Discard any shoes or clothing items that cannot be decontaminated.

5. FIRE-FIGHTING MEASURES

Flammable Properties:	Not flammable by OSHA criteria. Exposure to fire may cause sealed containers to rupture/explode.
Extinguishing Media	
Suitable Extinguishing Media:	All standard extinguishing media is acceptable.
Unsuitable Extinguishing Media:	Not applicable.
Protection of Firefighters	
Specific Hazards:	Complete combustion will yield carbon dioxide and/or carbon monoxide.
Precautions/Protective Equipment:	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA. Structural firefighters' protective clothing will only provide limited protection.
Fire Fighting Equipment/Instructions:	In case of fire and/or explosion do not breathe fumes. In the event of fire, cool containers with water spray. Fire may cause pressurization of sealed containers which may rupture or explode. Keep run-off water out of sewers and water sources. Dike for water control.
Specific Methods:	Cool containers with water spray. Maintain distance if sealed containers are exposed to flame.
Hazardous Combustion Products:	Carbon dioxide and carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Keep unnecessary personnel away. Ventilate closed spaces before entering them. Do not touch or walk through spilled material.

Environmental Precautions: Runoff or release to sewer, waterway, or ground is forbidden.

Methods for containment: Cutoff source of release if area is non-hazardous to personnel. Dike far ahead of spill with sand or soil to contain runoff; prevent runoff from reaching sewers, waterways, or other bodies of water. Remove large quantities of material with vacuum trucks or salvage tanks; the remaining liquid should be absorbed with clay, sand, sawdust, or other suitable absorbent and transferred into containers. Seal containers and contact a specialist for proper disposal. Never return spills in original containers for re-use. Refer to section 13 of this SDS for more information on waste management.

7. HANDLING AND STORAGE

Handling: The product is non-combustible. If heated, irritating vapors may be formed. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Storage: Prevent electrostatic build-up by using common bonding and grounding techniques. Store in a well-ventilated place. Keep the container tightly closed and dry. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	Components	OSHA (PEL) TWA	NIOSH (REL) TWA	ACGIH (TLV) TWA
1	Titanium Dioxide	Not Established	Not Established	Not Established

Personal Protective Equipment

Eye/Face Protection: Wear safety glasses or chemical goggles if splashing is possible. A full face respirator is recommended.

Skin Protection: Wear suitable protective clothing and eye/face protection.

Respiratory Protection: A full face respirator is recommended for eye protection and respiratory protection when applying product using conventional sprayers.

General Hygiene Considerations: Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Non-Transparent White Liquid
Physical State:	Liquid
Form:	Liquid
Color:	White
Odor:	Paraffin
Odor Threshold:	Not Established
pH:	8 - 9
Vapor Pressure:	Not Established
Vapor Density:	> 1 (1 = air)
Boiling Point:	212˚F (100˚C)
Melting Point/Freezing Point:	32˚F (0˚C)
Solubility (Water):	soluble
Specific Gravity:	0.983 - 0.995 g/ml
Density:	8.20 - 8.30 lbs/gal
Flash Point:	Not Applicable
Flammability Limits (in Air, % Vol.):	Not Applicable
Auto-Ignition Temperature:	Not Applicable
VOC:	20 g/L
Percent Volatiles:	70 - 90 %
Flammability Class:	Non-Flammable

10. STABILITY AND REACTIVITY

Chemical Stability:	Stable
Possibility of Hazardous Reactions:	Hazardous polymerization will not occur.
Conditions to Avoid:	Strong acids and alkalis.
Incompatible Materials:	Incompatible with strong acids, alkalis, and non-polar solvents.
Hazardous Decomposition Products:	No known hazardous decomposition products.

11. TOXICOLOGICAL INFORMATION

Routes of Exposure:	Inhalation. Skin contact.
Chronic Effects:	Not Established
Skin Corrosion/Irritation:	May cause skin irritation.
Serious Eye Damage/Eye Irritation:	May cause eye irritation.

12. ECOLOGICAL INFORMATION

Ecotoxicity:	Not Established
Environmental Effects:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Persistence and Degradability:	Not Established
Bioaccumulative potential:	Not Established
Mobility in Soil:	Not Established
Other Adverse Effects:	Not Established

13. DISPOSAL CONSIDERATIONS

Disposal Methods:	Dispose of contents / container in accordance with local / regional / national / international regulations.
Waste Codes:	Not Applicable

14. TRANSPORT INFORMATION

Department of Transportation

Basic Shipping Requirements:	Not regulated as dangerous goods.
Special Precautions:	Not Applicable

15. REGULATORY INFORMATION

CERCLA (Superfund) Reportable Quantity: None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard Categories:	Immediate Hazard:	No
	Delayed Hazard:	No
	Fire Hazard:	No
	Pressure Hazard:	No
	Reactivity Hazard:	No
	Section 302:	No
	Section 311:	No

Inventory Status

Country/Region	Inventory Name	On Inventory (Y/N)
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
USA & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

***A "Yes" indicates that all hazardous components of this product are registered as hazardous by their governing country(s)**

State Regulations

US - California Prop. 65 Components

Not Applicable

US - Minnesota Hazardous Substances: Hazardous Substance

Titanium Dioxide (13463-67-7)

US - New Jersey Right to Know - Substances: Listed Substance

Titanium Dioxide (13463-67-7)

US - Pennsylvania Right to Know - Hazardous Substances: Listed Substance

Titanium Dioxide (13463-67-7)

16. OTHER INFORMATION

Further Information

HMIS® is a registered trade and service mark of the NPCA.

HMIS® Ratings:	Health:	[1]
	Flammability:	[0]
	Physical Hazard:	[0]
NFPA Ratings:	Health:	[1]
	Flammability:	[0]
	Instability:	[0]

Prepared by: Mando DiBartolomeo
Right Pointe Company

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Date - This data sheet contains changes from the previous version in section(s):

SAFETY DATA SHEET

Diesel Exhaust Fluid (DEF) – Urea Solution 32.5%

SECTION 1: Identification

1.1 Product Identifier

Product Name: Diesel Exhaust Fluid (DEF) Urea Solution

Synonyms: Urea Liquor, ABF-DEF

Product Type: Liquid, Mixture

Product Code(s): 301001, 301025, 301055, 301275, 301330, 301999

1.2 Recommended Use

Identified Uses: NOx Reducing Agent

1.3 Supplier Details

AirBlueFluids, Inc.

471 W. Lambert Road, Suite #100

Brea, CA 92821

714-990-3940

http://www.airbluefluids.com

1.4 Emergency Phone No.

CHEMTREC (US & Canada) 1-800-424-9300

SECTION 2: Hazards Identification

National Fire Protection Association

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	

Legend HMIS / NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

2.1 Classification of the Substance or mixture

This material is not classified as hazardous.

2.2 Label Elements

Signal Word: None

Hazard Statement: No labeling applicable

Pictograms: None

Precautionary Statements:

P302+P352 – IF ON SKIN: Wash with plenty soap and water.

P305+P351 – IF IN EYES: Rinse cautiously with water for several minutes.

P332+P313 – If skin irritation occurs: get medical advice/attention.

P337+P313 – If eye irritation persists: get medical advice/attention.

2.3 Other Hazards

Eye: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin: Contact may cause mild skin irritation including redness and burning. No harmful effects from skin absorption have been reported.

Inhalation (Breathing): No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

Ingestion (Swallowing): No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

Signs and Symptoms: Effects of overexposure may include irritation of the nose, throat and digestive tract, headaches, coughing, nausea, vomiting, and transient disorientation.

Cancer: Inadequate evidence available to evaluate the cancer hazard of this material.

SECTION 3: Composition / Information of Ingredients

Name	Product Identifier	% by weight	GHS- US Classification
Urea	(CAS No.) 57-13-6	31 - 33	Not Classified
Water	(CAS No.) 7732-18-5	67 -69	Not Classified

SECTION 4: First Aid Measures

4.1 Description of Necessary First Aid Measures

General: If medical attention is needed have product container or label available.

Eye Contact: If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water. If symptoms persist, seek medical attention.

Skin Contact: Remove contaminated shoes and clothing and cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops and persists, seek medical attention. Wash contaminated clothing before reuse.

Inhalation: If respiratory problems develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, clear airway and immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

Ingestion: First aid is not normally required; however, if swallowed and symptoms develop, seek medical attention.

4.2 Most Important symptoms and effects, both acute and delayed

Eye Contact: Contact may cause mild eye irritation including stinging, watering, and redness.

Skin Contact: Contact may cause mild skin irritation including redness and burning. No harmful effects from skin absorption have been reported.

Inhalation: No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

Ingestion: No information available. Studies by other exposure routes suggest a low degree of toxicity by inhalation.

Ingesting large quantities may result in abdominal pains, diarrhea, nausea or vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician: No special requirements. Treat symptomatically.

SECTION 5: Fire-Fighting Measures

5.1 Extinguishing Media

Suitable Extinguishing Media: Material is non-flammable. Use extinguishing media appropriate for the surrounding fire.

Unsuitable Extinguishing Media: None known

5.2 Special hazards arising from the substance or mixture

Fire Hazard: Under fire conditions this material may decompose to ammonia, nitrogen oxides and carbon dioxide.

Explosion Hazard: Avoid contact with strong oxidizing agents such as chlorine (bleach), peroxides, chromates, nitric acid, perchlorates, concentrated oxygen or permanganates. Contact can generate heat, fires, explosions and release toxic fumes.

5.3 Advice for fire-fighters

Special Protective Equipment: Fire-fighters should wear complete protective clothing including self-contained breathing apparatus.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away from the spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Stop the source of the release if it can be done without risk. Immediately isolate the hazard area and restrict access to authorized personnel only.

6.2 Environmental precautions

To prevent spilled material from entering sewers, storm drains or natural watercourses, contain material with a dike or with appropriate absorbent materials such as sand, clay, soil or commercially available absorbent. Inform appropriate authorities if the material enters environmentally sensitive waterways.

Prevent material from entering basements or confined areas.

6.3 Methods and material for containment and clean up

Small Spill: Contain any spill with a dike or with appropriate absorbent materials such as sand, clay, soil or commercially available absorbent. Dilute with water and mop up. Place liquid and absorbent into a suitable waste container for disposal at an appropriate disposal facility according to current applicable laws and regulations.

Large Spill: Stop the source of the release if it can be done without risk. Immediately isolate the hazard area and restrict access to authorized personnel only. Wear appropriate protective equipment including respiratory protection as conditions warrant. To prevent spilled material from entering sewers, storm drains or natural watercourses, contain material with a dike or with appropriate absorbent materials. Place liquid and absorbent into a suitable waste container for disposal at an appropriate disposal facility according to current applicable laws and regulations. Do not return spilled material to the original containers for re-use.

6.4 Reference to other sections

Personal Protection –Section 8

Disposal Considerations – Section 13

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Handle using good industrial hygiene and safety procedures.

Wear appropriate personal protective equipment.

Avoid breathing vapor or mist.

Do not eat, drink or smoke when working with this material.

Avoid contact with skin and eyes. Wash hands and other areas of contact thoroughly with soap and water after handling this material.

7.2 Conditions for safe storage, including and incompatibilities

Store material in the original container protected from direct sunlight in a clean, cool, dry and well ventilated area.

Avoid containers, piping or fittings made of brass, bronze, all copper alloys, aluminum or galvanized metal.

Store this material in closed containers away from incompatible materials (Section 10).

Previously opened containers should carefully resealed and stored upright to avoid leaking.

7.3 Specific end use(s)

Industrial applications, emission control, diesel exhaust treatment reagent

SECTION 8: Exposure Controls / Personal Protection

8.1 Control parameters

No exposure limits established.

8.2 Exposure controls

Engineering controls: Provide adequate ventilation in storage and handling areas.

8.3 Individual protection measures

Personal protective equipment: Gloves, Safety Goggles, Protective Clothing

Hand Protection: Impermeable protective gloves should be worn at all times when handling chemical products.

Eye protection: Wear close fitting chemical goggles of full face shield where splashing or contact is likely. Do not wear contact lenses.

Skin and Body protection: Wear task appropriate protective clothing and full protective suit if splashing may occur.

Respiratory protection: Under normal operating conditions no personal respiratory protection is necessary. Use a NIOSH-approved respirator if concentrations of mist or vapor are expected to exceed occupational exposure limits.

General Hygiene measures:

-Wash contaminated clothing before reuse.

-Wash hands after handling the material particularly before eating or drinking.

-Avoid breathing mists or vapors.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Physical State	:	Liquid
Appearance	:	Clear
Color	:	Colorless
Odor	:	Slight, Ammonia
pH	:	~10
Molecular Weight	:	60.07 (100% Urea)
Melting / Freezing point	:	-11.5°C (11.3°F)
Boiling Point	:	~104°C (219°F)
Flash Point	:	No data available
Evaporation Rate	:	No data available
Self-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability	:	No data available

Flammability limits	:	No data available
Vapor Pressure @ 20°C	:	80 Pa @ 20°C
Relative vapor density @ 20°C	:	No data available
Specific Gravity	:	1.087-1.093 @ 20°C
Density	:	9.09 lb / gal
Solubility	:	Water: Miscible
Viscosity, dynamic	:	1.4 mPa.s @ 20°C (68.0°F)
Explosive properties	:	No data available
Oxidizing Properties	:	No data available
Explosive limits	:	No data available

SECTION 10: Stability and Reactivity

10.1 Reactivity

Material is stable under normal conditions of storage and handling.

10.2 Chemical Stability

Material is stable at standard temperature and pressure.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

Avoid contamination from metals, dust or organic materials.

10.5 Incompatible materials

Avoid contact with strong oxidizing agents such as chlorine (bleach), peroxides, chromates, nitric acid, perchlorates, concentrated oxygen or permanganates. Contact can generate heat, fires, explosions and release toxic fumes.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Under fire conditions this material may decompose to ammonia, nitrogen oxides and carbon dioxide.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects

Acute Toxicity:	No known significant effects or critical hazard
Oral:	Low acute toxicity - LD50 (rat) >5000mg/kg
Dermal:	Low acute toxicity - LD50 (rat) >2000mg/kg
Skin Corrosion / Irritation:	Prolonged contact can cause irritation: pH 10.
Serious damage / Irritation:	Can cause irritation: pH 10.
Respiratory or skin sensitization:	No known significant effects.
Germ cell mutagenicity:	No known significant effects or critical hazard
Carcinogenicity:	No known significant effects or critical hazard
Mutagenicity:	No known significant effects or critical hazard
Reproductive toxicity:	No known significant effects or critical hazard
Teratogenicity:	No known significant effects or critical hazard
Specific Target Organ toxicity (single exposure):	Not classified
Specific Target Organ toxicity (repeated exposure):	Not classified
Aspiration Hazard:	No known significant effects or critical hazard

11.2 Potential Acute Health Effects

Short Term Exposure

Eye Contact:	No known significant effects or critical hazard
Inhalation:	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin Contact:	No known significant effects or critical hazard
Ingestion:	No known significant effects or critical hazard

Potential Chronic Health Effects: No known significant effects or critical hazard.

SECTION 12: Ecological Information

12.1 Toxicity

Low toxicity to aquatic organisms

Fish: *Barillius barna,* 96 Hr LC_{50} >9,100 mg/L

Invertebrates: *Daphnia magna,* 24-Hr EC50 ≥ 10,000 mg/L

Plants: *Scenadesmus quadricauda*, 192 Hr cell multiplication inhibition Test TT > 10,000 mg/L

12.2 Persistence / degradability

Ultimately biodegradable

12.3 Bioaccumulation / accumulation

Material is unlikely to persist in the environment.

12.4 Mobility in environmental media

Because the product is highly water soluble, it will move with surface and ground water.

12.5 Chemical fate information

In water: Material is a fertilizer which may promote eutrophication in waterways. It is non-toxic to aquatic organisms as defined by USEPA.

In soil: Urea converts to nutrient nitrogen readily available to plants.

12.6 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Contain any waste in appropriate containers or with absorbent materials that can be placed in a container for safe disposal.

Because of the high purity specifications of this product, spilled or recovered material is not considered usable for the original purpose as DEF.

13.2 Waste Disposal Recommendations

Place waste in appropriate containers and dispose of in accordance with requirements of environmental protection and waste disposal legislation and any regional authority.

Do not dispose to the sewer unless it is allowed by the local jurisdiction.

Surplus and non-recyclable material should be disposed of by a licensed waste disposal contractor.

Waste packaging should be recycled if available, otherwise it should go to landfill.

13.3 Additional Information

This material is not listed as a RCRA Toxic Hazardous Waste

SECTION 14: Transport Information

U.S. Department of Transportation (DOT): Not regulated as Hazardous Material

Transportation of Dangerous Goods (TDG-Canada): Not regulated as Hazardous Material

International Maritime Dangerous Goods Code (IMDG): Not regulated as Hazardous Material

International Air Transport Association (IATA): Not regulated as Hazardous Material

14.1 UN number:

Not applicable

14.2 UN Proper Shipping Name:

Urea Solution

14.3 Additional Information:

No supplementary information available.

SECTION 15: Regulatory Information

15.1 U.S. Federal Regulations

TSCA: Not listed

OSHA: Not listed, however, some states have more stringent OSH programs than OSHA. Consult local state regulations to confirm compliance.

EPA

Clean Air Act: Not listed

Clean Water Act: Not listed

SARA

Hazard Categories-

Immediate Health hazard: Yes

Delayed Hazard: No

Fire Hazard: No

Pressure Hazard: No

Reactivity Hazard: No

304: Reportable quantity - 111,000 lbs

311/312: Classification not applicable, no products were listed.

15.2 Canadian Regulations

WHMIS: Class D Division 2 Subdivision B – Urea - Uncontrolled product.

DSL: All components are listed or exempt.

SECTION 16: Other Information

The information in this document is believed to be correct as of the date issued. **HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THIS INFORMATION, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE.** This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.

Issue Date: 5/27/2015

Effective Dates: 6/1/2015 – 6/1/2018

Revision: 1.0

Revision Date:

1. Identification

Product name	:	Sika Armatec®-110 EpoCem® Part A
Supplier	:	Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
E-mail address	:	ehs@sika-corp.com
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

2. Hazards identification

GHS Classification

Skin irritation, Category 2	H315: Causes skin irritation.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Germ cell mutagenicity, Category 2	H341: Suspected of causing genetic defects.

GHS label elements

Hazard pictograms	:	
Signal Word	:	Warning
Hazard Statements	:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. H341 Suspected of causing genetic defects.
Precautionary Statements	:	**Prevention:** P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray. P264 Wash skin thoroughly after handling. P272 Contaminated work clothing must not be allowed out of the workplace. P280 Wear protective gloves.

P281 Use personal protective equipment as required.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Storage:
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

See Section 11 for more detailed information on health effects and symptoms.
There are no hazards not otherwise classified that have been identified during the classification process.
There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

3. Composition/information on ingredients

Hazardous ingredients

Chemical name	CAS-No.	Concentration (%)
bisphenol-F-(epichlorhydrin) epoxy resin	9003-36-5	>= 50 - < 100 %
bisphenol-A-(epichlorhydrin) epoxy resin	25068-38-6	>= 5 - < 10 %
2,3-epoxypropyl o-tolyl ether	2210-79-9	>= 2 - < 5 %

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Remove contact lenses.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

Most important symptoms : irritant effects

and effects, both acute and delayed		sensitizing effects Allergic reactions Erythema Dermatitis See Section 11 for more detailed information on health effects and symptoms. Causes skin irritation. May cause an allergic skin reaction. Suspected of causing genetic defects.
Protection of first-aiders	:	Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.
Notes to physician	:	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific extinguishing methods	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Deny access to unprotected persons.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. If the product contaminates rivers and lakes or drains inform respective authorities. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

7. Handling and storage

Advice on safe handling	:	Do not breathe vapors or spray mist. Avoid exceeding the given occupational exposure limits (see section 8).

Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Store in original container.
Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Store in accordance with local regulations.

Materials to avoid : No data available

8. Exposure controls/personal protection

Contains no substances with occupational exposure limit values.

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection
Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures	:	Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.

9. Physical and chemical properties

Appearance	:	liquid
Color	:	white
Odor	:	characteristic
Odor Threshold	:	No data available
Flash point	:	> 219.9 °F (> 104.4 °C)
Ignition temperature	:	No data available
Decomposition temperature	:	No data available
Lower explosion limit (Vol%)	:	No data available
Upper explosion limit (Vol%)	:	No data available
Flammability (solid, gas)	:	No data available
Oxidizing properties	:	No data available
pH	:	6.5
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapor pressure	:	17 mmHg (23 hpa)
Density	:	1.09 g/cm3 at 68 °F (20 °C)
Water solubility	:	Note: soluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 20.5 mm2/s at 104 °F (40 °C)
Relative vapor density	:	No data available
Evaporation rate	:	No data available

Burning rate	:	No data available
Volatile organic compounds (VOC) content	:	50 g/l A+B+C Combined

10. Stability and reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available

11. Toxicological information

Acute toxicity

Not classified based on available information.

Ingredients:

bisphenol-A-(epichlorhydrin) epoxy resin:

Acute oral toxicity	:	LD50 Oral (Rat): > 5,000 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 20,000 mg/kg

2,3-epoxypropyl o-tolyl ether:

Acute oral toxicity	:	LD50 Oral (Rat): > 4,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Not classified based on available information.

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Suspected of causing genetic defects.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC	Not applicable
NTP	Not applicable

12. Ecological information

Other information

Do not empty into drains; dispose of this material and its container in a safe way.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
May be harmful to the environment if released in large quantities.
Water polluting material.

Component:

bisphenol-A-(epichlorhydrin) epoxy resin	25068-38-6	Toxicity to fish: LC50 Species: Oncorhynchus mykiss (rainbow trout) Dose: 2 mg/l Exposure time: 96 h Toxicity to daphnia and other aquatic invertebrates: EC50 Species: Daphnia magna (Water flea) Dose: 1.8 mg/l Exposure time: 48 h

13. Disposal considerations

Disposal methods

Waste from residues : Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not regulated

IATA

UN number	3082
Description of the goods	Environmentally hazardous substance, liquid, n.o.s. (bisphenol-F-(epichlorhydrin) epoxy resin, bisphenol-A-(epichlorhydrin) epoxy resin)
Class	9
Packing group	III
Labels	9
Packing instruction (cargo aircraft)	964
Packing instruction (passenger aircraft)	964
Packing instruction (passenger aircraft)	Y964

IMDG

UN number	3082
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (bisphenol-F-(epichlorhydrin) epoxy resin, bisphenol-A-(epichlorhydrin) epoxy resin)
Class	9
Packing group	III
Labels	9
EmS Number 1	F-A
EmS Number 2	S-F
Marine pollutant	yes

IMDG: For Limited Quantity special provisions reference IMDG Code Chapter 3.4

Special precautions for user
No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. Regulatory information

TSCA list : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

16. Other information

HMIS Classification

Health	*	2
Flammability		1
Physical Hazard		0
Personal Protection		X

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

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All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 04/06/2017

Material number: 188282

1. Identification

Product name	:	SikaTop® Armatec®-110 EpoCem® Part B
Supplier	:	Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
E-mail address	:	ehs@sika-corp.com
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

2. Hazards identification

GHS Classification

Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Skin sensitization, Category 1	H317: May cause an allergic skin reaction.

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.

Precautionary Statements : **Prevention:**
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water

for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

See Section 11 for more detailed information on health effects and symptoms.
There are no hazards not otherwise classified that have been identified during the classification process.
There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

3. Composition/information on ingredients

Hazardous ingredients

Chemical name	CAS-No.	Concentration (%)
Isophoronediamine	2855-13-2	>= 2 - < 3 %
Dicyclohexylamine	101-83-7	>= 1 - < 2 %

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

If inhaled : Move to fresh air.
Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

Most important symptoms and effects, both acute and : Allergic reactions
Excessive lachrymation

delayed		Erythema Dermatitis See Section 11 for more detailed information on health effects and symptoms. irritant effects sensitizing effects Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage.
Protection of first-aiders	:	Move out of dangerous area. Consult a physician. Show this material safety data sheet to the doctor in attendance.
Notes to physician	:	Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific extinguishing methods	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Deny access to unprotected persons.
Environmental precautions	:	Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Keep in suitable, closed containers for disposal.

7. Handling and storage

Advice on safe handling	:	Do not breathe vapors or spray mist. Avoid exceeding the given occupational exposure limits (see section 8). Do not get in eyes, on skin, or on clothing. For personal protection see section 8.

Persons with a history of skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Store in accordance with local regulations.

Materials to avoid : No data available

8. Exposure controls/personal protection

Contains no substances with occupational exposure limit values.

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection
Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.

Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.

9. Physical and chemical properties

Appearance	:	liquid
Color	:	No data available
Odor	:	amine-like
Odor Threshold	:	No data available
Flash point	:	> 212 °F (> 100 °C)
Ignition temperature	:	No data available
Decomposition temperature	:	No data available
Lower explosion limit (Vol%)	:	No data available
Upper explosion limit (Vol%)	:	No data available
Flammability (solid, gas)	:	No data available
Oxidizing properties	:	No data available
pH	:	ca. 10 at 73 °F (23 °C)
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapor pressure	:	17 mmHg (23 hpa)
Density	:	ca.1.03 g/cm3 at 73 °F (23 °C)
Water solubility	:	Note: soluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	ca.> 20.5 mm2/s at 104 °F (40 °C)
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available

Volatile organic compounds (VOC) content	:	50 g/l A+B+C Combined

10. Stability and reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available

11. Toxicological information

Acute toxicity

Not classified based on available information.

Ingredients:

Isophoronediamine:

Acute oral toxicity	:	LD50 Oral (Rat): 1,030 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Skin sensitization: May cause an allergic skin reaction.
Respiratory sensitization: Not classified based on available information.

Ingredients:

Isophoronediamine:

Assessment: The product is a skin sensitizer, sub-category 1A.
Result: The product is a skin sensitizer, sub-category 1A.

Germ cell mutagenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Aspiration toxicity

Not classified based on available information.

Carcinogenicity

Not classified based on available information.

IARC	Not applicable
NTP	Not applicable

12. Ecological information

Other information	Do not empty into drains; dispose of this material and its container in a safe way. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Component:

Isophoronediamine	2855-13-2	Toxicity to algae: ErC50 Species: Desmodesmus subspicatus (green algae) Dose: > 10 - 100 mg/l Exposure time: 72 h

13. Disposal considerations

Disposal methods

Waste from residues	:	Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not dangerous goods
IATA
Not dangerous goods
IMDG
Not dangerous goods

Special precautions for user
No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. Regulatory information

TSCA list : All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard
Chronic Health Hazard

SARA 302 : This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Clean Air Act

Ozone-Depletion Potential This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65 This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

16. Other information

HMIS Classification

Health	*	3
Flammability		1
Physical Hazard		0
Personal Protection		X

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

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All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 04/06/2017

Material number: 459620

1. Identification

Product name	:	Sika Armatec®-110 EpoCem® Part C
Supplier	:	Sika Corporation 201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
E-mail address	:	ehs@sika-corp.com
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887
Recommended use of the chemical and restrictions on use	:	For further information, refer to product data sheet.

2. Hazards identification

GHS Classification

Skin irritation, Category 2	H315: Causes skin irritation.
Serious eye damage, Category 1	H318: Causes serious eye damage.
Carcinogenicity, Category 1A (Inhalation)	H350i: May cause cancer by inhalation.
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ systemic toxicity - repeated exposure, Category 1, Lungs	H372: Causes damage to organs through prolonged or repeated exposure.

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H315 Causes skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.
H350i May cause cancer by inhalation.
H372 Causes damage to organs (Lungs) through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ eye protection/ face protection.
P281 Use personal protective equipment as required.
Response:
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/ attention.
P310 Immediately call a POISON CENTER/doctor.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

See Section 11 for more detailed information on health effects and symptoms.
There are no hazards not otherwise classified that have been identified during the classification process.
There are no ingredients with unknown acute toxicity used in a mixture at a concentration >= 1%.

3. Composition/information on ingredients

Hazardous ingredients

Chemical name	CAS-No.	Concentration (%)
Quartz (SiO2) <5µm	14808-60-7	>= 50 - < 100 %
Portland cement	65997-15-1	>= 25 - < 50 %
Quartz (SiO2)	14808-60-7	>= 2 - < 5 %
sodium nitrite	7632-00-0	>= 1 - < 2 %

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

If inhaled : Move to fresh air.

Consult a physician after significant exposure.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.
If symptoms persist, call a physician.

In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Keep eye wide open while rinsing.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not induce vomiting without medical advice.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
Obtain medical attention.

Most important symptoms and effects, both acute and delayed : irritant effects
carcinogenic effects

Cough
Respiratory disorder
Excessive lachrymation
Erythema
Dermatitis
See Section 11 for more detailed information on health effects and symptoms.

Causes skin irritation.
Causes serious eye damage.
May cause respiratory irritation.
May cause cancer by inhalation.
Causes damage to organs through prolonged or repeated exposure.

Protection of first-aiders : Move out of dangerous area.
Consult a physician.
Show this material safety data sheet to the doctor in attendance.

Notes to physician : Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Avoid breathing dust.
Deny access to unprotected persons.

Environmental precautions : Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.
Keep in suitable, closed containers for disposal.

7. Handling and storage

Advice on safe handling : Avoid formation of respirable particles.
Avoid exceeding the given occupational exposure limits (see section 8).
Do not get in eyes, on skin, or on clothing.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Prevent unauthorized access.
Store in original container.
Keep in a well-ventilated place.
Observe label precautions.
Store in accordance with local regulations.

Materials to avoid : No data available

8. Exposure controls/personal protection

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
Quartz (SiO2) <5µm	14808-60-7	OSHA Z-3	TWA	10 mg/m3 / %SiO2+2 respirable
		OSHA Z-3	TWA	250 mppcf / %SiO2+5 respirable
		OSHA P0	TWA	0.1 mg/m3

				Respirable fraction
		ACGIH	TWA	0.025 mg/m3 Respirable fraction
		OSHA Z-1	TWA	0.05 mg/m3 Respirable dust
Portland cement	65997-15-1	ACGIH	TWA	1 mg/m3 Respirable fraction
		OSHA Z-1	TWA	15 mg/m3 total dust
		OSHA Z-1	TWA	5 mg/m3 respirable fraction
		OSHA Z-3	TWA	50 Million particles per cubic foot Dust
		OSHA P0	TWA	10 mg/m3 Total dust
		OSHA P0	TWA	5 mg/m3 respirable dust fraction
fumes, silica	69012-64-2	OSHA Z-3	TWA	20 Million particles per cubic foot Dust
		OSHA Z-3	TWA	80 mg/m3 / %SiO2 Dust
Quartz (SiO2)	14808-60-7	OSHA Z-3	TWA	10 mg/m3 / %SiO2+2 respirable
		OSHA Z-3	TWA	250 mppcf / %SiO2+5 respirable
		OSHA P0	TWA	0.1 mg/m3 Respirable fraction
		ACGIH	TWA	0.025 mg/m3 Respirable fraction
		OSHA Z-1	TWA	0.05 mg/m3 Respirable dust

*The above mentioned values are in accordance with the legislation in effect at the date of the release of this safety data sheet.

****Basis**
ACGIH. Threshold Limit Values (TLV)
OSHA P0. Table Z-1, Limit for Air Contaminat (1989 Vacated Values)
OSHA P1. Permissible Exposure Limits (PEL), Table Z-1, Limit for Air Contaminant
OSHA P2. Permissible Exposure Limits (PEL), Table Z-2
OSHA Z3. Table Z-3, Mineral Dust

Engineering measures : Use of adequate ventilation should be sufficient to control worker exposure to airborne contaminants. If the use of this product generates dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Personal protective equipment

Respiratory protection : Use a properly fitted NIOSH approved air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary.

The filter class for the respirator must be suitable for the maximum expected contaminant concentration (gas/vapor/aerosol/particulates) that may arise when handling the product. If this concentration is exceeded, self-contained breathing apparatus must be used.

Hand protection
Remarks : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eye protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Hygiene measures : Avoid contact with skin, eyes and clothing.
Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Wash thoroughly after handling.
Avoid breathing dust.

9. Physical and chemical properties

Appearance	:	powder
Color	:	gray
Odor	:	odorless
Odor Threshold	:	No data available
Flash point	:	Note: Not applicable
Ignition temperature	:	No data available
Decomposition temperature	:	No data available
Lower explosion limit (Vol%)	:	No data available
Upper explosion limit (Vol%)	:	No data available
Flammability (solid, gas)	:	No data available
Oxidizing properties	:	No data available
pH	:	No data available
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapor pressure	:	No data available
Density	:	ca.2.7 g/cm3 at 73 °F (23 °C)
Water solubility	:	Note: insoluble
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available
Volatile organic compounds (VOC) content	:	50 g/l A+B+C Combined

10. Stability and reactivity

Reactivity	:	No dangerous reaction known under conditions of normal use.
Chemical stability	:	The product is chemically stable.

Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	No data available
Incompatible materials	:	No data available

11. Toxicological information

Not classified based on available information.

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.
Respiratory sensitization: Not classified based on available information.

Germ cell mutagenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Causes damage to organs (Lungs) through prolonged or repeated exposure.
Prolonged exposure can cause silicosis.

Aspiration toxicity

Not classified based on available information.

Carcinogenicity

May cause cancer by inhalation.

IARC	Group 1: Carcinogenic to humans	
	Quartz (SiO2) <5µm	14808-60-7
	Quartz (SiO2)	14808-60-7
NTP	Known to be human carcinogen	
	Quartz (SiO2) <5µm	14808-60-7
	Quartz (SiO2)	14808-60-7

12. Ecological information

Other information	Do not empty into drains; dispose of this material and its container in a safe way.

13. Disposal considerations

Disposal methods

Waste from residues	:	Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.
Contaminated packaging	:	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not dangerous goods
IATA
Not dangerous goods
IMDG
Not dangerous goods

Special precautions for user
No data available

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable

15. Regulatory information

TSCA list	:	All chemical substances in this product are either listed on the TSCA Inventory or are in compliance with a TSCA Inventory exemption.

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.

SARA304 Reportable Quantity
This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards	:	Acute Health Hazard Chronic Health Hazard
SARA 302	:	This material does not contain any components with a section 302 EHS TPQ.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

sodium nitrite	7632-00-0	1.53 %

Clean Air Act

Ozone-Depletion Potential This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).

California Prop 65 ⚠ **WARNING:** Cancer and Reproductive Harm - www.P65Warnings.ca.gov

16. Other information

HMIS Classification

Health	*	3
Flammability		0
Physical Hazard		0
Personal Protection		X

Caution: HMIS® rating is based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® rating is not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® rating is to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). Please note HMIS® attempts to convey full health warning information to all employees.

Notes to Reader

The information contained in this Safety Data Sheet applies only to the actual Sika Corporation ("Sika") product identified and described herein. This information is not intended to address, nor does it address the use or application of the identified Sika product in combination with any other material, product or process. All of the information set forth herein is based on technical data regarding the identified product that Sika believes to be reliable as of the date hereof. Prior to each use of any Sika product, the user must always read and follow the warnings and instructions on the product's current Product Data Sheet, product label and Safety Data Sheet for each Sika product, which are available at web site and/or telephone number listed in Section 1 of this SDS.

SIKA MAKES NO WARRANTIES EXPRESS OR IMPLIED AND ASSUMES NO LIABILITY ARISING FROM THIS INFORMATION OR ITS USE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES AND SHALL NOT

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All sales of Sika products are subject to its current terms and conditions of sale available at www.sikausa.com or 201-933-8800.

Revision Date 04/06/2017

Material number: 459621

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: **Extruded Plastic Products: Speed-E-Joint®, Snap-Cap®, Deck-O-Drain®** **Part Number: 2901100/2913000/2811000**

Manufacturer: **W. R. Meadows®, Inc.** **Address:** 300 Industrial Drive, Hampshire, Illinois 60140

Telephone: (847) 214-2100 In case of emergency, dial (800) 424-9300 (CHEMTREC)

Revision Date: 9/9/2014

Product Use: Expansion Joint in Concrete Construction

SECTION 2: HAZARDS IDENTIFICATION/EXPOSURE LIMITS

HMIS	
|Health|	|0|
|Flammability|	|0|
|Reactivity|	|0|
|Personal Protection|	| |

Products are classified as non-hazardous per OSHA 1910.1200. These products are defined by OSHA as an "article." A manufactured item that is formed to a specific shape or design during manufacture that does not release or result in exposure to a hazardous chemical under normal use conditions.

SECTION 3: HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20°C)	LEL (@24°C)
1. None					

Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 (SARA) and 40 CFR Part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313."

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: None normally required.
SKIN CONTACT: None normally required.
INHALATION: Not expected to be an exposure route.
INGESTION: Not expected to be an exposure source.

SECTION 5: FIRE AND EXPLOSIVES HAZARDS

FLASHPOINT: Not Applicable
EXTINGUISHING MEDIA: Water fog, foam, dry chemical.
CHEMICAL/COMBUSTION HAZARDS: Incomplete combustion products may contain toxic components. Avoid inhalation of smoke.
PRECAUTIONS/PERSONAL PROTECTIVE EQUIPMENT: Avoid smoke inhalation. Use appropriate respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Not applicable. Product is a solid.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES: No special requirements.
SAFE STORAGE: None.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

	OSHA				ACGIH			
Chemical Name:	PEL	PEL/CEILING	PEL/STEL	SKIN	TLV	TLV/CEILING	TLV/STEL	SKIN
1. None								

ENGINEERING CONTROLS: None required under normal use conditions.
PERSONAL PROTECTIVE EQUIPMENT: None required under normal conditions of use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A **VAPOR DENSITY:** N/A **% VOLATILE BY VOLUME:** N/A
EVAPORATION RATE: N/A **pH LEVEL:** N/A **% VOLATILE BY WEIGHT:** N/A
WEIGHT PER GALLON: N/A **PRODUCT APPEARANCE:** Solid Plastic **VOC CONTENT:** N/A

SECTION 10: STABILITY/REACTIVITY

STABILITY: Stable **HAZARDOUS POLYMERIZATION:** Will not occur.
CONDITIONS AND MATERIALS TO AVOID: None recognized.
HAZARDOUS DECOMPOSITION PRODUCTS: None recognized.

SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: No adverse effects known with normal product use.
SKIN CONTACT: No adverse effects with normal product use.
INHALATION: Not anticipated to be an exposure route.
INGESTION: Not anticipated to be an exposure route.
SIGNS AND SYMPTOMS: Symptoms of eye irritation include tearing, reddening, and swelling. Symptoms of skin irritation include redness and swelling. Gastrointestinal irritation symptoms include nausea, vomiting, and abdominal discomfort.
AGGRAVATED MEDICAL CONDITIONS: None recognized.
OTHER HEALTH EFFECTS: None recognized.

SAFETY DATA SHEET

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: N/E **DEGRADABILITY:** N/E **BIOACCUMULATIVE POTENTIAL:** N/E
SOIL MOBILITY: N/E **OTHER ADVERSE EFFECTS:** None Recognized

SECTION 13: WASTE DISPOSAL INFORMATION

WASTE DISPOSAL INFORMATION: Product is classified as a non-hazardous waste.

SECTION 14: TRANSPORTATION INFORMATION

HAZARDOUS/NON-HAZARDOUS MATERIAL: Not regulated by DOT.
UN NUMBER: None **HAZARD CLASS:** N/A **PACKING GROUP:** N/A
UN PROPER SHIPPING NAME: N/A
ENVIRONMENTAL HAZARDS: None recognized.
BULK TRANSPORTATION INFORMATION: None.
SPECIAL PRECAUTIONS: None.

SECTION 15: REGULATORY INFORMATION

OTHER REGULATORY CONSIDERATIONS: None recognized.

SECTION 16: OTHER INFORMATION

PREPARATION DATE: 9/9/2014
PREPARED BY: Dave Carey

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: **Sponge Rubber Expansion Joint** **Part Number: 2103360**

Manufacturer: **W. R. Meadows®, Inc.** **Address:** 300 Industrial Drive
Hampshire, Illinois 60140

Telephone: (847) 214-2100 In case of emergency, dial (800) 424-9300 (CHEMTREC)

Revision Date: 9/9/2014

Product Use: Expansion joint in concrete construction

SECTION 2: HAZARDS IDENTIFICATION/EXPOSURE LIMITS

HMIS	
|Health|	|0|
|Flammability|	|0|
|Reactivity|	|0|
|Personal Protection|	| |

Product is classified as non-hazardous per OSHA 1910.1200. This product is defined by OSHA as an "article." A manufactured item that is formed to a specific shape or design during manufacture that does not release or result in exposure to a hazardous chemical under normal use conditions.

SECTION 3: HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20°C)	LEL (@24°C)
1. None					

Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 (SARA) and 40 CFR Part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313."

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush eyes with water to remove particles.
SKIN CONTACT: Flush with water to remove particles. Wash affected areas with soap and water if available.
INHALATION: Not expected to be an exposure route.
INGESTION: Not expected to be an exposure source.

SECTION 5: FIRE AND EXPLOSIVES HAZARDS

FLASHPOINT: Not Applicable.
EXTINGUISHING MEDIA: Water fog, foam, dry chemical.
CHEMICAL/COMBUSTION HAZARDS: None recognized.
PRECAUTIONS/PERSONAL PROTECTIVE EQUIPMENT: Avoid smoke inhalation. Use appropriate respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Not applicable. Product is a solid.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES: No special requirements.
SAFE STORAGE: None.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

	OSHA				ACGIH			
Chemical Name:	PEL	PEL/CEILING	PEL/STEL	SKIN	TLV	TLV/CEILING	TLV/STEL	SKIN
1. None								

ENGINEERING CONTROLS: None required under normal use conditions.
PERSONAL PROTECTIVE EQUIPMENT: None required under normal conditions of use.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: N/A **VAPOR DENSITY:** N/A **% VOLATILE BY VOLUME:** N/A
EVAPORATION RATE: N/A **pH LEVEL:** N/A **% VOLATILE BY WEIGHT:** N/A
WEIGHT PER GALLON: N/A **PRODUCT APPEARANCE:** Grey solid **VOC CONTENT:** N/A

SECTION 10: STABILITY/REACTIVITY

STABILITY: Stable. **HAZARDOUS POLYMERIZATION:** Will not occur.
CONDITIONS AND MATERIALS TO AVOID: None recognized.
HAZARDOUS DECOMPOSITION PRODUCTS: None recognized.

SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: Direct contact may cause mechanical irritation.
SKIN CONTACT: Direct contact may cause slight mechanical skin irritation.
INHALATION: Not anticipated to be an exposure route.
INGESTION: Not anticipated to be an exposure route.

SAFETY DATA SHEET

Section 11 continued

SIGNS AND SYMPTOMS: Symptoms of eye irritation include tearing, reddening, and swelling. Symptoms of skin irritation include redness and swelling. Gastrointestinal irritation symptoms include nausea, vomiting, and abdominal discomfort.

AGGRAVATED MEDICAL CONDITIONS: None recognized.

OTHER HEALTH EFFECTS: None recognized.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: N/E **DEGRADABILITY:** N/E **BIOACCUMULATIVE POTENTIAL:** N/E

SOIL MOBILITY: N/E **OTHER ADVERSE EFFECTS:** None Recognized

SECTION 13: WASTE DISPOSAL INFORMATION

WASTE DISPOSAL INFORMATION: Product is classified as a non-hazardous waste.

SECTION 14: TRANSPORTATION INFORMATION

HAZARDOUS/NON-HAZARDOUS MATERIAL: Not regulated by DOT.

UN NUMBER: None **HAZARD CLASS:** N/A **PACKING GROUP:** N/A

UN PROPER SHIPPING NAME: N/A

ENVIRONMENTAL HAZARDS: None recognized.

BULK TRANSPORTATION INFORMATION: None.

SPECIAL PRECAUTIONS: None.

SECTION 15: REGULATORY INFORMATION

OTHER REGULATORY CONSIDERATIONS: None recognized.

SECTION 16: OTHER INFORMATION

PREPARATION DATE: 9/9/2014

PREPARED BY: Dave Carey

Safety Data Sheet (SDS)

Date Prepared/Revised: 8/11/2015 Version no.: 01 Supersedes: (10/9/2014)

1.) Identification of the Mixture and of the Company

Product identifier**: Aervoe Marking Chalk - Aerosol**

Product name:
Marking Chalk

214 Blue	215 White	216 Red	217 Orange	218 Yellow	219 Green

Relevant identified uses of the substance: Marking Chalk is designed to temporarily mark most paved surfaces, soil, and grass. Use for utility marking, construction sites, surveying, landscaping, and athletic field marking.
Uses advised against: This aerosol product is designed to spray upside down or at an angle not greater than 30° from vertical. Use caution if surface is wet, or if rain is imminent within 4 hours of application. Do not apply additional product until the previous coat is dry.

CAS No:	**Not Applicable (mixture)**
EC No:	**Not Applicable (mixture)**
Index No:	**Not Applicable (mixture)**
Manufacturer/Supplier:	**Aervoe Industries Incorporated**
Street address/P.O. Box:	**1100 Mark Circle**
Country ID/Postcode/Place	**Gardnerville, Nevada 89410**
Telephone number:	**001 (0) 1-775-782-0100**
e-mail:	**mailbox@aervoe.com**
National contact:	**Aervoe Industries Incorporated**
For Product Information:	00**1 (0) 1-800-227-0196**
Emergency telephone number:	**001 (0) 1-800-424-9300 (CHEMTREC – 24 hrs)** **English Language Service**

2. Hazards identification

Classifications

Physical Hazards:	Aerosol - Category 2 Flam. Liq. 2 Flam. Gas 1
Health Hazards:	STOT SE 3 Eye Irrit. 2
Environmental Hazards:	N/AV

Labeling

Signal Word: Warning

Hazard Statements:
H220 – Extremely flammable gas.
H223 – Flammable Aerosol
H225 – Highly flammable liquid and vapour
H229 – Pressurized container: may burst if heated
H319 – Causes serious eye irritation.
H336 – May cause drowsiness or dizziness

Precautionary Statements:
P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P103 - Read label before use
P210 - Keep away from heat/sparks/open flames/hot surfaces - no smoking
P211 - Do not spray on an open flame or other ignition source
P251 - Pressurized container: Do not pierce or burn, even after use
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P262 - Do not get in eyes, on skin, or on clothing
P264 - Wash … thoroughly after handling
P280 - Wear protective gloves/eye protection/face protection

P303+P361+P353 - If on skin or hair, remove/takeoff immediately all contaminated clothing. Rinse skin with water/shower.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50ºC/122ºF
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation
P251 - Pressurized container: Do not pierce or burn, even after use

Symbols/Pictograms:

3. Composition / Information on Ingredients

Composition

Chemical	Synonyms	CAS Number	EINECS Number	Weight Percent	Hazard Category	H-Code
Dimethyl Ether	D.M.E.	115-10-6	204-065-8	10-30%	Flam. Gas 1 Press. Gas	H220
Isopropanol	Isopropyl Alcohol	67-63-0	200-661-7	10-30%	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225 H319 H336

Other Product Information

Chemical Identity: Mixture

4.) First Aid Measures

General Advice: If symptoms persist, always call a doctor.

Inhalation First Aid: Remove victim to fresh air and provide oxygen if breathing is difficult. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention immediately.

Skin Contact First Aid: Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.

Eye Contact First Aid: If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids open. Get medical attention immediately.

Ingestion First Aid: If swallowed, wash out mouth with water provided the person is conscious. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Most Important Symptoms/Effects: Exposure may cause slight irritation to the skin, eyes, and respiratory tract. Excessive exposure may cause central nervous system effects.

5. Fire Fighting Measures

Flammable Properties: Aerosol
Auto Ignition Temperature: Not Available
Suitable extinguishing media: Carbon dioxide, dry chemical, water spray.
Unsuitable extinguishing media: None known
Special hazards arising from the substance or mixture: None known
Hazardous combustion products: Carbon dioxide, Carbon monoxide

Fire & Explosion Hazards: Closed Containers may rupture due to the buildup of pressure from extreme temperatures.

Precautions for fire-fighters: Use water spray to cool containers exposed to heat or fire to prevent pressure build up. In the event of a fire, wear full protective clothing and NIOSH- approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

PERSONAL PRECAUTIONARY MEASURES:

1) Follow personal protective equipment recommendations found in section 8.
2) Maintain adequate ventilation.

SPILL CLEAN-UP PROCEDURES:

1.) Evacuate unprotected personnel from the area.
2.) Remove sources of ignition if safe to do so.
3.) Pickup spilled materials using non-sparking tools and place in an appropriate container for disposal.
4.) Contain spill to prevent material from entering sewage or ground water systems.
5.) Always dispose of waste materials in accordance with all EU, National and Local Regulations.

7. Handling and Storage

Handling:

Flammable Aerosol, use in a well ventilated area.
Do not use near sources of ignition.
Do not to eat, drink and smoke while working with this material.
Wash hands after use.

Conditions for safe storage, including any incompatibilities:

Store out of direct sunlight.
Storage Temperature: 32° to 120°F (0° to 49°C).
No known incompatibilities.

8. Exposure Controls / Personal Protection

Appropriate engineering controls:

Ensure adequate ventilation. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.
Keep away from sources of ignition.
Take precautionary measures against static discharge.

Personal Protection:

Eye & face protection devices such as safety glasses, safety goggles or face shield are recommended.

Skin protection
Wear the appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection:
Use only in an adequately ventilated area. For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA).

Hazardous Ingredient	CAS Number	ACGIH TLV (TWA)	ACGIH TLV (STEL)	OSHA PEL (TWA)	OSHA PEL (STEL)
Dimethyl Ether	115-10-6	N/AV	N/AV	N/AV	N/AV
Isopropanol	67-63-0	200ppm	400ppm	400ppm	N/AV

***Values are based on the 2014 Guide to Occupational Exposure Values by ACGIH**

9. Information on Basic Physical and Chemical Properties

Appearance: Color varies by product	Odor: Alcohol odor
Odor Threshold: N/AV	pH: Not Applicable (solvent Base)
Melting Point: N/AV	Freezing Point: N/AV
Initial Boiling Point: N/AV	Boiling Point Range: N/AV
Flash Point: <0° F (-18° C)	Evaporation Rate: Faster than n-Butyl Acetate
Flammability Solid/Gas: Flammable gas	LEL: 2% UEL: 18%
Vapor Pressure: N/AV	Vapor Density: Heavier Than Air
Relative Density: N/AV	Solubility: Negligible
Partition Coefficient: n-octanol/ water: N/AV	Auto-ignition Temperature: N/AV
Decomposition Temperature: N/AV	Viscosity: N/AV
Explosive Properties: N/AV	Oxidizing Properties: N/AV

10. Stability & Reactivity

Possibility of hazardous reactions: Hazardous polymerization will not occur under normal conditions
Chemical stability: Stable under normal conditions
Conditions to avoid: Heat and ignition sources
Incompatible materials: Strong Oxidizing Agents
Hazardous decomposition products: Will not occur

11. Toxicological Information

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and

nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood

Routes of exposure: Eyes, skin, ingestion, and/or inhalation

Acute toxicological data:	N/AV
Eye irritation data:	N/AV
Skin irritation/sensitization/absorption data:	N/AV
Reproductive toxicity data:	N/AV
Mutagenicity data:	N/AV
Symptoms associated with physical contact:	N/AV
Acute/chronic effects from short/long term exposure:	Irritating to skin. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis. Not expected to be a skin sensitizer.

Known reportable carcinogens via the following agencies:

NTP:	N/AV
IARC:	N/AV
OSHA:	N/AV

* Petroleum distillates may contain chemical carcinogens in limited quantities (< 0.01%). These quantities are determined by the supplier/fraction/purity of the distillate during the manufacturing process. Chemicals that may be present within distillates are listed on California's prop 65 list such as ETHYLBENZENE, BENZENE, and TOLUENE.

12. Ecological Information

Ecotoxicity: **No Data Available**
Persistence and degradability: **No Data Available**
Bioaccumulative potential: **No Data Available**

Mobility in soil: **No Data Available**
Results of PBT and vPvB assessment: **No Data Available**
Other adverse effects: **No Data Available**

13. Disposal Considerations

Waste Disposal: Dispose of material in accordance with EU, national and local requirements. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.
Product / Packaging disposal: Dispose of packaging in accordance with federal, state and local requirements, regulations and/or laws governing your location.

14. Transportation Information

US DOT

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Reference 49 CFR 172.101

IMDG

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Reference IMDG code part 3

IATA:

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols, Flammable	2.1	Not Applicable	Not Applicable	Reference IATA Dangerous Goods Regulation

15. Regulatory Information

Workplace classification:
This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200). The Occupational Safety and Health Administration's interpretation of the product's hazard to workers.
SARA Title 3:
Section 311/312 Categorizations (40 CFR 372): This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard.

Superfund Amendment and Reauthorization Act (SARA) category. SARA requires reporting any spill of any hazardous substance.
TSCA status: All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.
WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the (M)SDS contains all of the information required by the CPR.
PROP 65 (CA): WARNING: This product may contain chemicals know to the state of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

This SDS has been completed in accordance with GHS Rev04 (2011): U.S OSHA, CMA, ANSI, Canadian WHMIS standards, and European Directives.

Date of Preparation/Revision: 8/11/2015
Supersedes: 10/9/2014

To the best of our knowledge, the information contained herein is believed to be accurate. However, the above data does not imply any guarantee or warranty of any kind, expressed or implied. The final determination of the suitability of any material is the sole responsibility of the user. All materials made present un-known hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards existing.

SPRAY PRODUCTS STARTING FLUID

SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Mixture
CAS No.	Mixture
Trade Name	SPRAY PRODUCTS STARTING FLUID
Product Code	SP-065516A, SP-065512AF, SP-065512A

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Engine starting aid
Uses Advised Against	None
Company Identification	Spray Products Corporation P.O. Box 737 Norristown, PA 19404
Telephone	(610) 277-1010
Fax	(610) 277-4390
E-Mail (competent person)	johnd@sprayproducts.com

Emergency telephone number

Emergency Phone No.	**Transportation Emergency:** CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200) — Flam. Aerosol 1; Compressed dissolved gas; Carc. 2; Skin Irrit. 2; STOT SE 3; Asp. Tox. 1

Label elements

Hazard Symbol

Signal word(s): **DANGER**

Hazard Statement(s)

Extremely flammable aerosol.

Contains gas under pressure; may explode if heated.

May cause cancer.

Causes skin irritation. Repeated exposure may cause skin dryness or cracking.

May cause drowsiness or dizziness.

May be fatal if swallowed and enters airways.

Precautionary Statement(s)

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Do not spray on an open flame or other ignition source.

Do not pierce or burn, even after use.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/eye protection.

Avoid breathing spray.

Protect from sunlight and do not expose to temperatures exceeding 50 ºC/122 ºF.

Wash hands and exposed skin after use.

Other hazards Toxic to aquatic life. Harmful to aquatic life with long lasting effects.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	% wt. *	CAS No.	Hazard classification
Heptane, branched, cyclic and linear	35 - 70	426260-76-6	Flam. Liq. 2, H225 Asp. Tox. 1; H304 Skin Irrit. 2, H315 STOT SE 3, H336 Aquatic Acute 2, H401 Aquatic Chronic 3, H412
Diethyl Ether	25 - 60	60-29-7	Flam. Liq. 1; H224 Acute Tox. 4; H302 STOT SE 3; H336
Carbon Dioxide	5 - 10	124-38-9	Compressed dissolved gas; H280
Ethanol	< 2	64-17-5	Flam. Liq. 2; H225 Eye Irrit. 2; H319
Chloroethane	< 1	75-00-3	Flam. Gas 1; H220 Carc. 2; H351 Aquatic Chronic 3; H412
Distillates (petroleum), hydrotreated heavy naphthenic	<0.5	64742-52-5	Asp. Tox. 1; H304
Distillates (petroleum), hydrotreated Light naphthenic	<0.5	64742-53-6	Asp. Tox. 1; H304

Additional Information – None

* The exact percentage withheld as a trade secret in accordance with 29 CFR 1910.1200.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

Inhalation	Move person to fresh air. If breathing is labored, administer oxygen. If symptoms develop, obtain medical attention.
Skin Contact	Wash affected skin with soap and water. If irritation (redness, rash, blistering) develops, get medical attention.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Do not induce vomiting. Do not give anything by mouth to an unconscious person. Get immediate medical attention.

Most important symptoms and effects, both acute and delayed May be fatal if swallowed and enters airways. Do NOT induce vomiting.

Indication of any immediate medical attention and special treatment needed IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

-Suitable Extinguishing Media	Extinguish with carbon dioxide, dry chemical, foam or water spray.
-Unsuitable Extinguishing Media	Do not use water jet.

Special hazards arising from the substance or mixture — Highly flammable vapor (flash point below 23°C).

Advice for fire-fighters — A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures — Avoid contact with skin and eyes.

Environmental precautions — Prevent liquid entering sewers, basements and work pits.

Methods and material for containment and cleaning up — Cover spills with inert absorbent material. Transfer to a container for disposal or recovery.

Reference to other sections — None

Additional Information — None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling — Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid contact with skin and eyes. Use product in a well-ventilated area only. Do not use in confined spaces.

Conditions for safe storage, including any incompatibilities

-Storage temperature — Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F. Keep container tightly closed.

-Incompatible materials — This product should be stored away from sources of strong heat or oxidizing chemicals.

Specific end use(s) — Engine starting aid

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
Heptane, branched, cylic and linear	426260-76-6	500 ppm*	1500 mg/m^3	-----	-----	*n-heptane
Diethyl ether	60-29-7	400 ppm	400 ppm	-----	500 ppm	-----
Chloroethane	75-00-3	1000 ppm	100 ppm*	-----	-----	*A3
Carbon dioxide	124-38-9	-------	5000 ppm	------	30,000 ppm	-----

#Assure minimum oxygen content of work atmosphere. *A3 = Confirmed Animal Carcinogen with Unknown Relevance to Humans

Recommended monitoring method — NIOSH 1500 (hydrocarbons, B.P. 36 - 126 ºC); NIOSH 1610 (Ethyl ether); NIOSH 2519 (Ethyl chloride)

Exposure controls

Appropriate engineering controls — Provide adequate ventilation to ensure that the occupational exposure limit is not exceeded.

Personal protection equipment

Eye/face protection 	Wear protective eyewear (goggles, face shield, or safety glasses).
Skin protection (Hand protection/ Other) 	Wear suitable gloves if prolonged skin contact is likely (Nitrile rubber or Butyl rubber). Check with protective equipment manufacturer's data.
Respiratory protection 	Normally no personal respiratory protection is necessary. In case of insufficient ventilation, wear suitable respiratory equipment. Check with protective equipment manufacturer's data.
Thermal hazards	Not normally required. Use gloves with insulation for thermal protection, when needed.
Environmental Exposure Controls	Avoid release to the environment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color.	Colorless
Odor	Sweetish, Hydrocarbon-like
Odor Threshold (ppm)	Not available
pH (Value)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available
Boiling point/boiling range (°C):	34 - 35 (Diethylether)
Flash Point (°C)	-45 (Diethylether)
Evaporation Rate	Not available
Flammability (solid, gas)	Extremely flammable
Explosive Limit Ranges	1.85% - 36.5% v/v (Diethylether)
Vapor pressure (Pascal)	7.16×10^4 (Diethylether)
Vapor Density (Air=1)	Not available
Density (g/ml)	Not available
Solubility (Water)	Not available
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	175 (Diethylether)
Decomposition Temperature (°C)	Not available
Kinematic Viscosity (cSt)	<20 @ 40 °C
Explosive properties	Not available
Oxidizing properties	Not available
Other information	Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	None anticipated.
Conditions to avoid	Avoid contact with heat and ignition sources.
Incompatible materials	This product should be stored away from sources of strong heat or oxidizing chemicals.
Hazardous decomposition product(s)	Carbon monoxide, Carbon dioxide, Acrid smoke

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes: Inhalation**,** Skin Contact**,** Eye Contact

Information on toxicological effects

Heptane, branched, cylic and linear (CAS# 426260-76-6) - By analogy with similar materials:

Acute toxicity	Oral: LD50 >5 g/kg-bw Dermal: LD50 >2 g/kg-bw Inhalation: LC50 = 65 - 103 mg/L (Vapour), 4-hr. rat May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.
Irritation/Corrosivity	Causes skin irritation. Repeated exposure may cause skin dryness or cracking. May cause eye irritation.
Sensitisation	It is not a skin sensitiser.
Repeated dose toxicity	NOAEC: 12350 mg/m3 (2 yr, inhal., rat, Systemic effects) LOAEC: 1650 mg/m3 (2 hr, inhal., rat, CNS effects) May cause drowsiness or dizziness.
Carcinogenicity	No data. It is unlikely to present a carcinogenic hazard to man.

NTP	IARC	ACGIH	OSHA	NIOSH
No.	No.	No.	No.	No.

Mutagenicity	There is no evidence of mutagenic potential.
Toxicity for reproduction	No information available

Chloroethane (CAS# 75-00-3)

NTP	IARC	ACGIH	OSHA	NIOSH
Clear Evidence in Female Mice	No.	A3 - Confirmed Animal Carcinogent	No.	Yes.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Heptane, branched, cylic and linear (CAS# 426260-76-6) - By analogy with similar materials:

Short term	LL50 (96 hour): >13.4 mg/L (*Oncorhynchus mykiss*) EL50 (48 hour): 3 mg/l (*Daphnia magna,* mobility*)* EC50 (96 hour): 13 mg/l (*Pseudokirchnerella subcapitata*)
Long Term	NOELR (28 days) 1.5 mg/l (*Fish*) QSAR LOEC (21 days): 0.32 mg/l (*Daphnia magna*) NOEL (96 hour) 6.3 mg/l (Algae)

Persistence and degradability	Readily biodegradable.
Bioaccumulative potential	The product has no potential for bioaccumulation.
Mobility in soil	Not available.
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods	Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.

SECTION 14: TRANSPORT INFORMATION

	U.S. DOT	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number	1950	1950	1950
Proper Shipping Name	Aerosols, flammable	Aerosols, flammable	Aerosols, flammable
Transport hazard class(es)	2.1	2.1	2.1
Packing group	Not applicable	Not applicable	Not applicable
Environmental hazards	None assigned	None assigned	None assigned
Special precautions for user	None assigned	None assigned	None assigned

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status**:** All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
Chloroethane	75-00-3	< 1	1000

SARA 311/312 - Hazard Categories:

☒ Fire ☒ Sudden Release ☐ Reactivity ☒ Immediate (acute) ☒ Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
Chloroethane	75-00-3	< 1

SARA 302 - Extremely Hazardous Substances (40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
Toluene	108-88-3	Developmental
Chloroethane	45-00-3	Cancer

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.
Date of preparation: April 20, 2015
Hazard Statement(s) and Risk Phrases Listed in: SECTION 2:/ SECTION 3:

Hazard Statement(s)
- H220: Extremely flammable gas.
- H224: Extremely flammable liquid and vapour.
- H225: Highly flammable liquid and vapor.
- H280: Contains gas under pressure; may explode if heated.
- H302: Harmful if swallowed.
- H304: May be fatal if swallowed and enters airways.
- H315: Causes skin irritation.
- H319: Causes serious eye irritation.
- H336: May cause drowsiness or dizziness.
- H351: Suspected of causing cancer.
- H401: Toxic to aquatic life.
- H412: Harmful to aquatic life with long lasting effects.

Training advice: None.

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

SAFETY DATA SHEET

1. Identification

Material name: PSI Steel Fiber C6560, 20KG (44LB)/ BAG
Material: SF656020KG

Recommended use and restriction on use

Recommended use: Article
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol:	No symbol
Signal Word:	No signal word.
Hazard Statement:	not applicable
Precautionary Statement:	not applicable

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Composition Comments: The components are not hazardous or are below required disclosure limits.

4. First-aid measures

Ingestion: Rinse mouth thoroughly.

Inhalation: Move to fresh air.

Skin Contact: Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

Eye contact: Rinse immediately with plenty of water.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Get medical attention if symptoms occur.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: No data available.

Methods and material for containment and cleaning up: Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

7. Handling and storage

Precautions for safe handling: Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. Store in original tightly closed container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: Wear goggles/face shield.

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and chemical properties

Appearance

Physical state:	solid
Form:	No data available.
Color:	Gray
Odor:	Odorless
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	No data available.

Flash Point:	No data available.
Evaporation rate:	No data available.
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	+/- 0.1 7.7
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Moderately irritating to skin with prolonged exposure.
Eye contact:	Eye contact is possible and should be avoided.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Not listed.

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

None present or none present in regulated quantities.

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

Other Regulations:

Regulatory VOC (less water and exempt solvent):	0 g/l
VOC Method 310:	0.00 %

Inventory Status:

Australia AICS:	All components in this product are listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	All components in this product are listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.

China Inv. Existing Chemical Substances:	All components in this product are listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	All components in this product are listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	All components in this product are listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	All components in this product are listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	08/05/2015
Version #:	1.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

PSI CRIMPED STEEL FIBER FB

Steel Macro-Fiber with Synthetic Fibrillated Micro-Fiber Blend

EUCLID CHEMICAL

Description

PSI CRIMPED STEEL FIBER FB are low carbon, cold drawn steel wire fibers combined with 100% virgin multi-length fibrillated polypropylene micro-synthetic fibers designed to provide concrete with plastic shrinkage crack protection, temperature and shrinkage crack control, enhanced flexural reinforcement, improved shear strength and increase the crack resistance of concrete. PSI Crimped Steel Fiber FB complies with ASTM C1116, Standard Specification for Fiber Reinforced Concrete and Shotcrete and ASTM A820, Type I, Standard Specification for Steel Fibers for Fiber Reinforced Concrete. This steel macro-fiber blend will also improve impact, shatter, fatigue and abrasion resistance while increasing toughness of concrete. Dosage rates will vary depending upon the reinforcing requirements and can range from 24 to 96 lbs/yd^3 (14 to 57 kg/m^3).

Primary Applications

- Commercial and industrial slabs on ground
- Bridge decks, overlays and pavements
- Precast concrete applications
- Shotcrete, tunnel linings and slope stabilization
- Mass concrete and composite deck construction

Features/Benefits

- Increases impact, shatter and abrasion resistance of concrete
- Reduces segregation, plastic settlement, and shrinkage cracking of concrete
- Provides three-dimensional reinforcement against macro-cracking
- Increases overall durability, fatigue resistance and flexural toughness
- Reduction of in-place cost versus wire mesh for temperature / shrinkage crack control
- Easily added to concrete mixture at any time prior to placement

Technical Information

Typical Engineering Data

Material	low carbon cold drawn steel wire and 100% virgin polypropylene multi-length fibrillated fiber
Available Lengths	steel fiber - 1 ½" (38 mm) synthetic fiber - blend of ½" & ¾" (13 & 19 mm)
Typical Dosage Rates	24 - 96 lb/yd^3 (14 - 57 kg/m^3)
Apect Ratio	steel fiber - 34
Tensile Strength	140 - 180 ksi (966 - 1242 MPa)
Deformation	continuously deformed circular segment
Appearance	bright, clean wire with white synthetic fiber

Packaging

PSI Crimped Steel Fiber FB is packaged in 24 lb (10.9 kg) bags; 1728 net lbs (784 kg) per pallet.

Shelf Life

3 years in original, unopened package.

19215 Redwood Road • Cleveland, OH 44110
800-321-7628 t • 216-531-9596 f
www.euclidchemical.com

Directions for Use

PSI Crimped Steel Fiber FB can be added to the concrete mixture at any time prior to placement of the concrete. It is generally recommended to add any fiber material at the ready-mix concrete plant during batching. The actual dosage rate will vary depending upon the application and performance requirements for each project. Fibers must be mixed with concrete for a minimum of four (4) to five (5) minutes at maximum mixing speed, depending on the mixer type, to ensure complete dispersion and uniformity. The addition of PSI Crimped Steel Fiber FB, at provided dosage rates, will decrease the measured slump of concrete; however, additional water should not be added. The use of water reducers and/or superplasticizers, such as Eucon 1037, Eucon MRX or the Plastol series of admixtures may be necessary to maintain desired workability.

Add other admixtures independently from fiber addition. When used properly, and placed in a concrete mix of sufficient workability, the fibers will not adversely alter the compressive or flexural strength of concrete or shotcrete.

Clean-up

Loose fiber material may be disposed in proper receptacles for refuse. Finishing equipment with fibers embedded in concrete should be thoroughly cleaned.

Precautions/Limitations

- Use of fibers may cause an apparent loss in measured slump of concrete. This may be offset with the use of a water reducing admixture if necessary.
- Fibers should never be added to a “zero-slump” concrete. Ensure a minimum concrete slump of 3” (80 mm) prior to addition of any fiber material. Fibers may also be added in loose form to aggregate charging devices.
- In all cases, consult the Safety Data Sheet before use.

Rev. 04.16

PSI CRIMPED STEEL FIBER MB

Steel Macro-Fiber with Synthetic Monofilament Micro-Fiber Blend

EUCLID CHEMICAL

Description

PSI CRIMPED STEEL FIBER MB are low carbon, cold drawn steel wire fibers combined with 100% virgin multi-length monofilament polypropylene micro-synthetic fibers designed to provide concrete with plastic shrinkage crack protection, temperature and shrinkage crack control, enhanced flexural reinforcement, improved shear strength and increase the crack resistance of concrete. PSI Crimped Steel Fiber MB complies with ASTM C1116, Standard Specification for Fiber Reinforced Concrete and Shotcrete and ASTM A820, Type I, Standard Specification for Steel Fibers for Fiber Reinforced Concrete. This steel macro-fiber blend will also improve impact, shatter, fatigue and abrasion resistance while increasing toughness of concrete. Dosage rates will vary depending upon the reinforcing requirements and can range from 24 to 96 lbs/yd^3 (14 to 57 kg/m^3).

Primary Applications

- Commercial and industrial slabs on ground
- Bridge decks, overlays and pavements
- Precast concrete applications
- Shotcrete, tunnel linings and slope stabilization
- Mass concrete and composite deck construction

Features/Benefits

- Increases impact, shatter and abrasion resistance of concrete
- Reduces segregation, plastic settlement, and shrinkage cracking of concrete
- Provides three-dimensional reinforcement against macro-cracking
- Increases overall durability, fatigue resistance and flexural toughness
- Reduction of in-place cost versus wire mesh for temperature / shrinkage crack control
- Easily added to concrete mixture at any time prior to placement

Technical Information

Typical Engineering Data

Material	low carbon cold drawn steel wire and 100% virgin polypropylene multi-length monofilament fiber
Available Lengths	steel fiber - 1 ½" (38 mm) synthetic fiber - blend of ½" & ¾" (13 & 19 mm)
Typical Dosage Rates	24 - 96 lb/yd^3 (14 - 57 kg/m^3)
Apect Ratio	steel fiber - 34
Tensile Strength	140 - 180 ksi (966 - 1242 MPa)
Deformation	continuously deformed circular segment
Appearance	bright, clean wire with white synthetic fiber

Packaging

PSI Crimped Steel Fiber MB is packaged in 24 lb (10.9 kg) bags; 1728 net lbs (784 kg) per pallet.

Shelf Life

3 years in original, unopened package.

19215 Redwood Road • Cleveland, OH 44110
800-321-7628 t • 216-531-9596 f
www.euclidchemical.com

Directions for Use

PSI Crimped Steel Fiber MB can be added to the concrete mixture at any time prior to placement of the concrete. It is generally recommended to add any fiber material at the ready-mix concrete plant during batching. The actual dosage rate will vary depending upon the application and performance requirements for each project. Fibers must be mixed with concrete for a minimum of four (4) to five (5) minutes at maximum mixing speed, depending on the mixer type, to ensure complete dispersion and uniformity. The addition of PSI Crimped Steel Fiber MB, at provided dosage rates, will decrease the measured slump of concrete; however, additional water should not be added. The use of water reducers and/or superplasticizers, such as Eucon 1037, Eucon MRX or the Plastol series of admixtures may be necessary to maintain desired workability.

Add other admixtures independently from fiber addition. When used properly, and placed in a concrete mix of sufficient workability, the fibers will not adversely alter the compressive or flexural strength of concrete or shotcrete.

Clean-up

Loose fiber material may be disposed in proper receptacles for refuse. Finishing equipment with fibers embedded in concrete should be thoroughly cleaned.

Precautions/Limitations

- Use of fibers may cause an apparent loss in measured slump of concrete. This may be offset with the use of a water reducing admixture if necessary.
- Fibers should never be added to a “zero-slump” concrete. Ensure a minimum concrete slump of 3” (80 mm) prior to addition of any fiber material. Fibers may also be added in loose form to aggregate charging devices.
- In all cases, consult the Safety Data Sheet before use.

Rev. 04.16

Revision Date: August 18, 2017 | Date of Issue: February 23, 2017 | Version Number: 3.0

SECTION 1: IDENTIFICATION

Product Identifier
Product Name: Stego Wrap

Intended Use of the Product
Under-slab and below-grade water vapor barrier

Company Name, Address, and Telephone of the Responsible Party
Stego Industries, LLC
216 Avenida Fabricante #101
San Clemente, CA 92672 USA

Emergency Telephone Number
Emergency Number: 1 (800) 424-9300 (24 Hrs.) CHEMTREC
Main Contact Number: (877) 464-7834

SECTION 2: HAZARDS IDENTIFICATION

Potential Health Effects:
Hazard Information: None as defined under OSHA Hazard Communication Standard: 29 CFR Part 1910.1200.
GHS Classification: Not classified/not a dangerous substance per Globally Harmonized System of Classification and Labeling of Chemicals (GHS).
GHS Labeling: No Label elements required/not a dangerous substance per Globally Harmonized System of Classification and Labeling of chemicals (GHS).
Inhalation: Inhalation of this product is not a likely route of exposure at room temperature. In the case of critical situations (i.e. fire, overheating, or combustion) excessive inhalation of fumes may result in respiratory irritation.
Skin: This product is not likely to be hazardous by skin contact under recommended conditions of use. Molten product may cause thermal burns.
Eyes: This product is not likely to be an eye irritant under recommended conditions of use. Mechanical irritation is possible, but unlikely under recommended conditions of use. Molten product may cause thermal burns.
Ingestion: Ingestion of this product is not a likely route of exposure.
Carcinogenicity: These components are not considered to be hazardous chemicals per OSHA Hazard Communication Standard: 29 CFR Part 1910.1200. No Ingredient of this product present at levels greater than or equal to 0.1 % is identified as probable, possible or confirmed human carcinogen by IARC. No ingredient of this product present at levels greater than or equal 0.1% is identified as a known or anticipated carcinogen by NTP. No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Characterization: Polyolefins and additives. *
Description: Film made of polyolefins. **

Mixture:
Chemical Characters: Polyolefin and additives.
Hazard Information: The material is not expected to be classified as hazardous.

Continued...
Note - legal notice on page 5.

Revision Date: August 18, 2017 | Date of Issue: February 23, 2017 | Version Number: 3.0

SECTION 4: FIRST AID MEASURES

The following first aid recommendations assume that appropriate personal and industrial hygiene practices are followed.

If Inhaled: This material is not likely to be hazardous by inhalation. At room temperature, the material is neither an irritant nor gives off hazardous vapor. In case of excessive inhalation of fumes due to critical situations (fire, etc.) move the person to fresh air. If symptoms persist, contact a physician.
In Case of Skin Contact: This material is not likely to be hazardous by skin contact. If molten material contacts skin, quickly cool in water, seek immediate medical attention. Do not try to peel solidified material from the skin or use solvents or thinners to dissolve it.
In Case of Eye Contact: Not likely to be an eye hazard in present form. In the case of physical contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of exposure to excessive fumes due to critical situations (fire, etc.) move the person to fresh air. If symptoms persist, contact a physician.
If Wwallowed: This material is not likely to be ingested in present form. Do not induce vomiting. Seek medical advice.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Water, Water Mist, Dry Chemical, Carbon Dioxide, and Foam. If possible water should be applied as a spray from a fogging nozzle since this is a surface burning material. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific Hazards During Fire Fighting: In its normal form, this product offers no unusual explosion hazards. See Hazardous Decomposition Products below.
Special Protective Equipment and Precaution for Fire Fighters: Use personal protective equipment. Wear self-contained breathing apparatus and chemical protective clothing for firefighting, if necessary.
Hazardous Decomposition Products: Normal combustion forms carbon dioxide, water vapor and may produce carbon monoxide, incomplete combustion products, other hydrocarbons, and hydrocarbon oxidation products depending on temperature and air availability.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Collect spilled material. Danger of slipping on spilled product.
Environmental Precautions: No special measures required. Prevent product from entering drains.
Methods and Materials for Containment and Cleaning Up: Clean up promptly by physical collection, sweeping or vacuum. Recycle product or dispose of properly.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling: Good personal hygiene practices and employ good housekeeping. Always wash hands after handling the product. When handled in bulk quantities, this product and its associated packaging may present a crushing hazard due to the large masses involved, possibly resulting in severe injury or death. Take precautionary measures against static electricity. Minimize dust generation.
Precautions for Safe Storage: Keep in a cool, dry, well ventilated environment. Product should not be stored in excessive cold, direct sunlight or temperatures exceeding 90°F. Compliance of this policy should ensure optimum performance of this product. Store in accordance with local regulations. Materials should be stored away from heat, sources of ignition, direct sunlight, oxidizing agents and other incompatible materials. Treat as a solid that can burn.

Continued...
Note - legal notice on page 5.

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SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Ventilate area to prevent accumulation of dust and fumes. Use local exhaust ventilation when routinely heat sealing this product. Ensure good ventilation at the workplace.
Exposure Limits: No applicable exposure limits available for product or components.
Personal Protection: Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material is offered only based on our understanding of normal usage. User's selection of appropriate personal protective equipment should be based on an evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the hazards and/or potential hazards that may be encountered during use.
Respiratory Protection: With proper Engineering Controls in place, no respiratory protection should be required.
Eye Protection: Use of safety glasses with side shields is good industrial practice. If contact is likely, safety glasses with side shields are recommended.
Skin Protection: Risk of skin irritation is not likely. If irritation occurs or is of concern wear disposable, protective gloves while handling this material.
Specific Hygiene Measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, using tobacco products, or using toilet facilities. Routinely wash work clothing and protective equipment to remove contaminates. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Materials spilled on hard surface can be a serious slipping/falling hazard. Use care in walking on spilled material.
Environmental Controls: Comply with applicable environment regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.
Occupational Exposure Limits: Consult local authorities for acceptable exposure limits.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

General Physical Form: Solid plastic film.

Information on Basic Physical and Chemical Properties

Appearance	Film
Physical State	Solid
Odor	Mild to no odor
Odor Threshold	No data available
pH-value	Not applicable
Melting Point (C)	90-140 degrees
Freezing Point (C)	No data available
Flash Point	No data available
Flammability (solid, gas)	Not classified. Polymer will burn but does not easily ignite.
Solubility in Water	Insoluble
Auto-ignition Temp	No data available
Density	1.00-0.91 g/cc
Lower Explosion Limit	Not applicable
Upper Explosion Limit	Not applicable
Explosive Properties	No data available

Continued...
Note - legal notice on page 5.

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SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions.
Conditions to Avoid: Avoid elevated temperatures for prolonged periods of time, contact with strong oxidizers, sparks or open flame. Minimize dust generation and accumulation.
Materials to Avoid: Avoid contacts with strong oxidizing agents. Material product performance and/or service life may be adversely affected by some aromatic hydrocarbons or other known polymer pro-degradants.
Hazardous Decomposition Products: Material does not decompose at ambient temperature.
Hazardous Polymerization: Under normal conditions of storage and use, hazardous polymerization will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity:
Oral Toxicity: Health injuries are not known or expected under normal use. Presumed not toxic.
Inhalation Toxicity, Vapor: Health injuries are not known or expected under normal use. Presumed not toxic.
Dermal Toxicity: Health injuries are not known or expected under normal use. Presumed not toxic.
Skin Irritation: No data available. No adverse effects expected.
Eye Irritation: No data available. No adverse effects expected.
Sensitization: No data available. No adverse effects expected.
Carcinogenicity: See section 2.
Additional Toxicological Information: Contains additives that are encapsulated in the film. Under the normal conditions for use of this film the encapsulated additives are not expected to pose any health hazards per our experience and the information provided to us.

SECTION 12: ECOLOGICAL INFORMATION

Persistence and Degradability: This material is persistent in the environment. Not readily biodegradable.
Bioaccumulation: No data available. No bioaccumulation expected.
Mobility: Product is insoluble and floats on water.
Ecotoxicity (Aquatic and Terrestrial): Not expected to be harmful to aquatic or terrestrial organisms.
Biodegradability: The material is not expected to be readily biodegradable.
Other Information: Recycle material or dispose of properly.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal (recommendations based on product as supplied): Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. It is recommended that all waste be analyzed for compliance to applicable laws and regulations governing proper recycling and/or disposal methods and reporting requirements. Consult your local or regional authorities.

SECTION 14: TRANSPORT INFORMATION

US DOT Hazard Class: Not regulated

SECTION 15: REGULATORY INFORMATION

US Regulations:
TSCA: All components of this product are on the TSCA inventory or are exempt from listing.
California Proposition 65: This product contains no known chemicals regulated by California Proposition 65.

Continued...
Note - legal notice on page 5.

Revision Date: August 18, 2017 | Date of Issue: February 23, 2017 | Version Number: 3.0

SECTION 16: OTHER INFORMATION

MEDICAL APPLICATION CAUTION: Do not use this material in medical applications involving permanent implantation in the human body or permanent contact with internal body fluids or tissues.

* Article; product meets definition of an article as defined by official OSHA interpretations.

** As per paragraph (i) of OSHA Hazard Communication Standard 29 CFR Part 1910.1200, formulation is considered a trade secret and specific chemical identify and exact percentage of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designation representatives in accordance with applicable provisions of paragraph (i).

Disclaimer: The information contained herein only applies to the noted product. To the best of our knowledge, having been obtained through our suppliers or third parties, this information is accurate. We make no warranties, express or implied, concerning this information or the safe use of the noted product, and we disclaim liability from loss, damage, or other from the product's use, handling, or storage. Users are responsible for verifying the fitness/suitable of the product for any purposes/applications and for confirming compliance with any/all relevant codes or regulations.

Please read the Product Statements for all Stego® products by navigating here:
http://www.stegoindustries.com/legal

SAFETY DATA SHEET

STEGO TAPE

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Stego Tape

Manufacturer: Stego Industries, LLC
216 Avenida Fabricante #101
San Clemente, CA 92672

Emergency Telephone: (949) 257-4100

Version Number: 1.0

Issue Date: 4/27/2015

Total Pages: 7

Product Use:

Specific Use: Bonding/Seaming/Masking
Intended Use: Industrial, Construction

SECTION 2: HAZARDS IDENTIFICATION

This product is exempt from hazard classification according to OSHA Hazard Communication Standard, 29 CFR 1910.1200

SECTION 3: INGREDIENTS

Ingredient	C.A.S. No.	% by WT.
Acrylic Adhesive	Proprietary*	25-45%*
Polyolefin Film	None	55-75%*

The selections marked with an '*' are proprietary and considered to be Trade Secrets. This is the reason that they are listed as such, or provided as a range.

SECTION 4: FIRST AID MEASURES

4.1 First Aid Procedures

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

Eye Contact: No need for first aid is anticipated.

Skin Contact: No need for first aid is anticipated.

Inhalation: No need for first aid is anticipated.

If Swallowed: No need for first aid is anticipated.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Flammable Properties

Autoignition Temperature: No Data Available

Flash Point: Not Applicable

Flammable Limits (LEL) Not Applicable

Flammable Limits (UEL) Not Applicable

5.2 Extinguishing Media

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide)

5.3 Protection of Fire Fighters

Special Fire Fighting Procedures:

Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards:

Not applicable. No unusual fire or explosion hazards are anticipated.

Note: See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Not applicable.

6.2 Environmental precautions

Not applicable.

6.3 Clean-up methods

Not applicable.

SECTION 7: HANDLING AND STORAGE

7.1 Handling

This product, under normal use conditions, is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical.

7.2 Storage

Not applicable.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

No engineering controls or personal protective equipment (PPE) are necessary. This product is considered to be an article which does not release or otherwise result in exposure to a hazardous chemical under normal use conditions.

8.1 Engineering Controls

Not applicable.

8.2 Personal Protective Equipment (PPE)

8.2.1 Eye/Face Equipment

Under normal use conditions, not required.

8.2.2 Skin Protection

Under normal use conditions, not required.

8.2.3 Respiratory Protection

Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.

8.2.4 Prevention of Swallowing

Under normal use conditions, not required.

8.3 Exposure Guidelines

None Established.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade:	Slight acrylate odor. Red polyolefin film coated with an acrylic adhesive and wound upon itself.
General Physical Form:	Solid, roll of tape
Autoignition temperature:	No Data Available
Flash Point:	Not Applicable
Flammable Limits (LEL):	Not Applicable
Flammable Limits (UEL):	Not Applicable
Boiling Point:	Not Applicable
Vapor Density:	Not Applicable
Vapor Pressure:	Not Applicable
Specific Gravity:	0.8 to 1.2
pH:	Not Applicable
Melting Point:	No Data Available
Solubility in Water:	None
Evaporation Rate:	Not Applicable
Volatile Organic Compounds:	No Data Available
Percent Volatile:	Not Applicable
VOC Less H20 and Exempt Solvents	No Data Available
Viscosity:	Not Applicable

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable

10.1 Conditions to avoid

None known

10.2 Materials to avoid

None known

Hazardous Polymerization: Hazardous polymerization will not occur

Hazardous Decomposition: Under recommended usage conditions, hazardous decomposition products are not expected. Hazardous decomposition products may occur as a result of oxidation, heating, or reaction with another material.

Hazardous Decomposition or By-Products:

Substance	Condition
Hydrocarbons	Combustion by-product
Carbon Monoxide	Combustion by-product
Carbon Dioxide	Combustion by-product

SECTION 11: TOXICOLOGICAL INFORMATION

This product, when used under reasonable conditions and in accordance with the directions for use, should not present a health hazard. However, use or processing of the product in a manner not in accordance with the product's directions for use may affect the performance of the product and may present potential health and safety hazards.

Eye Contact: No health effects are anticipated

Ingestion: No health effects are anticipated

Inhalation: This product may have a characteristic odor. No adverse health effects are anticipated.

Skin Contact: No health effects are anticipated

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicological Information

Not Determined.

Chemical Fate Information

Not Determined

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal Method

Reclaim if feasible. If product can't be reclaimed, dispose of waste product in a sanitary landfill. Alternatively, incinerate the waste product in an industrial, commercial, or municipal incinerator.

Since regulations vary, consult applicable regulations or authorities before disposal.

SECTION 14: TRANSPORT INFORMATION

Not regulated per U.S. DOT, IATA or IMO.

For Transport Information, please call 1-860-738-2600

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Contact Stego Industries for more information.

311/312 Hazard Categories

Fire Hazard:	No
Pressure Hazard:	No
Reactivity Hazard:	No
Immediate Hazard:	No
Delayed Hazard:	No

State Regulations

Contact Stego Industries for more information.

Chemical Inventories

This product is an article as defined by TSCA regulations, and is exempt from TSCA Inventory listing requirements. Contact Stego Industries for more information.

International Regulations

Contact Stego Industries for more information.

This SDS has been prepared to meet the U.S. OSHA Hazard Communications Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification

Health:	0
Flammability:	1
Reactivity:	0
Special Hazards:	None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material, but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued.

Please read the disclaimer information for all Stego® products.

Safety Data Sheet (SDS)

Date Prepared/Revised: 5/2/2016 Version no.: 04 Supersedes: (7/27/2015)

1.) Identification of the Mixture and of the Company

Product identifier**: Aervoe Survey Marking Paint - Aerosol**

Product name: **Survey Marking Paint**

Non-Fluorescent Colors	Fluorescent Colors	High Delivery	Metallic
201 Red 202 Yellow 203 Blue 204 Green 205 Orange 206 Black 207 White 208 Hi Visibility Yellow 209 Light Blue 212 Purple 280 Concrete Gray	220 Red 222 Orange 224 Green 226 Yellow 227 Blue 229 Pink 230 Red/Orange	281 Red 288 Fluorescent Orange	210 Silver

Relevant identified uses of the substance: Designed to adhere to most surfaces, includ¬ing pavement, gravel, and soil.
Uses advised against: This aerosol product is designed to spray at an angle not greater than 30° from vertical. Do not use on turf surfaces.

CAS No:	**Not Applicable (mixture)**
EC No:	**Not Applicable (mixture)**
Index No:	**Not Applicable (mixture)**
Manufacturer/Supplier:	**Aervoe Industries Incorporated**
Street address/P.O. Box:	**1100 Mark Circle**
Country ID/Postcode/Place	**Gardnerville, Nevada 89410**
Telephone number:	**001 (0) 1-775-782-0100**
e-mail:	**mailbox@aervoe.com**
National contact:	**Aervoe industries Incorporated**
For Product Information:	00**1 (0) 1-800-227-0196**
Emergency telephone number:	**001 (0) 1-800-424-9300 (CHEMTREC – 24 hrs)** **English Language Service**

2. Hazards identification

Classifications

Physical Hazards:	Aerosol - Category 1 Flam. Gas. 1 Press. Gas Flam. Liq. 2 Flam. Liq. 3 * 210 Silver

Health Hazards: Car 1B
Muta 1B
Asp Tox. 1
Eye Irrit. - 2
Rep. 2
Skin Irr. 2
STOT SE3
STOT RE 2
Acute Tox. 4 * 280 Concrete Gray

Environmental Hazards: Aquatic Chronic 2

Labeling

Signal Word: Danger

Hazard Statements:
H220 – Extremely flammable gas
H222 – Extremely flammable aerosol
H225 – Highly flammable liquid and vapour.
H226 – Flammable liquid and vapour.
H229 - Pressurized container: may burst if heated
H304 – May be fatal if swallowed and enters airways.
H312 – Harmful in contact with skin. *280 Concrete Gray
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H332 – Harmful if inhaled. * 280 Concrete Gray
H336 – May cause drowsiness or dizziness.
H340 – May cause genetic defects
H350 – May cause cancer
H361 – Suspected of damaging fertility or the unborn child .
H373 – May cause damage to nervous system through prolonged or repeated exposure(Inhalation)
H411 – Toxic to aquatic life with long lasting effects.

Precautionary Statements:
P101 - If medical advice is needed, have product container or label at hand
P102 - Keep out of reach of children
P103 - Read label before use
P210 - Keep away from heat/sparks/open flames/hot surfaces - no smoking
P211 - Do not spray on an open flame or other ignition source
P251 - Pressurized container: Do not pierce or burn, even after use
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
P262 - Do not get in eyes, on skin, or on clothing
P264 - Wash … thoroughly after handling
P280 - Wear protective gloves/eye protection/face protection

P303+P361+P353 - If on skin or hair, remove/takeoff immediately all contaminated clothing. Rinse skin with water/shower.
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50ºC/122ºF
P501 - Dispose of contents/container in accordance with local/regional/national/international regulation

Symbols/Pictograms:

3. Composition / Information on Ingredients

Composition

Chemical	Synonyms	CAS Number	EINECS Number	Weight Percent	Hazard Category	H-Code
Hydrocarbon Propellant	LPG	68476-86-8	270-705-8	10-30%	Press. Gas Flam. Gas 1 Carc. 1B Muta. 1B	H220 H350 H340
Hexane	n-Hexane	110-54-3	203-777-6	5-10%	Flam. Liq. 2 Repr. 2 Asp. Tox. 1 STOT RE 2 * Skin Irrit. 2 STOT SE 3 Aquatic Chronic 2	H225 H361f *** H304 H373 ** H315 H336 H411
Aliphatic Petroleum Distillates	Solvent Naphtha	64742-89-8	265-192-2	5-10%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
Aliphatic Petroleum Distillates	Solvent Naphtha	64742-88-7	265-191-7	1-5%	Asp. Tox. 1	H304
Aliphatic Petroleum Distillates	Solvent Naphtha	8032-32-4	232-453-7	1-5%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
Non-fluorescent colors also contain:						
Acetone	Propanone	67-64-1	200-662-2	1-5%	Flam. Liq. 2 Eye Irrit. 2	H225, H319,

					STOT SE 3	H336
Aliphatic Petroleum Distillates	Solvent Naphtha	8052-41-3	232-489-3	1-5%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
210 silver contains:						
Hydrocarbon Propellant	LPG	68476-86-8	270-705-8	10-30%	Press. Gas Flam. Gas 1 Carc. 1B Muta. 1B	H220 H350 H340
Acetone	Propanone	67-64-1	200-662-2	30-60%	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225, H319, H336
Aliphatic Petroleum Distillates	Solvent Naphtha	8052-41-3	232-489-3	1-5%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
n-Butyl Acetate	n-Butyl Ester	123-86-4	204-658-1	1-5%	Flam. Liq. 3 STOT SE 3	H226 H336
Aliphatic Petroleum Distillates	Solvent Naphtha	64742-89-8	265-192-2	10-30%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
Aliphatic Petroleum Distillates	Solvent Naphtha	64742-88-7	265-191-7	7-13%	Asp. Tox. 1	H304
280 Concrete Gray contains:						
Hydrocarbon Propellant	LPG	68476-86-8	270-705-8	10-30%	Press. Gas Flam. Gas 1 Carc. 1B Muta. 1B	H220 H350 H340
Hexane	n-Hexane	110-54-3	203-777-6	5-10%	Flam. Liq. 2 Repr. 2 Asp. Tox. 1 STOT RE 2 * Skin Irrit. 2 STOT SE 3 Aquatic Chronic 2	H225 H361f *** H304 H373 ** H315 H336 H411
Aliphatic Petroleum Distillates	Solvent Naphtha	64742-89-8	265-192-2	5-10%	Carc. 1B Muta. 1B Asp. Tox. 1	H350 H340 H304
n-Butyl Acetate	n-Butyl Ester	123-86-4	204-658-1	1-5%	Flam. Liq. 3 STOT SE 3	H226 H336
Acetone	Propanone	67-64-1	200-662-2	1-5%	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225, H319, H336
Ethyl Acetate	Ethanoate	141-78-6	205-500-4	1-5%	Flam. Liq. 2 Eye Irrit. 2 STOT SE 3	H225 H319 H336
2-Butoxyethyl Acetate	Butyl Glycol Acetate	112-07-2	203-933-3	1-5%	Acute Tox. 4 * Acute Tox. 4 *	H332 H312

Other Product Information

Chemical Identity: Mixture

4.) First Aid Measures

General Advice: If symptoms persist, always call a doctor.

Inhalation First Aid: Remove victim to fresh air and provide oxygen if breathing is difficult. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention immediately.

Skin Contact First Aid: Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention immediately. Wash clothing before reuse.

Eye Contact First Aid: If contact with eyes, immediately flush eyes with plenty of water for at least 15 minutes, while holding eyelids open. Get medical attention immediately.

Ingestion First Aid: If swallowed, wash out mouth with water provided the person is conscious. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Most Important Symptoms/Effects: Exposure may cause slight irritation to the skin, eyes, and respiratory tract. Excessive exposure may cause central nervous system effects.

5. Fire Fighting Measures

Flammable Properties: Aerosol

Auto Ignition Temperature: Not Available

Suitable extinguishing media: Carbon dioxide, dry chemical, water spray.

Unsuitable extinguishing media: None known

Special hazards arising from the substance or mixture: None known

Hazardous combustion products: Carbon dioxide, Carbon monoxide

Fire & Explosion Hazards: Closed Containers may rupture due to the buildup of pressure from extreme temperatures.

Precautions for fire-fighters: Use water spray to cool containers exposed to heat or fire to prevent pressure build up. In the event of a fire, wear full protective clothing and NIOSH- approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

PERSONAL PRECAUTIONARY MEASURES:

1) Follow personal protective equipment recommendations found in section 8.
2) Maintain adequate ventilation.

SPILL CLEAN-UP PROCEDURES:

1.) Evacuate unprotected personnel from the area.

2.) Remove sources of ignition if safe to do so.
3.) Pickup spilled materials using non-sparking tools and place in an appropriate container for disposal.
4.) Contain spill to prevent material from entering sewage or ground water systems.
5.) Always dispose of waste materials in accordance with all EU, National and Local Regulations.

7. Handling and Storage

Handling:

Flammable Aerosol, use in a well ventilated area.
Do not use near sources of ignition.
Do not to eat, drink and smoke while working with this material.
Wash hands after use.

Conditions for safe storage, including any incompatibilities:

Store out of direct sunlight.
Storage Temperature: 32° to 120°F (0° to 49°C).
No known incompatibilities.

8. Exposure Controls / Personal Protection

Appropriate engineering controls:
Ensure adequate ventilation. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.
Keep away from sources of ignition.
Take precautionary measures against static discharge.

Personal Protection:
Eye & face protection devices such as safety glasses, safety goggles or face shield are recommended.

Skin protection
Wear the appropriate protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection:
Use only in an adequately ventilated area. For unknown vapor concentrations use a positive-pressure, pressure-demand, self-contained breathing apparatus (SCBA).

Hazardous Ingredient	CAS Number	ACGIH TLV (TWA)	ACGIH TLV (STEL)	OSHA PEL (TWA)	OSHA PEL (STEL)
Aliphatic Petroleum Distillates	64742-88-7	N/AV	N/AV	N/AV	N/AV
Aliphatic Petroleum Distillates	64742-89-8	N/AV	N/AV	N/AV	N/AV
Hydrocarbon Propellant	68476-86-8	N/AV	N/AV	N/AV	N/AV
Aliphatic Petroleum Distillates	8032-32-4	200ppm	300ppm	200ppm	N/AV
Hexane	110-54-3	50ppm	N/AV	500ppm	N/AV
Acetone	67-64-1	500ppm	750ppm	1000ppm	N/AV
Aliphatic Hydrocarbon	8052-41-3	100ppm	N/AV	500ppm	N/AV

n-Butyl Acetate	123-86-4	150ppm	200ppm	150ppm	N/AV
Aliphatic Petroleum Distillates	64742-47-8	N/AV	N/AV	N/AV	N/AV
Ethyl Acetate	141-78-6	400ppm	N/AV	400ppm	N/AV
2-Butoxyethyl Acetate	112-07-2	20ppm	N/AV	N/AV	N/AV

***Values are based on the 2014 Guide to Occupational Exposure Values by ACGIH**

9. Information on Basic Physical and Chemical Properties

Appearance: Color varies by product.	Odor: Hydrocarbon Odor
Odor Threshold: N/AV	pH: Not Applicable (solvent Base)
Melting Point: N/AV	Freezing Point: N/AV
Initial Boiling Point: N/AV	Boiling Point Range: N/AV
Flash Point: <0° F (-18° C)	Evaporation Rate: Faster than n-Butyl Acetate
Flammability Solid/Gas: Flammable gas	Upper LEL: 1% Lower LEL: 13%
Vapor Pressure: N/AV	Vapor Density: Heavier Than Air
Relative Density: N/AV	Solubility: Negligible
Partition Coefficient: n-octanol/ water: N/AV	Auto-ignition Temperature: N/AV
Decomposition Temperature: N/AV	Viscosity: N/AV
Explosive Properties: N/AV	Oxidizing Properties: N/AV

10. Stability & Reactivity

Possibility of hazardous reactions: Hazardous polymerization will not occur under normal conditions
Chemical stability: Stable under normal conditions
Conditions to avoid: Heat and ignition sources
Incompatible materials: Strong Oxidizing Agents
Hazardous decomposition products: Will not occur

11. Toxicological Information

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Repeated overexposure can also damage kidneys, lungs, liver, heart and blood

Routes of exposure: Eyes, skin, ingestion, and/or inhalation

Acute toxicological data: (Acetone) Acute oral LD50: 5800mg/kg(rat)
(Acetone) LC50: 21000 ppm / 8 hr (rat)
(Hexane) LD50: 2870 mg/kg (Rat-Oral)

Eye irritation data: N/AV

Skin irritation/sensitization/absorption data: N/AV

Reproductive toxicity data:	N/AV
Mutagenicity data:	Muta 1B
Symptoms associated with physical contact:	N/AV
Acute/chronic effects from short/long term exposure:	Irritating to skin. Prolonged/repeated contact may cause defatting of the skin which can lead to dermatitis. Not expected to be a skin sensitizer.

Known reportable carcinogens via the following agencies:

NTP:	N/AV
IARC:	IARC3:Classification not possible from current data
OSHA:	TLV-A4

* Petroleum distillates may contain chemical carcinogens in limited quantities (< 0.01%). These quantities are determined by the supplier/fraction/purity of the distillate during the manufacturing process. Chemicals that may be present within distillates are listed on California's prop 65 list such as ETHYLBENZENE, BENZENE, and TOLUENE.

12. Ecological Information

Ecotoxicity: **No Data Available**
Persistence and degradability: **No Data Available**
Bioaccumulative potential: **No Data Available**
Mobility in soil: **No Data Available**
Results of PBT and vPvB assessment: **No Data Available**
Other adverse effects: **No Data Available**

13. Disposal Considerations

Waste Disposal: Dispose of material in accordance with EU, national and local requirements. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location.
Product / Packaging disposal: Dispose of packaging in accordance with federal, state and local requirements, regulations and/or laws governing your location.

14. Transportation Information

US DOT

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions

UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Reference 49 CFR 172.101

IMDG

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols	2.1	Not Applicable	Not Applicable	Reference IMDG code part 3

IATA:

UN Number	Proper Shipping Name	Hazard Class	Packing Group	Marine Pollutant	Special Provisions
UN1950	Aerosols, Flammable	2.1	Not Applicable	Not Applicable	Reference IATA Dangerous Goods Regulation

15. Regulatory Information

Workplace classification:
This product is considered hazardous under the OSHA Hazard Communication Standard (29 CFR 1910.1200). The Occupational Safety and Health Administration's interpretation of the product's hazard to workers.
SARA Title 3:
Section 311/312 Categorizations (40 CFR 372): This product is a hazardous chemical under 29 CFR 1910.1200, and is categorized as an immediate and delayed health, and flammability physical hazard. Superfund Amendment and Reauthorization Act (SARA) category. SARA requires reporting any spill of any hazardous substance.
TSCA status: All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.
WHMIS: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the (M)SDS contains all of the information required by the CPR.
PROP 65 (CA): WARNING: This product may contain chemicals know to the state of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

This SDS has been completed in accordance with GHS Rev04 (2011): U.S OSHA, CMA, ANSI, Canadian WHMIS standards, and European Directives.

Date of Preparation/Revision: 5/2/2016
Supersedes: (7/27/2015)

To the best of our knowledge, the information contained herein is believed to be accurate. However, the above data does not imply any guarantee or warranty of any kind, expressed or implied. The final

determination of the suitability of any material is the sole responsibility of the user. All materials made present un-known hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee these are the only hazards existing.

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/19/2016 Reviewed on 08/19/2016

1 Identification

· **Product identifier**

· **Trade name:** **Top Cast® Light Blue 05**

· **Article number:** 309056
· **Application of the substance / the mixture**

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Dayton® Superior
4226 Kansas Avenue Tel.: (866) 329-8724
Kansas City, KS 66106

Emergency Telephone Number: Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemicals. Within the U.S., Canada, or the U.S. Virgin Islands, call ChemTrec at (800) 424-9300, 24 hours a day. Or, outside these areas, call international number, +1 703 741-5970. Collect calls are accepted.

· **Information department:** Environmental, Health, and Safety department.

2 Hazard(s) identification

· **Classification of the substance or mixture**
Eye Dam. 1 H318 Causes serious eye damage.
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS05 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**
5-chloro-2-methyl-2H-isothiazol-3-one
(+)-tartaric acid
· **Hazard statements**
Causes serious eye damage.
May cause an allergic skin reaction.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 1
Reactivity = 0

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	1	Fire = 1
PHYSICAL HAZARD	0	Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

57-55-6	propane-1,2-diol	≤ 10%
87-69-4	(+)-tartaric acid	≤ 5%
26172-55-4	5-chloro-2-methyl-2H-isothiazol-3-one	≤ 0.1%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
In the event of persistent symptoms recieve medical treatment.
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
· **After swallowing:**
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
Seek medical treatment.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.

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· **Advice for firefighters**
· **Protective equipment:**
Because fire may produce thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
· **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Do not take internally.
· **Information about protection against explosions and fires:** *No special measures required.*

· **Conditions for safe storage, including any incompatibilities**
· **Storage:**
· **Requirements to be met by storerooms and receptacles:** *No special requirements.*
· **Information about storage in one common storage facility:** *Not required.*
· **Further information about storage conditions:** *Keep receptacle tightly sealed.*
· **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** *No further data; see item 7.*

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

57-55-6 propane-1,2-diol	
WEEL	Long-term value: 10 mg/m³

· **Additional information:** *The lists that were valid during the creation were used as basis.*

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· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Eye protection:** Wear appropriate eye protection to prevent eye contact.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	4
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	>100 °C (>212 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	371 °C (700 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17 mm Hg)
· **Density at 20 °C (68 °F):**	1.06 g/cm³ (8.846 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.

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· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with Water:**	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	9.9 %
Water:	82.0 %
Solids content:	50.0 %
· **Other information**	No further relevant information available.
· **Volatile Organic Compounds:**	Contains less than 100 g/L.

10 Stability and reactivity

· **Reactivity** No decomposition if stored and applied as directed.
· **Chemical stability** No decomposition if stored and applied as directed
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** Keep away from heat and sources of ignition.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** May cause skin irritation.
· **on the eye:**
Strong caustic effect.
Strong irritant with the danger of severe eye injury.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Corrosive
Irritant
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

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· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state, federal, and provincial environmental regulations.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to Federal, State, and Local regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number** · **DOT, ADR, ADN, IMDG, IATA**	Not Regulated
· **UN proper shipping name** · **DOT, ADR, ADN, IMDG, IATA**	Not Regulated
· **Transport hazard class(es)** · **DOT, ADR, ADN, IMDG, IATA** · **Class**	Not Regulated
· **Packing group** · **DOT, ADR, IMDG, IATA**	Not Regulated
· **Environmental hazards:** · **Marine pollutant:**	No
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.

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· **Transport/Additional information:**

· **ADR**

· **U.S. Domestic Ground Shipments:**	Same as listed for Standard Shipments above.
· **U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments:**	Same as listed for Standard Shipments above.
· **Emergency Response Guide (ERG) Number:**	Not determine
· **UN "Model Regulation":**	Not Regulated

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**
This product may contain 1 or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372. If so, the chemicals are listed below.

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to the State of California (Prop. 65) to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**

GHS05 GHS07

· **Signal word** Danger

· **Hazard-determining components of labeling:**
5-chloro-2-methyl-2H-isothiazol-3-one
(+)-tartaric acid

· **Hazard statements**
Causes serious eye damage.
May cause an allergic skin reaction.

· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor.
Specific treatment (see on this label).
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environmental, Health & Safety Department

· **Contact:** Environmental, Health & Safety Manager

· **Date of preparation / last revision** 08/19/2016 / 59

· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

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1 Identification

· **Product identifier**

· **Trade name:** **Top Cast® Beige 25**

· **Article number:** 309058
· **Application of the substance / the mixture**

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Dayton® Superior
4226 Kansas Avenue Tel.: (866) 329-8724
Kansas City, KS 66106

Emergency Telephone Number: Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemicals. Within the U.S., Canada, or the U.S. Virgin Islands, call ChemTrec at (800) 424-9300, 24 hours a day. Or, outside these areas, call international number, +1 703 741-5970. Collect calls are accepted.

· **Information department:** Environmental, Health, and Safety department.

2 Hazard(s) identification

· **Classification of the substance or mixture**
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**
5-chloro-2-methyl-2H-isothiazol-3-one
· **Hazard statements**
May cause an allergic skin reaction.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 1
Reactivity = 0

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	*1	Health = *1
FIRE	1	Fire = 1
PHYSICAL HAZARD	0	Reactivity = 0

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**

57-55-6	propane-1,2-diol	≤ 10%
87-69-4	(+)-tartaric acid	≤ 10%
26172-55-4	5-chloro-2-methyl-2H-isothiazol-3-one	≤ 0.1%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
In the event of persistent symptoms recieve medical treatment.
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Immediately move exposed person to fresh air. If breathing difficulty persists or develops get prompt medical attention.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** Seek medical treatment.
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** No further relevant information available.
· **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
· **Special hazards arising from the substance or mixture** No further relevant information available.

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· **Advice for firefighters**
· **Protective equipment:**
Because fire may produce thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Do not take internally.
· **Information about protection against explosions and fires:** *No special measures required.*

· **Conditions for safe storage, including any incompatibilities**
· **Storage:** *cool and dry*
· **Requirements to be met by storerooms and receptacles:** *No special requirements.*
· **Information about storage in one common storage facility:** *Store away from foodstuffs.*
· **Further information about storage conditions:** *None.*
· **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** *No further data; see item 7.*

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

57-55-6 propane-1,2-diol	
WEEL	Long-term value: 10 mg/m³

· **Additional information:** *The lists that were valid during the creation were used as basis.*

· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.

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Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Eye protection:** *Wear appropriate eye protection to prevent eye contact.*

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value at 20 °C (68 °F):**	4
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	185 °C (365 °F)
· **Flash point:**	>100 °C (>212 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	371 °C (700 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	2.6 Vol %
Upper:	12.6 Vol %
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17 mm Hg)
· **Density at 20 °C (68 °F):**	1 g/cm³ (8.345 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with**	
Water:	Fully miscible.
· **Partition coefficient (n-octanol/water):**	Not determined.

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· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	10.0 %
Water:	78.0 %
Solids content:	50.0 %
· **Other information**	No further relevant information available.
· **Volatile Organic Compounds:**	Contains less than 100 g/L.

10 Stability and reactivity

· **Reactivity** No decomposition if stored and applied as directed.
· **Chemical stability** No decomposition if stored and applied as directed
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** Keep away from heat and sources of ignition.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** May cause skin irritation.
· **on the eye:** No irritating effect known.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.

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· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state, federal, and provincial environmental regulations.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to Federal, State, and Local regulations.
· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· **UN-Number** · **DOT, ADR, ADN, IMDG, IATA**	Not Regulated
· **UN proper shipping name** · **DOT, ADR, ADN, IMDG, IATA**	Not Regulated
· **Transport hazard class(es)** · **DOT, ADR, ADN, IMDG, IATA** · **Class**	Not Regulated
· **Packing group** · **DOT, ADR, IMDG, IATA**	Not Regulated
· **Environmental hazards:**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR** · **U.S. Domestic Ground Shipments:**	Same as listed for Standard Shipments above.
· **U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments:**	Same as listed for Standard Shipments above.
· **Emergency Response Guide (ERG) Number:**	Not determine
· **UN "Model Regulation":**	Not Regulated

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**
This product may contain 1 or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372. If so, the chemicals are listed below.

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to the State of California (Prop. 65) to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**
5-chloro-2-methyl-2H-isothiazol-3-one
· **Hazard statements**
May cause an allergic skin reaction.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Specific treatment (see on this label).

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Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** *Environmental, Health & Safety Department*
· **Contact:** *Environmental, Health & Safety Manager*
· **Date of preparation / last revision** *08/19/2016 / 3*
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

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1 Identification

· **Product identifier**

· **Trade name:** **Top Cast® Canary Green 50**

· **Article number:** 309059
· **Application of the substance / the mixture**

· **Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Dayton® Superior
4226 Kansas Avenue
Kansas City, KS 66106
Tel.: (866) 329-8724

Emergency Telephone Number: Use only in the event of an emergency involving a spill, leak, fire, exposure, or accident involving chemicals. Within the U.S., Canada, or the U.S. Virgin Islands, call ChemTrec at (800) 424-9300, 24 hours a day. Or, outside these areas, call international number, +1 703 741-5970. Collect calls are accepted.

· **Information department:** Environmental, Health, and Safety department.

2 Hazard(s) identification

· **Classification of the substance or mixture**
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**
5-chloro-2-methyl-2H-isothiazol-3-one
· **Hazard statements**
May cause an allergic skin reaction.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 1
Reactivity = 0

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Trade name: Top Cast® Canary Green 50

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· **HMIS-ratings (scale 0 - 4)**

HEALTH	1	*Health = 1*
FIRE	1	*Fire = 1*
PHYSICAL HAZARD	0	*Reactivity = 0*

· **Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** *Not applicable.*
· **vPvB:** *Not applicable.*

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**
· **Description:** *Mixture of the substances listed below with nonhazardous additions.*

· **Dangerous components:**		
77-92-9	citric acid	≤ 10%
26172-55-4	5-chloro-2-methyl-2H-isothiazol-3-one	≤ 0.1%

· **Additional information:** *For the wording of the listed hazard phrases refer to section 16.*

4 First-aid measures

· **Description of first aid measures**
· **General information:**
Immediately remove any clothing soiled by the product.
In the event of persistent symptoms recieve medical treatment.
· **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
Immediately move exposed person to fresh air. If breathing difficulty persists or develops get prompt medical attention.
· **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Rinse opened eye for several minutes under running water. Then consult a doctor.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
· **After swallowing:** *Seek medical treatment.*
· **Information for doctor:**
· **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*
· **Indication of any immediate medical attention and special treatment needed** *No further relevant information available.*

5 Fire-fighting measures

· **Extinguishing media**
· **Suitable extinguishing agents:** *Use fire fighting measures that suit the environment.*
· **Special hazards arising from the substance or mixture** *No further relevant information available.*

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Trade name: Top Cast® Canary Green 50

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· **Advice for firefighters**
· **Protective equipment:**
Because fire may produce thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full face piece operated in pressure-demand or positive-pressure mode.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
· **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
· **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.
· **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

· **Handling:**
· **Precautions for safe handling**
Wear appropriate personal protective clothing to prevent eye and skin contact. Avoid breathing vapors or mists of this product. Use with adequate ventilation. Do not take internally.
· **Information about protection against explosions and fires:** *No special measures required.*

· **Conditions for safe storage, including any incompatibilities**
· **Storage:** *cool and dry*
· **Requirements to be met by storerooms and receptacles:** *No special requirements.*
· **Information about storage in one common storage facility:** *Store away from foodstuffs.*
· **Further information about storage conditions:** *Keep receptacle tightly sealed.*
· **Specific end use(s)** *No further relevant information available.*

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** *No further data; see item 7.*

· **Control parameters**
· **Components with limit values that require monitoring at the workplace:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

56-81-5 glycerol	
PEL	Long-term value: 15* 5** mg/m³ mist; *total dust **respirable fraction
TLV	TLV withdrawn-insufficient data human occup. exp.

· **Additional information:** *The lists that were valid during the creation were used as basis.*

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· **Exposure controls**
· **Personal protective equipment:**
· **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Breathing equipment:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
· **Eye protection:** Wear appropriate eye protection to prevent eye contact.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**	
· **General Information**	
· **Appearance:**	
Form:	Liquid
Color:	Light green
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	188 °C (370 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	400 °C (752 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapor pressure at 20 °C (68 °F):**	23 hPa (17 mm Hg)
· **Density:**	Not determined.
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.

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· **Solubility in / Miscibility with Water:**	Not miscible or difficult to mix.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	8.0 %
Water:	80.0 %
· **Other information**	No further relevant information available.
· **Volatile Organic Compounds:**	Contains less than 100 g/L.

10 Stability and reactivity

· **Reactivity** No decomposition if stored and applied as directed.
· **Chemical stability** No decomposition if stored and applied as directed
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions** No dangerous reactions known.
· **Conditions to avoid** Keep away from heat and sources of ignition.
· **Incompatible materials:** No further relevant information available.
· **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** May cause skin irritation.
· **on the eye:** Irritating effect.
· **Sensitization:** Sensitization possible through skin contact.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**
None of the ingredients is listed.

· **NTP (National Toxicology Program)**
None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**
None of the ingredients is listed.

12 Ecological information

· **Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability** No further relevant information available.

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Trade name: Top Cast® Canary Green 50

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· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Additional ecological information:**
· **General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**
· **Recommendation:**
It is the generator's responsibility to determine if the waste meets applicable definitions of hazardous waste. State and local regulations may differ from federal disposal regulations. Dispose of waste material according to local, state, federal, and provincial environmental regulations.

· **Uncleaned packagings:**
· **Recommendation:** Disposal must be made according to Federal, State, and Local regulations.

14 Transport information

· **UN-Number** · **DOT, ADR, IMDG, IATA**	Not Regulated
· **UN proper shipping name** · **DOT, ADR, IMDG, IATA**	Not Regulated
· **Transport hazard class(es)** · **DOT, ADR, IMDG, IATA** · **Class**	Not Regulated
· **Packing group** · **DOT, ADR, IMDG, IATA**	Not Regulated
· **Environmental hazards:**	Not applicable.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR** · **U.S. Domestic Ground Shipments:**	Same as listed for Standard Shipments above.
· **U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments:**	Same as listed for Standard Shipments above.
· **Emergency Response Guide (ERG) Number:**	Not determine
· **UN "Model Regulation":**	Not Regulated

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Trade name: Top Cast® Canary Green 50

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15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**
· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**
This product may contain 1 or more toxic chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR part 372. If so, the chemicals are listed below.

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to the State of California (Prop. 65) to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**
5-chloro-2-methyl-2H-isothiazol-3-one
· **Hazard statements**
May cause an allergic skin reaction.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
Specific treatment (see on this label).

(Contd. on page 8)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/19/2016 *Reviewed on 08/19/2016*

Trade name: Top Cast® Canary Green 50

(Contd. of page 7)

Wash contaminated clothing before reuse.
If skin irritation or rash occurs: Get medical advice/attention.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** *Environmental, Health & Safety Department*
· **Contact:** *Environmental, Health & Safety Manager*
· **Date of preparation / last revision** *08/19/2016 / -*
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

SAFETY DATA SHEET

1. Identification

Material name: TUF-STRAND SF 5#/BAG 5x5x30
Material: 101T 96

Recommended use and restriction on use

Recommended use: Article
Restrictions on use: Not known.

Manufacturer/Importer/Supplier/Distributor Information
EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD
CLEVELAND OH 44110
US

Contact person:	EH&S Department
Telephone:	216-531-9222
Emergency telephone number:	1-800-424-9300 (US); 1-613-996-6666 (Canada)

2. Hazard(s) identification

Hazard Classification

Not classified

Label Elements

Hazard Symbol:	No symbol
Signal Word:	No signal word.
Hazard Statement:	not applicable
Precautionary Statement:	not applicable

Other hazards which do not result in GHS classification: None.

3. Composition/information on ingredients

Mixtures

Composition Comments: The components are not hazardous or are below required disclosure limits.

4. First-aid measures

Ingestion: Rinse mouth thoroughly.

Inhalation: Move to fresh air.

Skin Contact: Remove contaminated clothing and wash the skin thoroughly with soap and water after work.

Eye contact: Rinse immediately with plenty of water.

Most important symptoms/effects, acute and delayed

Symptoms: May cause skin and eye irritation.

Indication of immediate medical attention and special treatment needed

Treatment: Get medical attention if symptoms occur.

5. Fire-fighting measures

General Fire Hazards: No unusual fire or explosion hazards noted.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: No data available.

Methods and material for containment and cleaning up: Collect spillage in containers, seal securely and deliver for disposal according to local regulations.

Notification Procedures: In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

Environmental Precautions: Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water sources or sewer. Environmental manager must be informed of all major spillages.

7. Handling and storage

Precautions for safe handling: Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Use mechanical ventilation in case of handling which causes formation of dust.

Conditions for safe storage, including any incompatibilities: Store away from incompatible materials. Store in original tightly closed container.

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

None of the components have assigned exposure limits.

Appropriate Engineering Controls Mechanical ventilation or local exhaust ventilation may be required. Observe good industrial hygiene practices. Observe occupational exposure limits and minimize the risk of inhalation of dust.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required.

Eye/face protection: Wear goggles/face shield.

Skin Protection

Hand Protection: Use suitable protective gloves if risk of skin contact.

Other: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

9. Physical and chemical properties

Appearance

Physical state:	solid
Form:	No data available.
Color:	White
Odor:	Odorless
Odor threshold:	No data available.
pH:	No data available.
Melting point/freezing point:	No data available.
Initial boiling point and boiling range:	220 °C 428 °F

Flash Point:	329 °C 625 °F
Evaporation rate:	No data available.
Flammability (solid, gas):	No
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%):	No data available.
Flammability limit - lower (%):	No data available.
Explosive limit - upper (%):	No data available.
Explosive limit - lower (%):	No data available.
Vapor pressure:	No data available.
Vapor density:	No data available.
Relative density:	0.9
Solubility(ies)	
Solubility in water:	Insoluble in water
Solubility (other):	No data available.
Partition coefficient (n-octanol/water):	No data available.
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	No data available.
Conditions to Avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

11. Toxicological information

Information on likely routes of exposure

Ingestion:	May be ingested by accident. Ingestion may cause irritation and malaise.
Inhalation:	In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.
Skin Contact:	Moderately irritating to skin with prolonged exposure.
Eye contact:	Eye contact is possible and should be avoided.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral
Product: No data available.

Dermal
Product: No data available.

Inhalation
Product: No data available.

Repeated dose toxicity
Product: No data available.

Skin Corrosion/Irritation
Product: No data available.

Serious Eye Damage/Eye Irritation
Product: No data available.

Respiratory or Skin Sensitization
Product: No data available.

Carcinogenicity
Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:
No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:
No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):
No carcinogenic components identified

Germ Cell Mutagenicity

In vitro
Product: No data available.

In vivo
Product: No data available.

Reproductive toxicity
Product: No data available.

Specific Target Organ Toxicity - Single Exposure
Product: No data available.

Specific Target Organ Toxicity - Repeated Exposure
Product: No data available.

Aspiration Hazard
Product: No data available.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Chronic hazards to the aquatic environment:

Fish
Product: No data available.

Aquatic Invertebrates
Product: No data available.

Toxicity to Aquatic Plants
Product: No data available.

Persistence and Degradability

Biodegradation
Product: No data available.

BOD/COD Ratio
Product: No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
Product: No data available.

Partition Coefficient n-octanol / water (log Kow)
Product: No data available.

Mobility in Soil: No data available.

Other Adverse Effects: No data available.

13. Disposal considerations

Disposal instructions: Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Contaminated Packaging: No data available.

14. Transport information

TDG:

Not Regulated

CFR / DOT:

Not Regulated

IMDG:

Not Regulated

15. Regulatory information

US Federal Regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
None present or none present in regulated quantities.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

CERCLA Hazardous Substance List (40 CFR 302.4):
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Not listed.

SARA 302 Extremely Hazardous Substance
None present or none present in regulated quantities.

SARA 304 Emergency Release Notification
None present or none present in regulated quantities.

SARA 311/312 Hazardous Chemical

None present or none present in regulated quantities.

SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)
None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):
None present or none present in regulated quantities.

US State Regulations

US. California Proposition 65
No ingredient regulated by CA Prop 65 present.

US. New Jersey Worker and Community Right-to-Know Act
No ingredient regulated by NJ Right-to-Know Law present.

US. Massachusetts RTK - Substance List
No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances
No ingredient regulated by PA Right-to-Know Law present.

US. Rhode Island RTK
No ingredient regulated by RI Right-to-Know Law present.

Other Regulations:

Regulatory VOC (less water and exempt solvent):	0 g/l
VOC Method 310:	0.00 %

Inventory Status:

Australia AICS:	One or more components in this product are not listed on or exempt from the Inventory.
Canada DSL Inventory List:	All components in this product are listed on or exempt from the Inventory.
EINECS, ELINCS or NLP:	One or more components in this product are not listed on or exempt from the Inventory.
Japan (ENCS) List:	One or more components in this product are not listed on or exempt from the Inventory.

China Inv. Existing Chemical Substances:	One or more components in this product are not listed on or exempt from the Inventory.
Korea Existing Chemicals Inv. (KECI):	One or more components in this product are not listed on or exempt from the Inventory.
Canada NDSL Inventory:	One or more components in this product are not listed on or exempt from the Inventory.
Philippines PICCS:	One or more components in this product are not listed on or exempt from the Inventory.
US TSCA Inventory:	All components in this product are listed on or exempt from the Inventory.
New Zealand Inventory of Chemicals:	One or more components in this product are not listed on or exempt from the Inventory.
Japan ISHL Listing:	One or more components in this product are not listed on or exempt from the Inventory.
Japan Pharmacopoeia Listing:	One or more components in this product are not listed on or exempt from the Inventory.

16.Other information, including date of preparation or last revision

Revision Date:	08/13/2015
Version #:	1.0
Further Information:	No data available.
Disclaimer:	For Industrial Use Only. Keep out of Reach of Children. The hazard information herein is offered solely for the consideration of the user, subject to their own investigation of compliance with applicable regulations, including the safe use of the product under every foreseeable condition.

Safety Data Sheet
ULTRABOND® 1

Created On: 03/20/2014
Revision Date: 4/6/2016
Version: 6.0

1. Product and Company Identification

Product Name: ULTRABOND 1 **(Part A)**

Product Use: Anchoring & Doweling

Company Identification:
ADHESIVES TECHNOLOGY CORP.
450 East Copans Road
Pompano Beach, FL 33064
Contact Phone: 1.800.892.1880
(9:00a.m. – 5:00p.m. EST)

Emergency Phone:
Chem-Tel:
1.800.255.3924 (24hrs)

2. Hazards Identification (Part A)

GHS Classification

Health	Physical	Environmental
Skin Irritant Cat 2 Eye Irritant Cat 2A Skin Sens Cat 1	Not Classified	Toxic to Aquatic Life Cat-2

GHS Label:

Warning:

Causes eye irritation
Skin irritant
May cause skin sensitization

Emergency Overview
May cause skin sensitization
Avoid contact with the skin and eyes
Avoid breathing fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Use outdoors or in a well-ventilated area

Primary Route of Exposure
Eyes, skin and oral

Carcinogenicity
This product contains titanium dioxide which IARC has classified as a Group 2B carcinogen (possibly carcinogenic to humans). Evidence is based on sufficient animal testing as a result of long-term inhalation at high concentrations of respirable amounts of titanium dioxide. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, this classification is not relevant. (Note: sanding of this product will create a possible dust hazard).

This product contains crystalline silica (quarts sand). IARC has classified crystalline silica as a Group 1 carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. Because this product is in liquid or paste form, it does not pose a dust hazard; therefore, this classification is not relevant. (Note: sanding of this product will create a possible silica dust hazard.

This product or one of its ingredients present at 0.1% or more IS listed as a carcinogen or suspect carcinogen by NTP, IARC, Prop 65 or OSHA.

3. Composition/ Information on Ingredients (Part A)

CAS Number	Content %	Chemical Name
25085-99-8	30 - 60	Diglycidyl Ether of Bisphenol A
14808-60-7	5 – 15	Crystalline Silica (quartz)
13463-67-7	1 - 5	Titanium Dioxide
Proprietary	10 - 20	Non – Hazardous Proprietary Ingredients
68460-21-9	7 - 15	Trimethylol Ethane Triglycidyl Ether
107-21-1	1 - 5	Ethylene Glycol (Cartridge ONLY)

4. First Aid Measures (Part A)

Inhalation: Move to fresh air; give oxygen if breathing is difficult. Call a physician if symptoms persist.
Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if symptoms persist.
Skin: Remove contaminated clothing. Wash with mild soap and water. Get medical attention if skin irritation or dermatitis persists.
Ingestion: Give plenty of water. DO NOT induce vomiting. Call a physician immediately.
Other: Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure. If sensitization occurs, future contact with the material should be avoided.

5. Fire Fighting Measures (Part A)

Flash Point: N/D
Flammable Limits: N/D

Extinguisher Media
Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire and Explosion Hazard
None known. Thermal decomposition can be formed.

Special Fire Fighting Procedures
Firefighters must wear self-contained breathing apparatus and full protective clothing to prevent contact with toxic and/or irritating fumes.

6. Accidental Release Measures (Part A)

Personal Precautions:
Avoid all personal contact. In enclosed areas, cleanup personnel should wear self-contained breathing apparatus.

Environmental Precautions:
Cover spills with sawdust, vermiculite, or other absorbent material to minimize spreading of the material before collecting.

7. Handling and Storage (Part A)

Handling: Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors. Use with adequate ventilation. Use appropriate personal protection equipment (Section 8). Wash thoroughly after handling.
Storage: Store in a cool dry place away from direct sunlight. Keep from freezing. Recommended storage temperature range in between 4 °C and 35 °C (40°F and 95° F).

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8. Exposure Control and Personal Protection (Part A)

Exposure Guidelines

Component	CAS#	OSHA PEL	TLV
Ethylene Glycol (Cartridge ONLY)	107-21-1	50ppm (Ceiling)	100 mg/ m^3 (Ceiling)
Quartz Silica Sand (Crystalline Silica)	14808-60-7	0.1 mg/m^3	0.025 mg/m^3
Titanium Dioxide	13463-67-7	15 mg/m^3	10 mg/m^3

Engineering Measures: Use local and general exhaust ventilation to maintain airborne concentrations below TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it.

Personal Protective Equipment

Respiratory Protection
None normally required. Use a NIOSH approved organic vapor chemical cartridge respirator when air movement is inadequate to control vapor build-up.

Eye/Face Protection
Wear splash proof chemical goggles/ full face shield if there is a potential for splashing.

Skin / Body Protection
Wear suitable gloves (neoprene, nitrile rubber or PVC) and protective clothing to mitigate exposure.

Other Protective Clothing or Equipment
Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

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9. Physical and Chemical Properties (Part A)

Appearance:	White Paste
Evaporation Rate:	N/A
Odor:	Slight Odor
Solubility in Water:	Insoluble
Specific Gravity (H2O=1):	1.4
Vapor Density (air = 1):	Non-Volatile
Vapor Pressure:	N/A
VOC Content:	See section 9 of part B for VOC content

pH:	N/D
Boiling Point:	N/A

10. Stability and Reactivity (Part A)

Stability:	Stable.
Thermal Decomposition:	Can yield CO, CO_2 and organic Nitrogen compounds.
Incompatibility:	Strong acids, peroxides, and other oxidizing agents.
Conditions to avoid:	Exposure to excessive heat and storage above 35°C (95°F) will shorten shelf life.

11. Toxicological Information (Part A)

Acute Oral Toxicity:
Not Determined

Acute Dermal Toxicity:
Not Determined

Acute Inhalation Toxicity:
Not Determined

Skin Irritation:
Irritating to skin.
The product has not been tested. The statement has been derived from the properties of the individual components.

Eye Irritation:
Irritating to eyes.
The product has not been tested. The statement has been derived from the properties of the individual components.

Respiratory Irritation:
Inhalation of vapors or mists may cause irritation to the respiratory system.

Sensitization:
May cause allergic skin reaction and irritation to the respiratory system.
The product has not been tested. The statement has been derived from the properties of the individual components.

Carcinogenicity Classification:
Quartz Silica Sand (Crystalline Silica):
IARC Group1: Known human carcinogen based on human evidence.
NTP (National Toxicology Program) has classified Crystalline Silica as a known human carcinogen.
Titanium dioxide:
IARC Group2B: Possibly carcinogenic to humans.

12. Ecological Information (Part A)

Acute Toxicity for:

Fish:
Diglycidyl Ether of Bisphenol A:
Fathead minnow/LC50 (96hrs): >3.1mg/l

Aquatic Invertebrates:
Diglycidyl Ether of Bisphenol A:
Water Flea Daphnis/EC 50 (48hrs): > 1.4mg/l

Algae:
No Data Available

Microorganisms:
Diglycidyl Ether of Bisphenol A:
Bacteria, (Growth inhibition)/IC50 (18hrs): > 42.6mg/l

Mobility:
Considering the use of the substance, it is unlikely that significant environmental exposure in the air or water will arise.

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13. Disposal Considerations (Part A)

If the material as supplied becomes a waste, dispose in accordance with federal, state and local regulations.

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14. Transportation Information (Part A)

This product is not regulated as a hazardous material for transportation.

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15. Regulatory Information (Part A)

HMIS Rating	
Health	*2
Flammability	1
Physical Hazard	0
PPE	B

NFPA Rating

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

Federal Regulations

CERCLA RQ	CAS	Chemical Name
5000 lbs	107-21-1	Ethylene Glycol (Cartridge ONLY)

SARA Title 311/312	Chronic Health Hazard
CA Prop 65	This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
TSCA	Listed

State Regulations:

State RTK	CAS#	Chemical Name
NJ, MA, PA	25085-99-8	Diglycidyl Ether of Bisphenol A
	107-21-1	Ethylene Glycol (Cartridge ONLY)
	14808-60-7	Crystalline Silica (quartz)
	13463-67-7	Titanium Dioxide

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16. Other Information (Part A)

Hazard Communication: This SDS has been prepared in accordance with the federal OSHA Hazard Communication Standard.

To the best of our knowledge, the information contained herein is accurate. However, Adhesives Technology Corp. does not assume any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Additional information is available upon request.

1. Product and Company Identification

Product Name: ULTRABOND 1 **(Part B)**

Product Use: Anchoring & Doweling

Company Identification:
ADHESIVES TECHNOLOGY CORP.
450 East Copans Road
Pompano Beach, FL 33064
Contact Phone: 1.800.892.1880
(9:00a.m. – 5:00p.m. EST)

Emergency Phone:
Chem-Tel:
1.800.255.3924 (24hrs)

2. Hazards Identification (Part B)

GHS Classification

Health	Physical	Environmental
Skin Corrosion Cat 1 Serious Eye Damage Cat 1 Skin Sen 1 Reproductive Tox Cat 2 Acute Tox Oral Cat 4 Acute Tox Inhalation Cat 4	Not Classified	Toxic to Aquatic Life Cat-2

GHS Label:

Danger:

Corrosive to skin and eyes

May cause skin sensitization
Harmful if swallowed or inhaled

Reproductive toxicity

Emergency Overview
Causes skin burns
Causes severe eye damage
Harmful if swallowed or inhaled
May cause skin sensitization
Suspected of damaging fertility
Wash skin thoroughly after handling
Avoid breathing fume/gas/mist/vapors/spray
Wear protective gloves/protective clothing/eye protection/face protection
Use outdoors or in a well-ventilated area
Avoid contact during pregnancy/while nursing

Primary Route of Exposure
Eyes, skin and oral

Carcinogenicity
This product contains crystalline silica (quarts sand). IARC has classified crystalline silica as a Group 1 carcinogen. Both IARC and NTP consider silica as a known human carcinogen. Evidence is based on the chronic and long-term exposure workers have had to respirable sized crystalline silica dust particles. Because

this product is in liquid or paste form, it does not pose a dust hazard; therefore, this classification is not relevant. (Note: sanding of this product will create a possible silica dust hazard)

This product or one of its ingredients present at 0.1% or more IS listed as a carcinogen or suspect carcinogen by NTP, IARC, Prop 65 or OSHA.

---

3. Composition/ Information on Ingredients (Part B)

CAS Number	Content %	Chemical Name
140-31-8	5 – 15	n-aminoethylpiperazine
84852-15-3	15 – 30	Nonylphenol
90-72-2	3 – 7	Tris-2, 4, 6(dimethylaminomethyl) phenol
100-51-6	1 – 5	Benzyl Alcohol
68953-36-6	5 – 15	Polyamido Amine (Bulk ONLY)
68082-29-1	5 – 15	Liquid polyamido resin (Cartridge ONLY)
14808-60-7	25 – 40	Crystalline Silica (quartz)
107-21-1	0.1– 1	Ethylene Glycol (Cartridge ONLY)

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4. First Aid Measures (Part B)

Inhalation: Move to fresh air; give oxygen if breathing is difficult. Call a physician if symptoms persist.
Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician if symptoms persist.
Skin: Remove contaminated clothing. Wash with mild soap and water. Get medical attention if skin irritation or dermatitis persists.
Ingestion: Give plenty of water. DO NOT induce vomiting. Call a physician immediately.
Other: Referral to a physician is recommended if there is any question about the seriousness of the injury/exposure. If sensitization occurs, future contact with the material should be avoided.

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5. Fire Fighting Measures (Part B)

Flash Point: N/D
Flammable Limits: N/D

Extinguisher Media
Carbon Dioxide, Dry Chemical, Water Fog

Unusual Fire and Explosion Hazard
None known. Thermal Decomposition can be formed.

Special Fire Fighting Procedures
Firefighters must wear self-contained breathing apparatus and full protective clothing to prevent contact with toxic and/or irritating fumes.

---

6. Accidental Release Measures (Part B)

Personal Precautions:
Avoid all personal contact. In enclosed areas, cleanup personnel should wear self-contained breathing apparatus.

Environmental Precautions
Cover spills with sawdust, vermiculite, or other absorbent material to minimize spreading of the material before collecting.

---

7. Handling and Storage (Part B)

Handling: Avoid contact with eyes, skin and clothing. Avoid inhalation of vapors. Use with adequate ventilation. Use appropriate personal protection equipment (Section 8). Wash thoroughly after handling.
Storage: Store in a cool dry place away from direct sunlight. Keep from freezing. Recommended storage temperature range in between 4 ºC and 35 ºC (40ºF and 95º F).

---

8. Exposure Control and Personal Protection (Part B)

Exposure Guidelines

Component	CAS#	OSHA PEL	TLV
Ethylene Glycol (Cartridge ONLY)	107-21-1	50ppm (Ceiling)	100 mg/ m^3 (Ceiling)
Quartz Silica Sand (Crystalline Silica)	14808-60-7	0.1 mg/m^3	0.025 mg/m^3

Engineering Measures: Use local and general exhaust ventilation to maintain airborne concentrations below TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it.

Personal Protective Equipment

Respiratory Protection
None normally required. Use a NIOSH approved organic vapor chemical cartridge respirator when air movement is inadequate to control vapor build-up.

Eye / Face Protection
Wear splash proof chemical goggles/full face shield if there is a potential for splashing.

Skin / Body Protection
Wear Suitable gloves (neoprene, nitrile rubber or PVC) and protective clothing to mitigate exposure.

Other Protective Clothing or Equipment
Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

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9. Physical and Chemical Properties (Part B)

Appearance:	Black Paste
Evaporation Rate:	N/A
Odor:	Slight Odor
Solubility in Water:	Insoluble
Specific Gravity (H2O=1):	1.05
Vapor Density (air = 1):	Non-Volatile
Vapor Pressure:	N/A
VOC Content (cartridge):	0 g/L (tested per EPA CFR 40, Part 63, Subpart PPPP, Appendix A) < 10.0 g/L (tested per ASTM E1868-10)
VOC Content (bulk):	0 g/L (tested per EPA CFR 40, Part 63, Subpart PPPP, Appendix A) 7 g/L (tested per EPA CFR 40, Part 60, method 24)
pH:	N/D
Boiling Point:	N/A

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10. Stability and Reactivity (Part B)

Stability:	Stable.
Thermal Decomposition:	Can yield CO, CO_2 and organic Nitrogen compounds.
Incompatibility:	Strong acids, peroxides, and other oxidizing agents.
Conditions to avoid:	Exposure to excessive heat and storage above 35°C (95°F) will shorten shelf life.

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11. Toxicological Information (Part B)

Acute Oral Toxicity:
Not Determined

Acute Dermal Toxicity:
Not Determined

Acute Inhalation Toxicity:
Not Determined

Skin Irritation:
Corrosive to skin
The product has not been tested. The statement has been derived from the properties of the individual components.

Eye Irritation:
Severe damage to eyes.

The product has not been tested. The statement has been derived from the properties of the individual components.

Respiratory Irritation:
Inhalation of vapors or mists may cause irritation to the respiratory system.

Sensitization:
May cause allergic skin reaction and irritation to the respiratory system.
The product has not been tested. The statement has been derived from the properties of the individual components.

Maternal Toxicity:
Nonylphenol causes maternal toxic effects per animal testing.

Carcinogenicity Classification:
Quartz Silica Sand (Crystalline Silica):
IARC Group1: Known human carcinogen based on human evidence.
NTP (National Toxicology Program) has classified Crystalline Silica as a known human carcinogen.

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12. Ecological Information (Part B)

Fish:
Polyamido Amine:
Zebrafish /LC50 (96hrs) : >5.0mg/l

Aquatic Invertebrates:
Polyamido Amine:
Water Flea Daphnis/EC 50 (48hrs): > 7.07mg/l

Algae:
No Data Available

Microorganisms:
No Data Available

Mobility:
Considering the use of the substance, it is unlikely that significant environmental exposure is the air or water will arise.

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13. Disposal Considerations (Part B)

If the material as supplied becomes a waste, dispose in accordance with federal, state and local regulations.

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14. Transportation Information (Part B)

DOT (US)
CARTRIDGE: Limited Quantity, LTD QTY
***BULK:** AMINES, LIQUID, CORROSIVE, N.O.S. (aminoethylpiperazine, 4-Nonylphenol, branched), Class 8, UN 2735, PG III

*Bulk packaging in quantities of 1.3 gallons (net) or less are packaged in accordance with the limited quantity exception.

IATA/ICAO
CARTRIDGE/BULK: AMINES, LIQUID, CORROSIVE, N.O.S. (aminoethylpiperazine, 4-Nonylphenol, branched), Class 8, UN 2735, PG III

IMDG
CARTRIDGE/BULK: AMINES, LIQUID, CORROSIVE, N.O.S. (aminoethylpiperazine, 4-Nonylphenol, branched), Class 8, UN 2735, PG III

15. Regulatory Information (Part B)

HMIS Rating	
Health	*3
Flammability	1
Physical Hazard	0
PPE	B

NFPA Rating

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

Federal Regulations

CERCLA RQ	CAS	Chemical Name
5000 lbs.	107-21-1	Ethylene Glycol (Cartridge ONLY)

SARA Title 311/312	Chronic Health Hazard
CA Prop 65	This product contains a chemical or chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.
TSCA	Listed

State Regulations:

State RTK	CAS#	Chemical Name
NJ, MA, PA	107-21-1	Ethylene Glycol (Cartridge ONLY)
	14808-60-7	Crystalline Silica (quartz)
	140-31-8	n-aminoethylpiperazine

16. Other Information

Hazard Communication: This SDS has been prepared in accordance with the federal OSHA Hazard Communication Standard.

To the best of our knowledge, the information contained herein is accurate. However, Adhesives Technology Corp. does not assume any liability whatsoever for the accuracy or completeness of the information contained

herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

Additional information is available upon request.

Safety Data Sheet
ULTRAPLAN 1 PLUS
Safety Data Sheet dated: 6/8/2016 - version 2
Date of first edition: 5/26/2015

1. IDENTIFICATION

Product identifier

Mixture identification:

Trade name: ULTRAPLAN 1 PLUS

Recommended use of the chemical and restrictions on use

Recommended use: Cement based levelling mortar

Restrictions on use: N.A.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Company: MAPEI CORP. (USA and Puerto Rico)
1144 East Newport Center Drive
33442 - Deerfield Beach - FL - USA
Phone: 954-246-8888

Emergency 24 hour numbers:

(USA) CHEMTREC 1-800-424-9300
(Canada) CANUTEC 1-613-996-6666

2. HAZARD(S) IDENTIFICATION

Classification of the chemical

Skin Irrit. 2	Causes skin irritation.
Eye Dam. 1	Causes serious eye damage.
Skin Sens. 1	May cause an allergic skin reaction.
Carc. 1A	May cause cancer if inhaled.
STOT RE 1	Causes damage to organs through prolonged or repeated exposure if inhaled.

Label elements

Symbols:

Danger

Code	Description
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H350.A	May cause cancer if inhaled.
H372.A	Causes damage to organs through prolonged or repeated exposure if inhaled.

Code	Description
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260.B	Do not breathe dust.
P264.2	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352.A	IF ON SKIN: Wash with plenty of water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310.B	Immediately call a doctor.

P314	Get medical advice/attention if you feel unwell.
P321.A	Specific treatment (see supplementary instructions on this label).
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P362+P364	Take off contaminated clothing and wash it before reuse.
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501.A	Dispose of contents/container in accordance with applicable regulations.

Ingredient(s) with unknown acute toxicity:

None

Hazards not otherwise classified identified during the classification process:

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances

N.A.

Mixtures

Hazardous components within the meaning of 29 CFR 1910.1200 and related classification:

List of components

Quantity	Name	Ident. Numb.	Classification
25-50 %	Silica Sand	CAS:14808-60-7	Carc. 1A, H350; STOT RE 1, H372
2.5-5 %	Portland cement	CAS:65997-15-1	STOT SE 3, H335; Eye Dam. 1, H318; Skin Sens. 1, H317; Skin Corr. 1A, H314
0.1-0.25 %	Lithium carbonate	CAS:554-13-2	Acute Tox. 4, H302; Eye Irrit. 2A, H319

4. FIRST AID MEASURES

Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Obtain medical attention if skin related symptoms persist.

Remove contaminated clothing immediately and dispose of safely.

After contact with skin, wash immediately with soap and plenty of water.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an opthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not induce vomiting, get medical attention showing the SDS and the hazard label.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

In case of inhalation, consult a doctor immediately and show him packing or label.

Most important symptoms/effects, acute and delayed

Eye irritation

Eye damages

Skin Irritation

Erythema

Indication of any immediate medical attention and special treatment needed

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO_2).

Unsuitable extinguishing media:

None in particular.

Specific hazards arising from the chemical

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

Hazardous combustion products: N.A.

Explosive properties: N.A.

Oxidizing properties: N.A.

Special protective equipment and precautions for fire-fighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

Methods and material for containment and cleaning up

Suitable material for taking up: absorbing material, organic, sand

Wash with plenty of water.

7. HANDLING AND STORAGE

Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Exercise the greatest care when handling or opening the container.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

See also section 8 for recommended protective equipment.

Conditions for safe storage, including any incompatibilities

Storage temperature: N.A.

Incompatible materials:

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

List of components with OEL value

Component	OEL Type Country	Ceiling	Long Term mg/m3	Long Term ppm	Short Term mg/m3	Short Term ppm	Behaviour	Note
Silica Sand	ACGIH		0,025					A2 - Suspected Human Carcinogen;lung cancer;pulmonary fibrosis;
Portland cement	OSHA		15					
	OSHA		5					
	ACGIH		1					A4 - Not Classifiable as a Human Carcinogen;pulmonary function;respiratory symptoms;asthma;

Appropriate engineering controls: N.A.

Individual protection measures

Eye protection:

Use close fitting safety goggles, don't use eye lens.

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton.

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber.

Respiratory protection:

Use adequate protective respiratory equipment.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state: Solid

Appearance and colour: Powder whitish

Odour: Cement like

Odour threshold: N.A.
pH in Water Dispersion: 12.00
Melting point / freezing point: N.A.
Initial boiling point and boiling range: N.A.
Flash point: Not Applicable
Evaporation rate: N.A.
Upper/lower flammability or explosive limits: N.A.
Vapour density: N.A.
Vapour pressure: N.A.
Relative density: 2.15 g/cm3
Solubility in water: Dispersible
Solubility in oil: N.A.
Partition coefficient (n-octanol/water): N.A.
Auto-ignition temperature: N.A.
Decomposition temperature: N.A.
Viscosity: N.A.
Explosive properties: N.A.
Oxidizing properties: N.A.
Solid/gas flammability: N.A.

Other information

Substance groups relevant properties: N.A.
Miscibility: N.A.
Fat Solubility: N.A.
Conductivity: N.A.

10. STABILITY AND REACTIVITY

Reactivity

Stable under normal conditions

Chemical stability

Data not Available.

Possibility of hazardous reactions

None.

Conditions to avoid

Stable under normal conditions.

Incompatible materials

None in particular.

Hazardous decomposition products

None.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Toxicological information of the mixture:

There is no toxicological data available on the mixture. Consider the individual concentration of each component to assess toxicological effects resulting from exposure to the mixture.

Toxicological information on main components of the mixture:

Silica Sand	a) acute toxicity	LD50 Oral Rat = 500mg/kg
Lithium carbonate	a) acute toxicity	LC50 Inhalation Rat > 217mg/l 4h
		LD50 Oral Rat = 525mg/kg

If not differently specified, the information required in the regulation and listed below must be considered as N.A.

a) acute toxicity

b) skin corrosion/irritation

c) serious eye damage/irritation

d) respiratory or skin sensitisation

e) germ cell mutagenicity

f) carcinogenicity

g) reproductive toxicity

h) STOT-single exposure

i) STOT-repeated exposure

j) aspiration hazard

Substance(s) listed on the IARC Monographs:

Silica Sand Group 1

Substance(s) listed as OSHA Carcinogen(s):

Silica Sand

Substance(s) listed as NIOSH Carcinogen(s):

Silica Sand

Substance(s) listed on the NTP report on Carcinogens:

Silica Sand

12. ECOLOGICAL INFORMATION

Toxicity

Adopt good working practices, so that the product is not released into the environment.

Eco-Toxicological Information:

List of components with eco-toxicological properties

Quantity	Component	Ident. Numb.	Ecotox Infos
25-50 %	Silica Sand	CAS: 14808-60-7	LC50 a) Aquatic acute toxicity carp> 10000,00000mg/L 72h

Persistence and degradability

N.A.

Bioaccumulative potential

N.A.

Mobility in soil

N.A.

Other adverse effects

N.A.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Any disposal practice must be in compliance with local, state and federal laws and regulations (contact local or state environmental agency for specific rules). Do not dump into sewers, any body of water or onto the ground.

Waste must be handled in accordance with all federal, state, provincial, and local regulations. Consult authorities before disposal.

14. TRANSPORT INFORMATION

UN number

ADR-UN number: N/A

DOT-UN Number: N/A

IATA-Un number: N/A

IMDG-Un number: N/A

UN proper shipping name

ADR-Shipping Name: N/A

DOT-Proper Shipping Name: N/A

IATA-Technical name: N/A

IMDG-Technical name: N/A

Transport hazard class(es)

ADR-Class: N/A

DOT-Hazard Class: N/A

IATA-Class: N/A

IMDG-Class: N/A

Packing group

ADR-Packing Group: N/A

DOT-Packing group: N/A

IATA-Packing group: N/A

IMDG-Packing group: N/A

Environmental hazards

Marine pollutant: No

Environmental Pollutant: N.A.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

N.A.

Special precautions

Department of Transportation (DOT):

DOT-Special Provision(s): N/A
DOT-Label(s): N/A
DOT-Symbol: N/A
DOT-Cargo Aircraft: N/A
DOT-Passenger Aircraft: N/A
DOT-Bulk: N/A
DOT-Non-Bulk: N/A

Road and Rail (ADR-RID):

ADR-Label: N/A
ADR-Hazard identification number: N/A
ADR-Tunnel Restriction Code: N/A

Air (IATA):

IATA-Passenger Aircraft: N/A
IATA-Cargo Aircraft: N/A
IATA-Label: N/A
IATA-Subrisk: N/A
IATA-Erg: N/A
IATA-Special Provisions: N/A

Sea (IMDG):

IMDG-Stowage Code: N/A
IMDG-Stowage Note: N/A
IMDG-Subrisk: N/A
IMDG-Special Provisions: N/A
IMDG-Page: N/A
IMDG-Label: N/A
IMDG-EMS: N/A
IMDG-MFAG: N/A

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15. REGULATORY INFORMATION

USA - Federal regulations

TSCA - Toxic Substances Control Act

TSCA inventory:

All the components are listed on the TSCA inventory

TSCA listed substances:

Silica Sand	is listed in TSCA	Section 8b
Portland cement	is listed in TSCA	Section 8b
Lithium carbonate	is listed in TSCA	Section 8b

SARA - Superfund Amendments and Reauthorization Act

Section 302 - Extremely Hazardous Substances:

no substances listed

Section 304 - Hazardous substances:

no substances listed

Section 313 - Toxic chemical list:

Lithium carbonate

CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act

Substance(s) listed under CERCLA:

no substances listed

CAA - Clean Air Act

CAA listed substances:

no substances listed

CWA - Clean Water Act

CWA listed substances:

no substances listed

USA - State specific regulations

California Proposition 65

Substance(s) listed under California Proposition 65:

Silica Sand	Listed as carcinogen
Lithium carbonate	Listed as reproductive toxicant

Massachusetts Right to know

Substance(s) listed under Massachusetts Right to know:

Silica Sand

Portland cement

Lithium carbonate

Pennsylvania Right to know

Substance(s) listed under Pennsylvania Right to know:

Silica Sand

Portland cement

New Jersey Right to know

Substance(s) listed under New Jersey Right to know:

Silica Sand

Portland cement

Lithium carbonate

Canada- Federal regulations

DSL - Domestic Substances List

DSL Inventory:

All the substances are listed in the DSL.

NDSL - Non Domestic Substances List

NDSL Inventory:

no substances listed

NPRI - National Pollutant Release Inventory

Substances listed in NPRI:

no substances listed

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16. OTHER INFORMATION

Code	Description
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H350	May cause cancer .
H350.A	May cause cancer if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure .
H372.A	Causes damage to organs through prolonged or repeated exposure if inhaled.

Safety Data Sheet dated: 6/8/2016 - version 2
Product code: 1850

Additional classification information

NFPA

HMIS Health: 2 = Moderate
HMIS Health - Is health hazard chronic?: Yes
HMIS Flammability: 0 = Not Combustible
HMIS Reactivity: 0 = Minimal
HMIS P.P.E.: Safety glasses, gloves, dust respirator
NFPA Health: 2 = Moderate
NFPA Flammability: 0 = Not Combustible
NFPA Reactivity: 0 = Minimal
NFPA Special Risk: NONE

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. The information herein is presented in good faith and believed to be accurate as of the effective date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State or provincial, and local laws.

This document was prepared by a competent person who has received appropriate training.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This SDS cancels and replaces any preceding release.

Legend to abbreviations and acronyms used in the safety data sheet:

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
RID: Regulation Concerning the International Transport of Dangerous Goods by Rail.
IMDG: International Maritime Code for Dangerous Goods.
IATA: International Air Transport Association.
IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
ICAO: International Civil Aviation Organization.
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
CLP: Classification, Labeling, Packaging.
EINECS: European Inventory of Existing Commercial Chemical Substances.
INCI: International Nomenclature of Cosmetic Ingredients.
CAS: Chemical Abstracts Service (division of the American Chemical Society).
GefStoffVO: Ordinance on Hazardous Substances, Germany.
LC50: Lethal concentration, for 50 percent of test population.
LD50: Lethal dose, for 50 percent of test population.
DNEL: Derived No Effect Level.
PNEC: Predicted No Effect Concentration.
TLV: Threshold Limiting Value.
TWATLV: Threshold Limit Value for the Time Weighted Average 8 hour day. (ACGIH Standard).
STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
WGK: German Water Hazard Class.
KSt: Explosion coefficient.

Paragraphs modified from the previous revision:

- 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING
- 2. HAZARDS IDENTIFICATION
- 3. COMPOSITION/INFORMATION ON INGREDIENTS
- 4. FIRST AID MEASURES
- 9. PHYSICAL AND CHEMICAL PROPERTIES
- 11. TOXICOLOGICAL INFORMATION
- 12. ECOLOGICAL INFORMATION
- 15. REGULATORY INFORMATION
- 16. OTHER INFORMATION

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

PRODUCT NAME	**VAPOR LOCK 20/20**
PRODUCT USE	Water-based concrete admixture that stops the route of moisture migration
MANUFACTURER'S NAME	SPECIALTY PRODUCTS GROUP TEL 1-877-957-4626 SPECIALTY PRODUCTS GROUP 6254 SKYWAY RD., PO BOX 915 FAX 905-527-0606 3909 Witmer RD, Suite 1014 SMITHVILLE, ON. L0R 2A0 NIAGARA FALLS, NY 14305
EMERGENCY NUMBER	613-996-6666 OR *666 CANUTEC 1-800-535-5053 UNITED STATES POISON INFORMATION CENTRE

2. HAZARDS IDENTIFICATION

ROUTE OF ENTRY	Eye contact, Ingestion, Inhalation, Skin contact.
CARCINOGENIC STATUS	Not considered carcinogenic by NTP, IARC, and OSHA.
TARGET ORGANS	Eye, Skin, and lungs
HEALTH EFFECTS – EYE	Moderate irritation expected
HEALTH EFFECTS – SKIN	Moderate irritation expected.
HEALTH EFFECTS – INGESTION	May cause irritation to the mouth, esophagus and stomach and damage to kidney, central nervous system and blood.
HEALTH EFFECTS – INHALATION	Spray mist is irritating to the respiratory system.

NAPA

HMIS

0-MINIMAL; 1-SLIGHT; 2-MODERATE; 3-HIGH; 4-EXTREME

3.COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS NUMBER	WEIGHT %	TWA Ppm	LD50 ORAL RAT Mg/kg	LC50 INHAL RAT ppm
SILICIC ACID, SODIUM SALT PROPIETARY BLEND	1344-09-8	5-25	NA	NA	NA

4. FIRST AID MEASURES

FIRST AID – INHALATION	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.
FIRST AID – SKIN	Immediately flood the skin with large quantities of water. Remove contaminated clothing and shoes. Obtain medical attention.
FIRST AID – EYE	Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention.
FIRST AID – INGESTION	If swallowed, Obtain medical attention immediately. If victim is fully conscious, give a cupful of milk. If conscious induce vomiting. Never give anything by mouth to an unconscious person.

INFORMATION FOR DOCTOR

Most important symptoms and effects, both acute and delayed.
No further relevant information

Indications of any immediate medical attention and special treatment needed.
No further relevant information available.

5. FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY	Non-flammable. Will not support combustion.
EXTINGUISHING MEDIA	Is compatible with all extinguishing media.
SPECIAL HAZARDS OF PRODUCT	Dries to form glass film which can easily cut the skin. Spilled material is very slippery. Can etch glass if not promptly removed.
PROTECTIVE EQUIPMENT FOR FIRE FIGHTING	Wear full protective clothing when this material is present in the area of the fire.
EXPLOSION DATA – SENSITIVITY TO IMPACT	N/A
EXPLOSION DATA – SENSITIVITY TO STATIC DISCHARGE	N/A

6. ACCIDENTAL RELEASE MEASURES

SPILL PROCEDURES	Small spills – Mop up and neutralize liquid, dispose in accordance with federal, provincial and local regulations or permits. Large spills – Isolate hazard area. Do not touch or walk through spilled material. Isolate, dike and store discharged material, if possible. Use sand or earth to contain material. If containment is impossible, neutralize contaminated area and flush with large quantities of water.
PERSONAL PRECAUTIONS	Wear chemical goggles, body-covering protective clothing, chemical resistant gloves and rubber boots. Use a NIOSH-approved dust and mist respirator where spray mist occurs.
ENVIRONMENTAL PRECAUTIONS	Prevent the material from entering drains or watercourses. Notify authorities if spill has entered watercourse or sewer.

REFERENCES TO OTHER SECTIONS

See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment
See Section 13 for disposal information

7. HANDLING AND STORAGE

HANDLING	Avoid contact with eyes, skin and clothing. Avoid breathing mist. Keep container closed. Promptly clean up spills.
STORAGE	Keep container closed. Store in clean steel or plastic containers. Separate from acids, reactive metals and ammonium salts. Storage temperature 0-95 deg C. Do not store in aluminum, fiberglass, copper, brass, zinc or galvanized containers.

INFORMATION ABOUT PROTECTION AGAINST EXPLOSION AND FIRE
Keep ignition sources away – Do not smoke
Protect against electrostatic charges

SPECIFIC END USE(S)
No further relevant information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROL MEASURES	Use with adequate ventilation. Keep containers closed. Safety shower and eyewash fountain should be within direct access.
RESPIRATORY PROTECTION	Use a NIOSH-approved dust and mist respirator where spray mist occurs. Observe Provincial regulations for respiratory use.
HAND PROTECTION	Full-length gloves should be worn during all handling operations. Neoprene gloves.
EYE PROTECTION	Chemical goggles should be worn during all handling operations to protect against splashing.
BODY PROTECTION	Discard contaminated protective equipment. If there is danger of splashing, wear overall or apron.
PROTECTION DURING APPLICATION	During application, adequate ventilation must be provided. Mix in a well-ventilated area. If ventilation is poor, wear respiratory protection. Dries to form glass film which can easily cut the skin. Spilled material is very slippery. Can etch glass if not promptly removed.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
ODOUR & APPEARANCE	Odorless, clear
ODOR THRESHOLD (ppm)	NA
SPECIFIC GRAVITY	1.07 – 1.10
VAPOR DENSITY (AIR = 1)	ND
VAPOR PRESSURE 20 C	ND

EVAPORATION RATE	ND
BOILING POINT (^{0} C)	ND
FREEZING POINT (^{0} C)	ND
pH	ND
COEFFICIENT OF WATER/OIL DISTRIBUTION	ND
SOLUBILITY IN WATER	Miscible
VOC (g/l)	0
FLASH POINT (PMCC) (°C/F)	Non-flammable.
UPPER FLAMMABLE LIMIT %VOL	NA
LOWER FLAMMABLE LIMIT %VOL	NA
AUTOIGNITION TEMP (°C/F)	NA

10. STABILITY AND REACTIVITY

STABILITY	Stable under normal conditions
CONDITIONS TO AVOID	Do Not Freeze
MATERIALS TO AVOID	Gels and can generate heat when mixed with acid. May react with ammonium salts resulting in evolution of ammonia gas. Flammable hydrogen gas may be produced on contact with aluminum, tin, lead and zinc. May react with strong oxidizing agents.
HAZARDOUS POLYMERIZATION	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS	Hydrogen gas.

11. TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE	Irritation to the eyes and skin is expected. Irritation and burning sensation of mouth, throat, nausea, vomiting and abdominal pain. On inhalation of liquid will cause irritation to mucous membranes, coughing and wheezing.
EFFECTS OF CHRONIC EXPOSURE	May cause dermatitis and irritation on repeated contact.
EXPOSURE LIMITS	NA
IRRITANCY	Moderate irritation expected
SENSITIZATION	ND
CARCINOGENICITY	Not listed as a carcinogen by IARC, NTP or OSHA.
REPRODUCTIVE TOXICITY	ND
TERATOGENICITY	ND
MUTAGENICITY	ND
TOXICOLOGICALLY SYNERGISTIC PRODUCTS	ND

12. ECOLOGICAL INFORMATION

MOBILITY	Sinks and mixes with water. Diluted material rapidly depolymerizes to yield dissolved silica in a form that is indistinguishable from natural dissolved silica.
PERSISTENCE/DEGRADABILITY	This product is not persistent in aquatic systems, but its high pH when undiluted or unneutralized is harmful to aquatic life. Full ecological impact has not been determined.
BIO-ACCUMULATION	Neither silica nor sodium will appreciably bioconcentrate up the food chain.
ECOTOXICITY	The following data is reported for sodium silicate on a 100% basis: A 96 hour median tolerance for: Fish (Gambusia affnis) of 2320 ppm; Water fleas (Daphnia magna) of 247 ppm; Snail eggs (Lymnea) of 632 ppm; (Amphipoda) of 160 ppm.

RESULTS of PBT and vPvB Assessment
PBT: N/A
vPvB: N/A

13. DISPOSAL CONSIDERATIONS

PRODUCT DISPOSAL	Absorb product on an inert material (sand or earth) and transfer absorbed product into a waste container. Dispose of in accordance with all applicable local and national regulations.
CONTAINER DISPOSAL	Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues. Dispose of containers with care.

UNCLEANED PACKAGINGS
Recommendation: Disposal must be made according to official regulations

14. TRANSPORTATION INFORMATION

CANADA	**TDG CLASSIFICATION**
HAZARD LABEL NOT REQUIRED	NOT REGULATED, Keep from freezing
EXPORT	
DOT CFR 172.101 DATA	NOT REGULATED
UN PROPER SHIPPING NAME	NA
UN CLASS	NA
UN NUMBER	NA
UN PACKAGING GROUP	NA
FLASH POINT	NA
HAZARDOUS MATERIAL	NA
HAZARD LABEL	NA
MARINE POLLUTANT	NO
SPECIFIC PRECAUTIONS FOR USER	M/A

15. REGULATORY INFORMATION

WHMIS CLASSIFICATION: CLASS D, DIV.2, SUBDIVISION B-Material causing other toxic effects.

CEPA STATUS (DSL) : All of the ingredients of this product are listed on the Domestic Substances List.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by CPR.

16. OTHER INFORMATION

HAZARD RATING (HMIS)	HEALTH: 1 FLAMMABLITY: 0 REACTIVITY: 0 0-MINIMAL; 1-SLIGHT; 2-MODERATE; 3-HIGH; 4-EXTREME
KEY	NA: No applicable information found or available CAS#: Chemical Abstracts Service Number ACGIH: American Conference of Governmental Industrial Hygienists OSHA: Occupational Safety and Health Administration TLV: Threshold Limit Value PEL: Permissible Exposure Limit STEL: Short Term Exposure Limit NTP: National Toxicology Program IARC: International Agency for Research on Cancer R: Risk S: Safety LD50: Lethal Dose 50% LC50: Lethal Conce.ntration 50%
PREPARED BY:	Specialty Products Group Inc.

SDS REVISION DATE	**JAN 1 2017**

Provided data is offered in good faith as typical values and not as a product specification. No warranty, either express or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable, however, each user should review these recommendations.

SAFETY DATA SHEET

1. Identification

Product identifier **WATERSTOP-RX® 101**

Other means of identification Not available.

Recommended use Not available.

Recommended restrictions Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name CETCO, an MTI Company

Address 2870 Forbs Avenue
Hoffman Estates, IL 60192
United States

Telephone General Information 800 527-9948

Website http://www.cetco.com/

E-mail safety.data@amcol.com

Emergency phone number .

Americas 1.866.519.4752 (US, Canada, Mexico) 1 760 476 3962 Access Code 333562

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Prevention Observe good industrial hygiene practices.

Response If exposed or concerned: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
CARBON BLACK		1333-86-4	< 1
Other components below reportable levels			90 - 100

Impurities

Chemical name	CAS number	%
QUARTZ	14808-60-7	

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

Composition comments Occupational Exposure Limits for impurities are listed in Section 8. This product contains naturally occurring crystalline silica (not listed in Annex I of Directive 67/548/EEC) in quantities less than 6%.

4. First-aid measures

Inhalation Not likely, due to the form of the product. Get medical attention, if needed.

Skin contact No specific first aid measures noted. Wash with water and soap as a precaution.

Eye contact	Flush eyes immediately with large amounts of water. If irritation persists get medical attention.
Ingestion	Not likely, due to the form of the product. If ingestion of a large amount does occur, seek medical attention.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Dry chemical, CO2, water spray or regular foam. Carbon dioxide (CO2). Use any media suitable for the surrounding fires.
Unsuitable extinguishing media	None known.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	In the event of fire, wear self-contained breathing apparatus.
Fire-fighting equipment/instructions	In the event of fire, cool tanks with water spray.
Specific methods	Cool containers exposed to flames with water until well after the fire is out. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Not a fire hazard. No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	For waste disposal, see section 13 of the SDS.
Environmental precautions	None known.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. In case of insufficient ventilation, wear suitable respiratory equipment.
Conditions for safe storage, including any incompatibilities	No special restrictions on storage with other products. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Keep in a cool, well-ventilated place.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	
CARBON BLACK (CAS 1333-86-4)	PEL	3.5 mg/m3	
Additional components	**Type**	**Value**	**Form**
INERT OR NUISANCE DUSTS (CAS SEQ250)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Additional components	Type	Value	Form
INERT OR NUISANCE DUSTS (CAS SEQ250)	TWA	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.
Impurities	**Type**	**Value**	**Form**
QUARTZ (CAS 14808-60-7)	TWA	0.3 mg/m3	Total dust.

US. OSHA Table Z-3 (29 CFR 1910.1000)

Impurities	Type	Value	Form
		0.1 mg/m3	Respirable.
		2.4 mppcf	Respirable.

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
CARBON BLACK (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.

Impurities	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
CARBON BLACK (CAS 1333-86-4)	TWA	0.1 mg/m3

Impurities	Type	Value	Form
QUARTZ (CAS 14808-60-7)	TWA	0.05 mg/m3	Respirable dust.

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines Some of the components of this product are hazardous in the respirable form. However, because of the physical nature of this product, dust generation is not expected.

Appropriate engineering controls If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL, suitable respiratory protection must be worn.

Individual protection measures, such as personal protective equipment

Eye/face protection Eye wash fountain is recommended. Wear safety glasses; chemical goggles for fumes which may arise from thermal processing.

Hand protection For prolonged or repeated skin contact use suitable protective gloves.

Other When material is heated, wear gloves to protect against thermal burns.

Respiratory protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. When dusts or thermal processing fumes are generated and ventilation is not sufficient to effectively remove them, appropriate NIOSH/MSHA approved respiratory protection must be provided.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Use good industrial hygiene practices in handling this material.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Solid.

Color Black. or red

Odor Not available.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0 hPa estimated
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.80 g/cm3 estimated
Percent volatile	0 % estimated estimated
Specific gravity	1.8 estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Stable at normal conditions.
Possibility of hazardous reactions	Will not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	None known.
Hazardous decomposition products	At thermal decomposition temperatures, carbon monoxide and carbon dioxide.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Expected to be a low ingestion hazard.
Inhalation	Prolonged inhalation may be harmful.
Skin contact	Not available.
Eye contact	Direct contact with eyes may cause temporary irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity

Components	**Species**	**Test Results**
CARBON BLACK (CAS 1333-86-4)		
Acute		
Oral		
LD50	Rat	> 8000 mg/kg
Impurities	**Species**	**Test Results**
QUARTZ (CAS 14808-60-7)		
Acute		
Oral		
LD50	Rat	500 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Mild irritant to eyes (according to the modified Kay & Calandra criteria) Mild irritant to eyes (according to the modified Kay & Calandra criteria)
Respiratory or skin sensitization	
Respiratory sensitization	Not available.
Skin sensitization	According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled. Risk of cancer cannot be excluded with prolonged exposure.

IARC Monographs. Overall Evaluation of Carcinogenicity

CARBON BLACK (CAS 1333-86-4)	2B Possibly carcinogenic to humans.
QUARTZ (CAS 14808-60-7)	1 Carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

QUARTZ (CAS 14808-60-7)	Known To Be Human Carcinogen.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not available.

Chronic effects In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.)

In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003)

According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects. Some of the components of this product are hazardous in the respirable form. However, because of the physical nature of this product, dust generation is not expected.

Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled.

12. Ecological information

Ecotoxicity No data available for this product. This material is not expected to be harmful to aquatic life.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Material should be recycled if possible.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not available.

15. Regulatory information

US federal regulations OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - No
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance Yes

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Food and Drug Administration (FDA)
Total food additive
Indirect food additive
GRAS food additive

US state regulations WARNING: This product contains a chemical known to the State of California to cause cancer.

US - Pennsylvania RTK - Hazardous Substances: Listed substance

CARBON BLACK (CAS 1333-86-4)
QUARTZ (CAS 14808-60-7)

US. Massachusetts RTK - Substance List

CARBON BLACK (CAS 1333-86-4)
QUARTZ (CAS 14808-60-7)

US. New Jersey Worker and Community Right-to-Know Act

Not regulated.

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

CARBON BLACK (CAS 1333-86-4)	Listed: February 21, 2003
QUARTZ (CAS 14808-60-7)	Listed: October 1, 1988

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 13-August-2014

Revision date 07-May-2015

Version # 09

Further information This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

HMIS® ratings
Health: 1*
Flammability: 0
Physical hazard: 0

NFPA ratings
Health: 1
Flammability: 0
Instability: 0

Disclaimer The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The manufacturer expressly does not make any representations, warranties, or guarantees as to its accuracy, reliability or completeness nor assumes any liability, for its use. It is the user's responsibility to verify the suitability and completeness of such information for each particular use.

Third party materials: Insofar as materials not manufactured or supplied by this manufacturer are used in conjunction with, or instead of this product, it is the responsibility of the customer to obtain, from the manufacturer or supplier, all technical data and other properties relating to these and other materials and to obtain all necessary information relating to them. No liability can be accepted in respect of the use of this product in conjunction with materials from another supplier. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. The information in the sheet was written based on the best knowledge and experience currently available.

Safety Data Sheet

1 - Identification

Product Name: WD-40 Multi-Use Product Aerosol ***NOT FOR SALE IN CALIFORNIA*** **Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion** **Restrictions on Use: None identified** **SDS Date Of Preparation: 07/20/2014**	**Manufacturer: WD-40 Company** **Address: 1061 Cudahy Place (92110)** **P.O. Box 80607** **San Diego, California, USA** **92138 –0607** **Telephone:** **Emergency only: 1-888-324-7596 (PROSAR)** **Information: 1-888-324-7596** **Chemical Spills: 1-800-424-9300 (Chemtrec)** **1-703-527-3887 (International Calls)**

2 – Hazards Identification

Hazcom 2012/GHS Classification:
Flammable Aerosol Category 1
Gas Under Pressure: Compressed Gas
Aspiration Toxicity Category 1

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

Label Elements:

DANGER!
Extremely Flammable Aerosol.
Contains gas under pressure; may explode if heated.
May be fatal if swallowed and enters airways.
Prevention
Keep away from heat, sparks, open flames, hot surfaces – No smoking.
Do not spray on an open flame or other ignition source.
Pressurized container: Do not pierce or burn, even after use.
Response
IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.
Storage
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place.
Disposal
Dispose of contents and container in accordance with local and national regulations.

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent	US Hazcom 2012/ GHS Classification
Aliphatic Hydrocarbon	64742-47-8	45-50	Flammable Liquid Category 3

			Aspiration Toxicity Category 1
Petroleum Base Oil	64742-56-9 64742-65-0 64742-53-6 64742-54-7 64742-71-8	<25	Not Hazardous
LVP Aliphatic Hydrocarbon	64742-47-8	12-18	Aspiration Toxicity Category 1
Carbon Dioxide	124-38-9	2-3	Simple Asphyxiant Gas Under Pressure, Compressed Gas
Non-Hazardous Ingredients	Mixture	<10	Not Hazardous

Note: The exact percentages are a trade secret.

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.
Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.
Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.
Signs and Symptoms of Exposure: May cause eye and respiratory irritation. Inhalation may cause coughing, headache and dizziness. Skin contact may cause drying of the skin.
Indication of Immediate Medical Attention/Special Treatment Needed: Immediate medical attention is needed for ingestion.

5 – Fire Fighting Measures

Suitable (and unsuitable) Extinguishing Media: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.
Specific Hazards Arising from the Chemical: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Combustion will produce oxides of carbon and hydrocarbons.
Special Protective Equipment and Precautions for Fire-Fighters: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.

6 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.
Methods and Materials for Containment/Cleanup: Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 – Handling and Storage

Precautions for Safe Handling: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.

Conditions for Safe Storage: Store in a cool, well-ventilated area, away from incompatible materials Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol. Store away from oxidizers.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA, 10 mg/m3 STEL ACGIH TLV 5 mg/m3 TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product
Appropriate Engineering Controls: Use in a well-ventilated area.
Personal Protection:
Eye Protection: Avoid eye contact. Always spray away from your face.
Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.
Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended
Appropriate Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.
Personal Protection:
Eye Protection: Safety goggles recommended where eye contact is possible.
Skin Protection: Wear chemical resistant gloves.
Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Appearance:	Light amber liquid	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8%
Odor:	Mild petroleum odor	Vapor Pressure:	95-115 PSI @ 70°F
Odor Threshold:	Not established	Vapor Density:	Greater than 1 (air=1)
pH:	Not Applicable	Relative Density:	0.8 – 0.82 @ 60°F
Melting/Freezing Point	Not established	Solubilities:	Insoluble in water
Boiling Point/Range:	361 - 369°F (183 - 187°C)	Partition Coefficient; n-octanol/water:	Not established
Flash Point:	122°F (49°C) Tag Closed Cup (concentrate)	Autoignition Temperature:	Not established
Evaporation Rate:	Not established	Decomposition Temperature:	Not established
Flammability (solid, gas)	Flammable Aerosol	Viscosity:	2.79-2.96 cSt @ 100°F
VOC:	412 grams/liter (49.5%)	Pour Point:	-63°C (-81.4°F) ASTM D-97

10 – Stability and Reactivity

Reactivity: Not reactive under normal conditions
Chemical Stability: Stable

Possibility of Hazardous Reactions: May react with strong oxidizers generating heat.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.
Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

Symptoms of Overexposure:
Inhalation: High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.
Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.
Ingestion: This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.
Chronic Effects: None expected.
Carcinogen Status: None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.
Reproductive Toxicity: None of the components is considered a reproductive hazard.

Numerical Measures of Toxicity:
The oral toxicity of this product is estimated to be greater than 5,000 mg/kg and the dermal toxicity greater than 2,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

12 – Ecological Information

Ecotoxicity: No specific aquatic toxicity data is currently available, however components of this product are not expected to be harmful to aquatic organisms
Persistence and Degradability: Component are readily biodegradable.
Bioaccumulative Potential: Bioaccumulation is not expected based on an assessment of the ingredients.
Mobility in Soil: No data available
Other Adverse Effects: None known

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Do not puncture or incinerate containers, even empty. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information_

DOT Surface Shipping Description:
UN1950, Aerosols, 2.1 Ltd. Qty (Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark)
IMDG Shipping Description: Un1950, Aerosols, 2.1, LTD QTY
ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1 NOTE: WD-40 does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

15 – Regulatory Information

U.S. Federal Regulations:
CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many

states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
SARA TITLE III:
Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
VOC Regulations: This product complies with the consumer product VOC limits of the US EPA and states adopting the OTC VOC rules but does not comply with CARB.
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.
Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.
Canadian WHMIS Classification: Class A (Compressed gas), Class B-5 (Flammable Aerosol)
This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:
Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

Revision Date: July 20, 2014 Supersedes: May 23, 2014

Revision Summary: Convert to Hazcom 2012. Changes in all sections.

Prepared by: Industrial Health & Safety Consultants, Inc. Shelton, CT, USA

APPROVED By: I. Kowalski Regulatory Affairs Dept.

5049000/No.0015205

SAFETY DATA SHEET

Revision Date – May, 2015

1. Product and Company Information

Trade Name: Carbon Steel Wire, PC Strand, and Welded Wire Reinforcement

Product Use: Primarily concrete reinforcement; other applications may also apply

Manufacturer List & Emergency Phone Number:

Insteel Wire Products – AZ
4750 Olympic Way
Kingman, Arizona 86402
928-692-1001

Insteel Wire Products – FLW
3050 Melson Avenue
Jacksonville, Florida 32254
904-354-8552

Insteel Wire Products – FLS
1 Wiremil Road
Sanderson, Florida 32087
904-275-2100

Insteel Wire Products – KY
3325 State Road 1099
Hickman, Kentucky 42050
270-236-2325

Insteel Wire Products – MO
810 Atchison Street
St. Joseph, Missouri 64503
816-233-1177

Insteel Wire Products – NC
1510 Carter Street
Mount Airy, NC 27030
336-719-9000

Insteel Wire Products – PA
501 Forest Drive
Hazle Township, PA 18202
570-450-2090

Insteel Wire Products – TN
630 National Drive
Gallatin, Tennessee 37066
615-451-6330

Insteel Wire Products – TXW
500 Klemp Road
Dayton, Texas 77535
936-258-7625

Insteel Wire Products – TXS
11020 Tanner Road
Houston, TX 77041
713-937-7178

2. Hazard Identification

Under normal handling and use, exposure to steel wire, welded wire reinforcement or PC strand presents few health hazards. Thermal cutting and welding may produce fumes or dust which could be inhaled and be potentially hazardous. The exposure levels in Section 3 and hazard statements in section 2 b) relate to acute fume and dust exposure.

a) GHS classification

Carcinogenicity (Category 2)
Skin Sensitization (Category 1)
Specific Target Organ Toxicity-Repeated Exposure (Category 1)

b) GHS label elements

Symbol names: "Health hazard", "Irritant"

Note: the following hazard statements may apply to acute fume/dust exposure:
H317: May cause an allergic skin reaction.
H351: Suspected of causing cancer via inhalation.
H372: Causes damage to respiratory tract through prolonged or repeated exposure

Note: the following precautionary statements may apply to acute fume/dust exposure:
P202: Do not handle until all safety precautions have been read and understood.
P261: Avoid breathing dust/fumes.
P281: Use personal protective equipment as required.
P308 + P313: If exposed or concerned get medical advice/attention.

3. Composition

a) Chemical identity:

Principal Hazardous Components	CAS #	Percent	TLV	OSHA PEL	Levels Referring To
Iron	1309-37-1	93 – 99	5 Mg/m³ (Respirable)	10 Mg/m³	As dust or welding fumes
Manganese	7439-96-5	0 – 2.5	5 Mg/m³	5 Mg/m³	As total dust
Silicon	7440-21-3	0 – 1.5	10 Mg/m³	10 Mg/m³	As total dust
Chromium	7440-47-3	0 – 1.0	0.5 Mg/m³	1 Mg/m³	As chromium metal (Cr)
Molybdenum	7439-98-7	0 – 1.0	5 Mg/m³	5 Mg/m³	As soluble Mo
Carbon	7440-44-0	0 – 1.0	3.5 Mg/m³ (as carbon black)	15 Mg/m³	As graphite

b) Synonyms or common product names:
Wire: Bright Basic Wire, Formed Wire, Spiral Wire;
Welded Wire Reinforcement: Mesh; Wire Mesh; Welded Wire Mesh; Welded Wire Fabric; Welded Wire Cloth
PC Strand: Prestressing Steel Strand; Prestressed Concrete Strand; Uncoated Seven-Wire Strand for Prestressed Concrete

4. First Aid Measures

a) Description of necessary measures
Eye Contact - Flush thoroughly with running water to remove particulate.
Skin Contact - Brush off excess dust and wash area thoroughly with soap and water.
Inhalation - Remove to fresh air.
Ingestion - Seek medical attention.

b) Significant symptoms/effects, acute and delayed.
Eye Contact
Dust, particulates, or fumes may cause irritation including pain and redness. Rubbing of the eye may result in scratching of the cornea. Contact with heated material may cause thermal burns.

Skin Contact
Dust or particulates may cause mechanical irritation due to abrasion. Some components in this product are capable of causing an allergic reaction, possibly resulting in burning, itching, and skin eruptions. Contact with heated material may cause thermal burns.

Inhalation
Dust may cause irritation of the nose, throat, and lungs. Excessive inhalation of metallic fumes and dust may result in metal fume fever, an influenza-like illness characterized by a sweet or metallic taste in the mouth accompanied by dryness and irritation of the throat, cough, shortness of breath, pulmonary

edema, general malaise, weakness, fatigue, muscle and joint pains, blurred vision, fever, and chills. Typical symptoms last from 12 to 48 hours.

Ingestion

Not expected to be acutely toxic via ingestion based on the physical and chemical properties of the product. Swallowing excessive amounts of dust may cause irritation, nausea, and diarrhea.

Chronic or Special Toxic Effects

Repeated exposure to fine dust may inflame the nasal mucosa and cause changes to the lung. In addition, a red-brown pigmentation of the eye and/or skin may occur. Welding fumes have been associated with adverse health effects. Product contains suspected carcinogens.

Target Organs

Overexposure to dust or fumes may cause adverse effects to the following organs or systems: eyes, skin, liver, kidney, central nervous system, cardiovascular system, respiratory system.

Medical Conditions Aggravated by Exposure

Exposure may aggravate skin diseases such as eczema or respiratory disorders including asthma, bronchitis, and emphysema. Long-term inhalation exposure to agents that cause pneumoconiosis (e.g. dust) may act synergistically with inhalation of oxide fumes/dust from this product.

c) Indication of immediate medical attention and special treatment needed, if necessary.
Note to Physician- Inhalation of metal fume or metal oxides may produce an acute febrile state, with cough, chills, weakness, and general malaise, nausea, vomiting, muscle cramps, and remarkable leukocytosis. Treatment is symptomatic, and condition is self-limited in 24-48 hours. Chronic exposure to fumes/dust may result in pneumoconiosis of mixed type.

5. Fire-Fighting Measures

a) Extinguishing Media – Use dry powder or sand for molten metal; for steel dust use dry sand, water, foam, argon or nitrogen. Do not use water as extinguishing media for molten metal; do not use carbon dioxide for molten metal or dust.

b) Unusual Fire or Explosion Hazards - Steel products do not present fire or explosion hazards under normal conditions. Any non-oxidized fine metal particles/dust generated by grinding or other related processes may produce materials that should be tested for combustibility by the customer. High concentrations of combustible metallic fines in the air may present an explosion hazard.

c) Firefighters should not enter confined spaces without wearing NIOSH/MSHA approved positive pressure breathing apparatus (SCBA) with full face mask and full protective equipment.

6. Accidental Release Measures

Precautions if Material is Spilled or Released - Emergency response is unlikely unless in the form of combustible dust. Avoid inhalation, eye, or skin contact of dusts by using appropriate precautions outlined in section 8. Keep fine dust or powder away from sources of ignition. Heavy concentrations of airborne dust may be minimized by vacuuming or wet-sweeping dusty areas. Clean-up personnel should wear respirators and protective clothing.

Fire and Explosion Hazards - Some customer processes may generate combustible dust that may require specific precautions when cleaning spills or releases of dust.

Environmental Precautions – Prevent dust or particulates from entering drains, sewers, or waterways. Some grades of steel may contain reportable quantities of alloying elements. See Section 15 for additional information.

Waste Disposal Methods - Dispose used or unused product in accordance with applicable Federal, State, and Local regulations.

7. Handling and Storage

Precautions for Safe Handling - Exercise care during grinding, welding and cutting operations to minimize airborne particles and fumes. Wear respirators; avoid breathing dust or fumes. Use good housekeeping practices to prevent accumulations of dust. Dust and/or particulates may form explosive mixtures with air. Applicable Federal, state and local laws and regulations may require testing dust generated from processing of steel products to determine if it represents a fire or explosion hazard and to determine appropriate protection methods.

Storage conditions - Stable under normal temperatures and pressures. Store away from strong oxidizers.

8. Exposure Controls/Personal Protection

Eye Protection - Safety glasses, eyewash stations
Skin Protection - Protecting clothing including footwear
Respiratory Protection (Specific Type) - MSHA or NIOSH approved respirators
Ventilation Recommended - Use exhaust ventilation
Other Protection - No food consumption in area of concentrations of dust or vapor.

9. Physical and Chemical Properties

a) Appearance (physical state, color etc.): grey or black solid metallic wire; slight oxide coloration (i.e. blue) possible on PC strand;
b) Odor: (N/A)
c) Melting point/freezing point: (MP: ~2700 – 2800 degrees F)
d) Flash point: (N/A)
e) Evaporation rate: (N/A)
f) Flammability (solid, gas): (N/A in bulk form); see sections 5 and 6 for flammability of dust or powder
g) Upper/lower flammability or explosive limits: (N/A)
h) Vapor pressure: (N/A)
i) Solubility(ies): not soluble in water, oil, or alcohol-based reagents
j) Auto-ignition temperature: (N/A)

10. Stability and Reactivity

Stability – Chemically stable
Reactivity/Incompatibility – Strong acids or caustics may produce H_2 gas; do not store near strong oxidizers
Hazardous Decomposition Products – Welding, cutting or grinding may cause metal fumes or dust (see section 4). Keep fine dust or powder away from sources of ignition.

11. Toxicological information

Under normal handling and use, exposure to steel wire, welded wire mesh or PC strand presents few health hazards. Thermal cutting and welding may produce fumes which could be inhaled and be potentially hazardous. The exposure levels in Section 3 relate to fumes and dust.

Chronic overexposure to iron oxide fumes may cause benign pneumoconiosis with symptoms that include chronic bronchitis, emphysema, and shortness of breath upon exertion. Overexposure to dusts and metal fumes from the ferrous alloy elements may cause irritation to the skin, nose, mouth and eyes and lung and affect the gastrointestinal, nervous, and hemotopoietic systems. Chronic health effects (including cancer) have been associated with the welding fumes of individual component metals.

Fumes of manganese may cause metal fume fever with flu-like symptoms. Prolonged exposure to manganese dust or fumes may lead to "manganism", a neurological syndrome with symptoms including tremors, reduced response speed, irritability, and gait and balance difficulties.

Chromium has been identified as potential human carcinogen. Cancer is generally attributed to the hexavalent (+6) form of chromium which is listed as a carcinogen by NTP and IARC (Group 1). In addition, prolonged and repeated overexposure to chromium dusts or fumes may cause skin ulcers, nasal irritation and ulceration, kidney damage and cancer of the respiratory system. Chromium is a skin sensitizer.

This product may contain small amounts of nickel. Prolonged and repeated contact with nickel may cause sensitization dermatitis. Inhalation of nickel compounds has caused lung damage as well as sinus, nasal and lung cancer in laboratory animals. Nickel is a listed carcinogen by NTP and IARC (Group 1).

This product may contain small amounts of vanadium. Adverse effects from dermal, inhalation or parenteral exposure to various vanadium compounds have been reported. The major target for vanadium pentoxide toxicity is the respiratory tract. Fumes or dust can cause severe eye and respiratory irritation, and systemic effects. Following overexposure, reported symptoms include chronic bronchitis, green tongue, conjunctivitis, chronic productive cough, and tightness of the chest have been reported following overexposure. Allergic reactions resulting from skin and inhalation exposures have also been reported. Vanadium currently is not regarded as a human carcinogen.

The product may contain small amounts of copper. Copper dust and fumes can irritate the eyes, nose and throat causing coughing, wheezing, nosebleeds, ulcers and metal fume fever. Other effects from repeated copper fume inhalation include discoloration of skin, teeth or hair. Copper also may cause an allergic skin reaction. Overexposure to copper can affect the liver.

12. Ecological information

No specific information is available regarding this product.

13. Disposal information

Dispose in accordance with federal, state, and local health/environmental regulations. Prevent materials from entering drains, sewers, or waterways. Recycling is encouraged.

14. Transport Information

a) UN number: N/A
b) UN proper shipping name: N/A
c) Transport hazard class(es): Not regulated
d) Environmental hazards: N/A
e) Special shipping precautions: N/A

15. Regulatory Information

The following listing of regulations relating to an IWP product may not be complete and should not be solely relied upon for all regulatory compliance responsibilities.

This product and/or its constituents are subject to the following regulations:

OSHA Regulations:

This product is not hazardous under the criteria of the Federal OSHA Hazardous Communication Standard 29 CFR 1910.1200. However, dust and fumes from this product may be combustible or hazardous and require protection to comply with applicable Federal, State and local laws and regulations.

EPA Regulations:

RCRA: Chromium is regulated under this act.

Clean Water Act: Chromium is a Section 307 Priority Pollutant

Safe Drinking Water Act: Chromium, Iron, Manganese and Molybdenum are regulated under this act.

Toxic Substance Control Act (TSCA): Components of this product are listed on the TSCA Inventory

CERCLA Hazardous Substance (40 CFR 302.4): This product as a whole is not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA), Title III

Section 311/312: Immediate (acute) health hazard and delayed (chronic) health hazard

This product contains EPCRA Section 313 chemicals subject to the reporting requirements of the Emergency Planning and Community Right-To-Know Act of 1986.

State Regulations:

California Proposition 65: This product may contain chemicals known to the State of California to cause cancer and chemicals known to cause birth defects or other reproductive harm.

This product may contain components subject to Massachusetts; Pennsylvania and New Jersey substance lists.

Other Regulations: The product as a whole is not listed in any state regulations. However, individual components of the product are listed in various state regulations:

WHMIS (Canadian): D2B Product Classification

16. Other Information Including Information on Preparation of the SDS

Prepared by Insteel Wire Products Company

Hazard Rating System:

NFPA Code: 0-0-0 HMIS Code: 0-0-0 PPE: See Section 8

Although Insteel Wire Products has attempted to provide current and accurate information herein, Insteel Wire Products cannot warrant the absolute correctness of this information. Insteel Wire Products also assumes no liability for any loss, damage or injury of any kind which may result from or arise out of the use of or reliance on this information by any person or organization.

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: 1100 **Part Number:** 3011000

Manufacturer: W. R. MEADOWS, INC. **Address:** 300 Industrial Drive, Hampshire, Illinois 60140

Telephone: (847) 214-2100 In case of emergency, dial (800) 424-9300 (CHEMTREC)

Revision Date: 12/26/2017

Product Use: Concrete Curing Compound

SECTION 2: HAZARDS IDENTIFICATION/EXPOSURE LIMITS

HMIS	
|Health|	| 1 |
|Flammability|	| 0 |
|Reactivity|	| 0 |
|Personal Protection|	| |

HAZARD STATEMENTS

WARNING!

May cause skin irritation.

May cause eye irritation.

May cause respiratory irritation.

PRECAUTIONARY STATEMENTS

Avoid direct contact.

Avoid of inhalation of mists/vapors.

SECTION 3: HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20°C)	LEL (@25°C)
1. Light Aromatic Naphtha	64742-95-6	5-10	No	2.1	1

Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 (SARA) and 40 CFR Part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313." *N/A: Not Applicable*

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with water for fifteen minutes. If symptoms persist, seek medical attention.

SKIN CONTACT: Remove contaminated shoes/clothing. Wipe excess from skin and wash with soap if available. Seek medical attention if irritation persists. Do not use clothing until throughly decontaminated.

INHALATION: Remove victim to fresh air and treat symptomatically. Seek medical attention if symptoms persist.

INGESTION: Do not induce vomiting. If vomiting spontaneously occurs, keep the victim's head below the hips to prevent lung aspiration. Seek immediate medical attention.

SECTION 5: FIRE AND EXPLOSIVES HAZARDS

FLASHPOINT: >210°F

EXTINGUISHING MEDIA: Water fog, foam, dry chemical, or carbon dioxide.

CHEMICAL/COMBUSTION HAZARDS: Carbon dioxide, carbon monoxide, and incomplete combustion products.

PRECAUTIONS/PERSONAL PROTECTIVE EQUIPMENT: Avoid smoke inhalation. Personal protective equipment should include helmet, face shield, bunker coat, gloves, rubber boots, and a positive pressure NIOSH-approved self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Evacuate unauthorized personnel from spill area. Wear appropriate personal protective equipment. Shut off source of spill if safe to do so. Dike and contain. Recover free product and soak up residue with an absorbent, such as clay or other suitable material. Place in non-leaking containers for proper disposal. Flush area to remove trace residues. Dispose of flush solutions as above.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES: Avoid direct contact.

SAFE STORAGE: Keep containers closed when not in use. Prevent product from freezing.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

	OSHA				ACGIH			
Chemical Name:	PEL	PEL/CEILING	PEL/STEL	SKIN	TWA	TLV/CEILING	TLV/STEL	SKIN
1. Light Aromatic Naphtha	N/E	N/E	N/E	N/E	N/E	N/E	N/E	N/E

N/E: Not Established

ENGINEERING CONTROLS: None required under normal use conditions.

PERSONAL PROTECTIVE EQUIPMENT: Safety glasses, chemical-resistant gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 212°F **VAPOR DENSITY:** > 1 (Air=1) **% VOLATILE BY VOLUME:** 85

EVAPORATION RATE: <1 (Ether =1) **pH LEVEL:** 8.80 **% VOLATILE BY WEIGHT:** 84

WEIGHT PER GALLON: 8.33 **PRODUCT APPEARANCE:** Tan Liquid **VOC CONTENT:** 278 g/L

SAFETY DATA SHEET

SECTION 10: STABILITY/REACTIVITY

STABILITY: Stable. **HAZARDOUS POLYMERIZATION:** Will not occur.
CONDITIONS AND MATERIALS TO AVOID: Strong oxidizing agents.
HAZARDOUS DECOMPOSITION PRODUCTS: None recognized.

SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: Direct contact may cause mild to moderate irritation. Product vapors/mists may also cause irritation.
SKIN CONTACT: Direct contact may result in mild to moderate irritation.
INHALATION: Not expected to be an exposure pathway under normal use conditions.
INGESTION: Not expected to be an exposure pathway under normal use conditions.
SIGNS AND SYMPTOMS: Symptoms of eye irritation include pain, tearing, redness, and swelling. Symptoms of skin irritation include reddening, swelling, and rash. Symptoms of respiratory irritation include runny nose, coughing, chest discomfort, shortness of breath, and reduced lung function. Symptoms of gastrointestinal irritation include sore throat, abdominal pain, nausea, vomiting, and diarrhea.
AGGRAVATED MEDICAL CONDITIONS: None recognized.
OTHER HEALTH EFFECTS: None recognized.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: N/E **DEGRADABILITY:** N/E **BIOACCUMULATIVE POTENTIAL:** N/E
SOIL MOBILITY: N/E **OTHER ADVERSE EFFECTS:** N/E

SECTION 13: WASTE DISPOSAL INFORMATION

WASTE DISPOSAL INFORMATION: Classified as a non-hazardous waste.

SECTION 14: TRANSPORTATION INFORMATION

HAZARDOUS/NON-HAZARDOUS MATERIAL: Non-hazardous.
UN NUMBER: None. **HAZARD CLASS:** None. **PACKING GROUP:** None.
UN PROPER SHIPPING NAME: Not regulated.
ENVIRONMENTAL HAZARDS: Not applicable.
BULK TRANSPORTATION INFORMATION: Not regulated when shipped in bulk configuration.
SPECIAL PRECAUTIONS: Protect product from freezing.

SECTION 15: REGULATORY INFORMATION

OTHER REGULATORY CONSIDERATIONS: None.

SECTION 16: OTHER INFORMATION

PREPARATION DATE: 12/26/2017
PREPARED BY: Dave Carey

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: **1600 Series** **Part Number: 3016000**

Manufacturer: **W. R. MEADOWS, INC.** **Address:** 300 Industrial Drive, Hampshire, Illinois 60140

Telephone: (847) 214-2100 In case of emergency, dial (800) 424-9300 (CHEMTREC)

Revision Date: 1/31/2018

Product Use: Concrete Curing Compound

SECTION 2: HAZARDS IDENTIFICATION/EXPOSURE LIMITS

HMIS	
|Health|	|1|
|Flammability|	|0|
|Reactivity|	|0|
|Personal Protection|	| |

Product is classified as non-hazardous per OSHA 1910.1200.

SECTION 3: HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20°C)	LEL (@24°C)
1 Titanium Dioxide	13463-67-7	1-5	No	N/A	N/A

Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthoprization Act of 1966 (SARA) and 40 CFR Part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313." *N/A = Not Applicable*

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush eyes with water. If irritation persists, seek medical attention.
SKIN CONTACT: Wash affected areas with mild soap and water. If irritation persists, seek medical attention.
INHALATION: Not expected to be an exposure route.
INGESTION: Dilute with liquid unless victim is unconscious or very drowsy. If vomiting occurs, keep head below the hips to prevent lung aspiration. Seek immediate medical attention.

SECTION 5: FIRE AND EXPLOSIVES HAZARDS

FLASHPOINT: > 210°F
EXTINGUISHING MEDIA: Not applicable, product will not support combustion.
CHEMICAL/COMBUSTION HAZARDS: None required.
PRECAUTIONS/PERSONAL PROTECTIVE EQUIPMENT: None required.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Remove/contain source of release. Dike/Contain spilled material. Avoid direct contact. Use appropriate absorbents to clean-up residues. Place in sealed containers for proper disposal.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES: Avoid direct contact.
SAFE STORAGE: Do not allow product to freeze.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name:	PEL	PEL/CEILING	OSHA PEL/STEL	SKIN	ACGIH TLV	TLV/CEILING	TLV/STEL	SKIN
1. Titanium Dioxide*	N/A	N/E	N/E	No	N/A	N/E	N/E	N/E

*: This material is in solution. No exposure is anticipated unless the product is dried/abraded. *N/E: Not Established* *N/A: Not Applicable*

ENGINEERING CONTROLS: None required under normal use conditions.
PERSONAL PROTECTIVE EQUIPMENT: Safety glasses, chemical resistant gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 212°F **VAPOR DENSITY:** >1 (AIR=1) **% VOLATILE BY VOLUME:** 75
EVAPORATION RATE: As water **pH LEVEL:** 8.67 **% VOLATILE BY WEIGHT:** 75
WEIGHT PER GALLON: 8.25 **PRODUCT APPEARANCE:** White liquid **VOC CONTENT:** 52 to 145 g/L *(Product Specific)*

SECTION 10: STABILITY/REACTIVITY

STABILITY: Stable. **HAZARDOUS POLYMERIZATION:** Will not occur.
CONDITIONS AND MATERIALS TO AVOID: None recognized.
HAZARDOUS DECOMPOSITION PRODUCTS: None recognized.

SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: Direct contact may cause mild irritation.
SKIN CONTACT: Direct contact may cause slight skin irritation.
INHALATION: Not anticipated to be an exposure route.
INGESTION: May cause mild irritation of the gastrointestinal tract.

SAFETY DATA SHEET

Section 11 continued

SIGNS AND SYMPTOMS: Symptoms of eye irritation include tearing, reddening, and swelling. Symptoms of skin irritation include redness and swelling. Gastrointestinal irritation symptoms include nausea, vomiting, and abdominal discomfort.
AGGRAVATED MEDICAL CONDITIONS: None recognized.
OTHER HEALTH EFFECTS: None recognized. None of the components of this product are recognized as being carcinogenic.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: N/E **DEGRADABILITY:** N/E **BIOACCUMULATIVE POTENTIAL:** N/E
SOIL MOBILITY: N/E **OTHER ADVERSE EFFECTS:** None Recognized

SECTION 13: WASTE DISPOSAL INFORMATION

WASTE DISPOSAL INFORMATION: Product is classified as a non-hazardous waste.

SECTION 14: TRANSPORTATION INFORMATION

HAZARDOUS/NON-HAZARDOUS MATERIAL: Not regulated by DOT.
UN NUMBER: None. **HAZARD CLASS:** N/A **PACKING GROUP:** N/A
UN PROPER SHIPPING NAME: N/A
ENVIRONMENTAL HAZARDS: None recognized.
BULK TRANSPORTATION INFORMATION: None.
SPECIAL PRECAUTIONS: Protect product from freezing.

SECTION 15: REGULATORY INFORMATION

OTHER REGULATORY CONSIDERATIONS: None recognized.

SECTION 16: OTHER INFORMATION

PREPARATION DATE: 1/31/2018
PREPARED BY: Dave Carey

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: **LIN-SEAL® CLEAR** **Part Number: 3075000**

Manufacturer: **W. R. Meadows®, Inc.** **Address:** 300 Industrial Drive
Hampshire, Illinois 60140

Telephone: (847) 214-2100 In case of emergency, dial (800) 424-9300 (CHEMTREC)

Revision Date: 9/9/2014

Product Use: Anti-Spalling/Sealing Compound for Concrete

SECTION 2: HAZARDS IDENTIFICATION/EXPOSURE LIMITS

HMIS	
|Health|	|1|
|Flammability|	|2|
|Reactivity|	|0|
|Personal Protection|	| |

HAZARD STATEMENTS

WARNING!
Causes skin/eye irritation.
Flammable liquid and vapor.
Harmful if inhaled.
May be fatal if ingested and enters airway.

PRECAUTIONARY STATEMENTS:
Use only in well-ventilated areas.
Avoid breathing vapors and direct contact.
Store in well-ventilated location.
Wear appropriate personal protective equipment.
Control vapors in confined spaces utilizing mechanical ventilation.

SECTION 3: HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20°C)	LEL (@25°C)
1. Mineral Spirits	64742-47-8	45-50	No	2.6	0.75
2. Linseed Oil	8001-26-1	50-55	No	N/A	N/A

Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 (SARA) and 40 CFR Part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313." *N/A: Not Applicable*

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush eyes with water for fifteen (15) minutes. If symptoms persist, seek medical attention.

SKIN CONTACT: Wash affected areas with mild soap and water. Remove contaminated shoes/clothing. If symptoms persist, seek medical attention.

INHALATION: If respiratory symptoms develop move affected individual from exposure source and into fresh air. If symptoms persist, seek medical attention.

INGESTION: Dilute with liquid unless the victim is unconscious or very drowsy. Do not induce vomiting. If vomiting spontaneously occurs, prevent lung aspiration. Seek immediate medical attention.

SECTION 5: FIRE AND EXPLOSIVES HAZARDS

FLASHPOINT: 113 degrees F

EXTINGUISHING MEDIA: Water fog, foam, dry chemical.

CHEMICAL/COMBUSTION HAZARDS: Carbon monoxide, carbon dioxide, and incomplete combustion products.

PRECAUTIONS/PERSONAL PROTECTIVE EQUIPMENT: Avoid smoke inhalation. Use appropriate personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Avoid direct contact. Remove ignition sources. Dike and contain spilled material. Remove source of spill if safe to do so. Apply absorbent and place clean-up material in sealed/marked containers for proper disposal. All materials that come in contact with this product should be placed in sealed, water-filled containers.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES: Avoid direct contact. Materials soaked with linseed oil (rags, absorbent etc.) may spontaneously catch fire if improperly discarded. Immediately after use all materials coming in contact with this product should be placed in a sealed, water-filled container.

SAFE STORAGE: Keep containers closed when not in use. Keep away from ignition sources.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

	OSHA				ACGIH			
Chemical Name:	PEL	PEL/CEILING	PEL/STEL	SKIN	TWA	TLV/CEILING	TLV/STEL	SKIN
1. Mineral Spirits	100 ppm	500 ppm	N/E	No	100 ppm	N/E	200 ppm	N/E
2. Linseed Oil	5 mg/m^3 **+	N/E	N/E	No	10 mg/m^3 **	N/E	N/E	N/E

N/E: Not Established +: 5 mg/m^3 respirable fraction **: Mist in air

ENGINEERING CONTROLS: Use with adequate ventilation. Use explosion-proof equipment.

PERSONAL PROTECTIVE EQUIPMENT: Safety glasses, chemical-resistant gloves.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 350 degrees F
VAPOR DENSITY: >1 (air=1)
% VOLATILE BY VOLUME: N/E
EVAPORATION RATE: <1 (Ether=1)
pH LEVEL: N/E
% VOLATILE BY WEIGHT: 46 (approximate)
WEIGHT PER GALLON: 7.04
PRODUCT APPEARANCE: Brown liquid
VOC CONTENT: 393 g/L

SECTION 10: STABILITY/REACTIVITY

STABILITY: Stable.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS AND MATERIALS TO AVOID: Oxidizing agents, strong acids, and strong alkalies.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, and incomplete combustion products.

SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: Direct contact may cause mild to moderate irritation. Product vapors/mists may also cause irritation.
SKIN CONTACT: Direct contact may cause slight skin irritation. Prolonged/repeated contact may result in irritation/dermatitis.
INHALATION: Exposure may cause irritation of the nose, throat, respiratory tract, and other mucous membranes. Exposure to excessive vapor concentrations may cause signs of transient central nervous system depression (headache, fatigue, drowsiness, dizziness, loss of coordination).
INGESTION: May result in irritation of the gastrointestional tract. Ingestion of excessive quantities may result in symptoms of transient central nervous system depression as noted above.
SIGNS AND SYMPTOMS: Symptoms of eye irritation include tearing, reddening, and swelling. Symptoms of skin irritation include redness and swelling. Gastrointestinal irritation symptoms include nausea, vomiting, and abdominal discomfort. Symptoms of respiratory irritation include runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function. Symptoms of transient central nervous system depression include: headache, fatigue, drowsiness, dizziness, and loss of coordination.
AGGRAVATED MEDICAL CONDITIONS: Pre-existing skin, eye, and respiratory disorders may be aggravated by exposure to this product.
OTHER HEALTH EFFECTS: None recognized.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: N/E
DEGRADABILITY: N/E
BIOACCUMULATIVE POTENTIAL: N/E
SOIL MOBILITY: N/E
OTHER ADVERSE EFFECTS: None Recognized

SECTION 13: WASTE DISPOSAL INFORMATION

WASTE DISPOSAL INFORMATION: Linseed contaminated items should be handled as indicated above. Product is a hazardous waste (D001).

SECTION 14: TRANSPORTATION INFORMATION

HAZARDOUS/NON-HAZARDOUS MATERIAL: Not regulated by DOT (Domestic Land Transportation).
UN NUMBER: None.
HAZARD CLASS: N/A
PACKING GROUP: N/A
UN PROPER SHIPPING NAME: N/A
ENVIRONMENTAL HAZARDS: None recognized.
BULK TRANSPORTATION INFORMATION: None.
SPECIAL PRECAUTIONS: None.

SECTION 15: REGULATORY INFORMATION

OTHER REGULATORY CONSIDERATIONS: None recognized.

SECTION 16: OTHER INFORMATION

PREPARATION DATE: 9/9/2014
PREPARED BY: Dave Carey

SAFETY DATA SHEET

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product: VOCOMP®-20 **Part Number:** 3420000

Manufacturer: W. R. Meadows®, Inc. **Address:** 300 Industrial Drive, Hampshire, Illinois 60140

Telephone: (847) 214-2100 In case of emergency, dial (800) 424-9300 (CHEMTREC)

Revision Date: 9/9/2014

Product Use: Concrete Curing/Sealing Compound

SECTION 2: HAZARDS IDENTIFICATION/EXPOSURE LIMITS

HMIS		HAZARD STATEMENTS
|Health|	|1|	WARNING!
|Flammability|	|0|	Causes skin irritation.
|Reactivity|	|0|	**PRECAUTIONARY STATEMENTS**
|Personal Protection|	| |	Avoid direct contact.

SECTION 3: HAZARDS COMPONENTS

Chemical Name:	CAS Number	% by Weight	SARA 313	Vapor Pressure (mm Hg@20°C)	LEL (@25°C)
1. Propylene Glycol Phenyl Ether	770-35-4	1-5	No	< 1	0.8

Under the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1966 (SARA) and 40 CFR Part 372, chemicals listed on the 313 List (40 CFR Part 373.65) are identified under the heading "SARA 313."

SECTION 4: EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Flush eyes with water for fifteen (15) minutes. If symptoms persist, seek medical attention.
SKIN CONTACT: Wash affected areas with mild soap and water. Remove contaminated shoes/clothing. If symptoms persist, seek medical attention.
INHALATION: Not expected to be an exposure route as supplied. If respiratory symptoms develop, seek medical attention.
INGESTION: Dilute with liquid unless the victim is unconscious or very drowsy. Do not induce vomiting. If vomiting spontaneously occurs, prevent lung aspiration. Seek immediate medical attention.

SECTION 5: FIRE AND EXPLOSIVES HAZARDS

FLASHPOINT: Product will not flash due to water content.
EXTINGUISHING MEDIA: Water fog, foam, dry chemical.
CHEMICAL/COMBUSTION HAZARDS: Carbon monoxide, carbon dioxide, and incomplete combustion products.
PRECAUTIONS/PERSONAL PROTECTIVE EQUIPMENT: Use appropriate personal protective equipment.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURES: Avoid direct contact. Dike and contain spilled material. Remove source of spill if safe to do so. Apply absorbent and place clean-up material in sealed/marked containers for proper disposal. Clean-up materials will be classified as non-hazardous waste.

SECTION 7: HANDLING AND STORAGE

SAFE HANDLING PROCEDURES: Avoid direct contact.
SAFE STORAGE: Prevent product from freezing.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

	OSHA				ACGIH			
Chemical Name:	PEL	PEL/CEILING	PEL/STEL	SKIN	TWA	TLV/CEILING	TLV/STEL	SKIN
1. Propylene Glycol Phenyl Ether	N/E	N/E	N/E	No	N/E	N/E	N/E	N/E

N/E: Not Established

ENGINEERING CONTROLS: None required under normal use conditions.
PERSONAL PROTECTIVE EQUIPMENT: Safety glasses, chemical-resistant gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: 212 degrees F **VAPOR DENSITY:** N/A **% VOLATILE BY VOLUME:** N/E
EVAPORATION RATE: <1 (Ether=1) **pH LEVEL:** 9.4 **% VOLATILE BY WEIGHT:** 80
WEIGHT PER GALLON: 8.46 **PRODUCT APPEARANCE:** Opaque Liquid **VOC CONTENT:** 20 g/L

SECTION 10: STABILITY/REACTIVITY

STABILITY: Stable. **HAZARDOUS POLYMERIZATION:** Will not occur.
CONDITIONS AND MATERIALS TO AVOID: None recognized.
HAZARDOUS DECOMPOSITION PRODUCTS: None recognized.

SAFETY DATA SHEET

SECTION 11: TOXICOLOGICAL INFORMATION

EYE CONTACT: Direct contact may cause mild to moderate irritation.
SKIN CONTACT: Direct contact may cause slight skin irritation. Prolonged/repeated contact may result in irritation.
INHALATION: Not anticipated to be an exposure route.
INGESTION: Not anticipated to be an exposure route.
SIGNS AND SYMPTOMS: Symptoms of eye irritation include tearing, reddening, and swelling. Symptoms of skin irritation include redness and swelling. Gastrointestinal irritation symptoms include nausea, vomiting, and abdominal discomfort. Symptoms of respiratory irritation include runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function.
AGGRAVATED MEDICAL CONDITIONS: Pre-existing skin, eye, and respiratory disorders may be aggravated by exposure to this product.
OTHER HEALTH EFFECTS: None recognized.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICITY: N/E **DEGRADABILITY:** N/E **BIOACCUMULATIVE POTENTIAL:** N/E
SOIL MOBILITY: N/E **OTHER ADVERSE EFFECTS:** None Recognized

SECTION 13: WASTE DISPOSAL INFORMATION

WASTE DISPOSAL INFORMATION: Solidified product can be landfill disposed. No free liquids.

SECTION 14: TRANSPORTATION INFORMATION

HAZARDOUS/NON-HAZARDOUS MATERIAL: Not regulated by DOT.
UN NUMBER: None. **HAZARD CLASS:** N/A **PACKING GROUP:** N/A
UN PROPER SHIPPING NAME: N/A
ENVIRONMENTAL HAZARDS: None recognized.
BULK TRANSPORTATION INFORMATION: None.
SPECIAL PRECAUTIONS: Prevent product from freezing.

SECTION 15: REGULATORY INFORMATION

OTHER REGULATORY CONSIDERATIONS: None recognized.

SECTION 16: OTHER INFORMATION

PREPARATION DATE: 9/9/2014
PREPARED BY: Dave Carey