ACETYLENE
Safety Data Sheet

1. IDENTIFICATION

Product identifier
Product Name ACETYLENE

Other means of identification
Safety data sheet number LIND-P001
UN / ID no. UN1001

Recommended use of the chemical and restrictions on use
Recommended Use Industrial and professional use. Welding.
Uses advised against Consumer use.

Details of the supplier of the safety data sheet
Linde Gas North America LLC
10 Riverview Drive
Danbury, CT 06810
Phone: 908-329-9700
www.lindeus.com

* May include subsidiaries or affiliate companies / divisions.

For additional product information contact your local customer service.

Emergency telephone number
Company Phone Number +1 800-645-4633

CHEMTREC: 1-800-424-9300 (North America) +1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Flammable gases	Category 1
Gases under pressure	Dissolved gas
Simple asphyxiants	Yes

Label elements

Signal word
Danger

Hazard Statements
Extremely flammable gas
May react explosively even in the absence of air at elevated pressure and / or temperature
Contains gas under pressure; may explode if heated
May displace oxygen and cause rapid suffocation
May form explosive mixtures with air

Precautionary Statements - Prevention
Do not handle until all safety precautions have been read and understood
Keep away from heat, sparks, open flames, hot surfaces. — No smoking
Use and store only outdoors or in a well ventilated place
Use a backflow preventive device in piping
Fusible plugs in top, bottom, or valve melt at 98 °C to 107 °C (208° F to 224° F). Do not discharge at pressures above 15 psi (103 kPa)
Close valve after each use and when empty
Never put cylinders into unventilated areas of passenger vehicles

Precautionary Statements - Response
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical attention / advice.
Leaking gas fire: do not extinguish, unless leak can be stopped safely
Eliminate all ignition sources if safe to do so

Precautionary Statements - Storage
Protect from sunlight when ambient temperature exceeds 52°C / 125°F

Precautionary Statements - Disposal
Dispose of contents / containers in accordance with container supplier / owner instructions

Hazards not otherwise classified (HNOC)
Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Volume %	Chemical Formula
Acetylene	74-86-2	60 - 100	C_2H_2
Acetone	67-64-1	5 - 10	C_3H_6O

For safety reasons, acetylene gas is dissolved in acetone in the gas cylinder.

4. FIRST AID MEASURES

Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
Skin contact	Wash off immediately with soap and plenty of water. Contaminated clothing presents a fire hazard and should be removed immediately. Get medical attention if irritation develops and / or persists.
Eye contact	Consult a physician if direct contact with pressurized material occurs. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Seek immediate medical attention / advice.
Ingestion	Not an expected route of exposure.
Self-protection of the first aider	Remove all sources of ignition. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS.

Most important symptoms and effects, both acute and delayed

Symptoms	Simple asphyxiant. May cause suffocation by displacing the oxygen in the air. Exposure to oxygen-deficient atmosphere (<19.5%) may cause dizziness, drowsiness, nausea, vomiting, excess salivation, diminished mental alertness, loss of consciousness and death. Exposure to atmospheres containing 8-10% or less oxygen will bring about unconsciousness without warning and so quickly that the individuals cannot help or protect themselves. Lack of sufficient oxygen may cause serious injury or death. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

DO NOT EXTINGUISH A LEAKING GAS FIRE UNLESS LEAK CAN BE STOPPED. Dry chemical. Water spray or fog.

Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.

Specific extinguishing methods

If possible, stop the flow of gas. Do not extinguish the fire until supply is shut off as otherwise an explosive-ignition may occur. If the fire is extinguished and the flow of gas continues, GET AWAY!

Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Do not direct water at source of leak or safety devices; icing may occur. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible withdraw from area and let fire burn. Use water spray to cool surrounding containers. Be cautious of a Boiling Liquid Evaporating Vapor Explosion, BLEVE, if flame is impinging on surrounding containers. Continue to cool fire exposed cylinders until flames are extinguished. Damaged cylinders should be handled only by specialists.

Specific hazards arising from the chemical

GASEOUS ACETYLENE IS SPONTANEOUSLY COMBUSTIBLE IN AIR AT PRESSURES ABOVE 15 PSI (270 kPa). Pure acetylene is shock sensitive. It requires a very low ignition energy so that fires which have been extinguished without stopping the flow of gas can easily re-ignite with possible explosive force.

Fires involving acetylene occur occasionally at fusible metal pressure relief plugs at the tops and bottoms of cylinders, commonly due to hot metal or slag dropped on the fusible plugs. When the fusible plug releases a large volume of acetylene creating a "roaring" sound. The flame may extend a foot or two away from the cylinder until the pressure is reduced. In most cases, the other end of the cylinder may develop a coating of frost.

If the flame is large, burning from a fusible plug, DO NOT try to put it out unless the cylinder is outdoors or in a very well ventilated area free from sources of ignition. Usually it is very difficult to exinguish large fires because the escaping acetylene may be re-ignited by adjacent ignition sources, thereby possibly creating confined space explosion. Keep containers cool with water spray.

Vapors may travel to source of ignition and flash back. Vapors from liquefied gas are initially heavier than air and spread along ground. Vapors may accumulate in confined areas (basement, tanks, hopper / tank cars, etc.). Cylinders may rupture under extreme heat.

Hazardous combustion products	Carbon monoxide. Carbon dioxide (CO_2).

Protective equipment and precautions for firefighters

Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. If the fire is extinguished and the flow of gas continues, GET AWAY!

As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Consider the risk of potentially explosive atmospheres. Monitor oxygen level. All equipment used when handling the product must be grounded. Use non-sparking tools and equipment. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe. Do not touch or walk through spilled material.
Other Information	Gas / vapor is heavier than air. Prevent from entering sewers, basements and workpits, or any place where accumulation may be dangerous.

Environmental precautions

Environmental precautions	Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material. Prevent spreading of vapors through sewers, ventilation systems and confined areas. See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods for containment	Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. If leak is in container or container valve, contact the appropriate emergency telephone number in Section 1 or call your closest Linde location. DO NOT ATTEMPT TO REMOVE CYLINDERS THAT HAVE BEEN EXPOSED TO HEAT.
Methods for cleaning up	Return cylinder to Linde or an authorized distributor.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Never use copper piping for acetylene service. Only steel or wrought iron pipe should be used. Open cylinder valve minimum amount required (no more than 1-1.5 turns) to deliver acceptable flow to enable the cylinder to be closed quickly in an emergency situation. Acetylene is shipped in a cylinder packed with a porous mass material, and a liquid solvent, commonly acetone. Acetylene is dissolved in the acetone solution and dispersed throughout the porous medium. When the valve of a charged acetylene cylinder is opened, the acetylene comes out of the solution and passes out in the gaseous form. IT IS CRUCIAL THAT FUSE PLUGS IN THE TOPS AND BOTTOMS OF ALL ACETYLENE CYLINDERS BE THOROUGHLY INSPECTED WHENEVER HANDLED. REMOVE AND QUARANTINE IN SAFE LOCATION ANY DEFECTIVE CYLINDER.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof. "NO SMOKING" signs should be posted in storage and use areas. Use equipment purged with inert gas or evacuated prior to discharge from cylinder. Avoid contact with pure copper, mercury, silver and brass with greater than 65% copper. Solvent (acetone) may accumulate in piping system. For maintenance use appropriate resistant gloves, eye goggles. Operating pressure should be limited to 15 psig (103 kPa) or less. Consider the use of flashback arrestors. Unless oxygen and acetylene are separated, there should be a non-combustible partition of at least 5 ft. high with a fire-resistance rating of one-half hour between cylinders. In the U.S. cylinders stored inside a building near user locations must be limited to total capacity of 2500 ft^3 of gas, exclusive of in-use or attached for use cylinders.

Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distance, use a cart designed to transport cylinders. Never attempt to lift a cylinder by its valve protection cap. Never insert an object (e.g. wrench, screwdriver, pry bar,etc.) into valve cap openings. Doing so may damage valve, causing leak to occur. Use an adjustable strap wrench to remove over-tight or rusted caps. Use only with adequate ventilation. Use a backflow preventive device in piping. Use only with equipment rated for cylinder pressure. Close valve after each use and when empty. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier. Ensure the complete gas system has been checked for leaks before use.

Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to refill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit.

Only experienced and properly instructed persons should handle gases under pressure. Always store and handle compressed gas cylinders in accordance with Compressed Gas Association, pamphlet CGA-P1, Safe Handling of Compressed Gases in Containers.

For additional information, consult the Compressed Gas Association's pamphlets P-1, G-1, G-1.1, AV-9, G-1.2, G-1.3, G-1.5, G-1.6, G-1.7, C-13, SB-4, NFPA #51, and OSHA 1910 Subpart H & Q.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Outside or detached storage is preferred. Do not store cylinders on their side. This makes the acetylene less stable and less safe, and increases the likelihood of solvent loss resulting in decomposition. If rough handling or other occurrences should cause any fusible plug to leak, move the cylinder to an open space well away from an possible source of a sign on the cylinder warning of "Leaking Flammable Gas".

Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Keep at temperatures below 52°C / 125°F. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Full and empty cylinders should be segregrated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Stored containers should be periodically checked for general condition and leakage.

Incompatible materials

Oxidizing agents. Halogenated compounds. Halogens. Copper. Silver. Mercury. Brasses containing >65% copper and brazing materials containing silver or copper.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Acetylene 74-86-2	: See Appendix F: Minimal Oxygen Content, explosion hazard	None	Ceiling: 2500 ppm Ceiling: 2662 mg/m^3
Acetone	STEL: 750 ppm	TWA: 1000 ppm	IDLH: 2500 ppm 10% LEL

67-64-1	TWA: 500 ppm	TWA: 2400 mg / m³ (vacated) TWA: 750 ppm (vacated) TWA: 1800 mg / m³ (vacated) STEL: 2400 mg / m³	TWA: 250 ppm TWA: 590 mg / m³

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. 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 — Local exhaust ventilation to prevent accumulation of high concentrations and maintain air-oxygen levels at or above 19.5%. Explosion proof ventilation systems. Oxygen detectors should be used when asphyxiating gases may be released. Consider installation of leak detection systems in areas of use and storage. Systems under pressure should be regularly checked for leakages. Showers. Eyewash stations.

Individual protection measures, such as personal protective equipment

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

Skin and body protection — Work gloves and safety shoes are recommended when handling cylinders. Wear fire / flame resistant / retardant clothing. Take precautionary measures against static discharge.

Respiratory protection — Use positive pressure airline respirator with escape cylinder or self contained breathing apparatus for oxygen-deficient atmospheres (<19.5%).

General Hygiene Considerations — Handle in accordance with good industrial hygiene and safety practice. Do not get in eyes, on skin, or on clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Gas.
Appearance	Colorless.
Odor	Slight garlic.
Odor threshold	No information available
pH	Not applicable
Melting / freezing point	-80.6 °C / -113 °F
Evaporation rate	Not applicable
Flammability (solid, gas)	Flammable Gas.
Lower flammability limit:	2.5%
Upper flammability limit:	82%
Flash point	Not applicable
Autoignition temperature	296 °C / 565 °F
Decomposition temperature	No data available
Water solubility	Soluble in water.
Partition coefficient	No data available
Kinematic viscosity	Not applicable

Chemical Name	Molecular weight	Boiling point / range	Vapor Pressure	Vapor density (air =1)	Gas Density kg / m³@20°C	Critical Temperature
Acetylene	26.03	-75.2 °C	4378 kPa@ 21.1°C	0.90	1.72	36.0 °C
Acetone	58.07			2.0	-	

10. STABILITY AND REACTIVITY

Reactivity
Forms explosive acetylides with copper, silver and mercury. Do not use alloy containing more than 65% copper

Chemical stability
Do not allow free gas (outside of cylinder) to exceed 15 psig. Do not expose cylinders to sudden shock or heat. Acetylene will decompose violently with cylinder failure. Do not discharge at pressures above 15 psi (103 kPa).

Explosion data

Sensitivity to Mechanical Impact	Self-decomposition or self ignition may be triggered by heat, chemical reaction, friction or impact.
Sensitivity to Static Discharge	Yes.

Possibility of Hazardous Reactions
May react explosively even in absence of air at elevated pressure and / or temperature. May form explosive mixtures with air.

Hazardous polymerization	Temperatures as low as 250°F (121°C) at high pressure, or at low pressure in the presence of a catalyst are sufficient to initiate a polymerization reaction. The hazard is that the polymerization normally liberates heat and may lead to ignition and decomposition of acetylene if conditions permit.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
Oxidizing agents. Halogenated compounds. Halogens. Copper. Silver. Mercury. Brasses containing >65% copper and brazing materials containing silver or copper.

Hazardous Decomposition Products
Hydrogen gas. Carbon monoxide. Carbon dioxide (CO_2).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	High concentrations (10-20% in air) cause symptoms similar to that of being intoxicated. As a narcotic gas or intoxicant, it causes hypercapnia (an excessive amount of carbon dioxide in the blood). Repeated exposures to tolerable levels has not shown deleterious effects. TCLo, human-inhalation of 20 pph inhaled has been shown to cause headaches and dyspnea.
Skin contact	May cause skin irritation and / or dermatitis.
Eye contact	May cause slight irritation.
Ingestion	Not an expected route of exposure.

Information on toxicological effects

Symptoms	High concentrations may cause asphyxia from lack of oxygen or act as a narcotic causing central nervous system depression. Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	May cause skin and eye irritation.
Sensitization	Not classified.
Germ cell mutagenicity	Not classified.

Carcinogenicity	This product does not contain any carcinogens or potential carcinogens listed by OSHA, IARC or NTP.
Reproductive toxicity	Not classified.
Developmental Toxicity	Not classified.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.
Chronic toxicity	None known.
Target Organ Effects	Central nervous system (CNS), Respiratory system.
Aspiration hazard	Not applicable.

Numerical measures of toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50	Inhalation LC50 (CGA P-20)
Acetone 67-64-1	= 5800 mg / kg (Rat)	1700mg / kg (rabbit)	18892 mg / m^3	-

Oral LD50 No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

No known acute aquatic toxicity.

Chemical Name	Algae / aquatic plants	Fish	Crustacea
Acetone 67-64-1	-	6210 - 8120: 96 h Pimephales promelas mg / L LC50 static 4.74 - 6.33: 96 h Oncorhynchus mykiss mL / L LC50 8300: 96 h Lepomis macrochirus mg / L LC50	10294 - 17704: 48 h Daphnia magna mg / L EC50 Static 12600 - 12700: 48 h Daphnia magna mg / L EC50

Persistence and degradability

No information available.

Bioaccumulation

Will not bioconcentrate.

Chemical Name	Partition coefficient
Acetylene 74-86-2	0.32
Acetone 67-64-1	-0.24

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes: Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to Linde for proper disposal. This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).

14. TRANSPORT INFORMATION

DOT

UN / ID no.	UN1001
Proper shipping name	Acetylene, dissolved
Hazard Class	2.1
Special Provisions	N86, N88
Description	UN1001, Acetylene, dissolved, 2.1

Emergency Response Guide Number 116

TDG

UN / ID no.	UN1001
Proper shipping name	Acetylene, dissolved
Hazard Class	2.1
Description	UN1001, Acetylene, dissolved mixture, 2.1

IATA

UN / ID no.	UN1001
Proper shipping name	Acetylene, dissolved
Hazard Class	2.1
ERG Code	10L
Special Provisions	A1
Description	UN1001, Acetylene, dissolved mixture, 2.1

IMDG

UN / ID no.	UN1001
Proper shipping name	Acetylene, dissolved
Hazard Class	2.1
EmS-No.	F-D, S-U
Description	UN1001, Acetylene, dissolved, 2.1

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL / NDSL	Complies
EINECS / ELINCS	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

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

Should this product meet EPCRA 311 / 312 reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Chemical Name	Hazardous Substances RQs	CERCLA / SARA RQ	Reportable Quantity (RQ)
Acetone 67-64-1	5000 lb	-	5000 lb 2270 kg

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substances which are listed hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act:.

Chemical Name	CAS No.	VOC Chemicals	Class 1	Class 2

Acetylene	74-86-2	X	-	-
Acetone	67-64-1	X	-	-

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).

Risk and Process Safety Management Programs
This material, as supplied, contains one or more regulated substances with specified thresholds under 40 CFR Part 68 or regulated as a highly hazardous chemical pursuant to the 29 CFR Part 1910.110 with specified thresholds:.

Chemical Name	U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Toxic Substances	U.S. - CAA (Clean Air Act) - Accidental Release Prevention - Flammable Substances	U.S. - OSHA - Process Safety Management - Highly Hazardous Chemicals
Acetylene		10000 lb	

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
Acetylene 74-86-2	X	X	X
Acetone 67-64-1	X	X	X

Chemical Name	Carcinogenicity	Exposure Limits
Acetone		Mexico: TWA= 1000 ppm Mexico: TWA= 2400 mg / m^3 Mexico: STEL= 1260 ppm Mexico: STEL= 3000 mg / m^3

16. OTHER INFORMATION

NFPA Health hazards 0 Flammability 4 Instability 2 Physical and Chemical Properties -

Note: Ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2009, CGA Recommended Hazard Ratings for Compressed Gases, 3rd Edition.

Issue Date	10-Mar-2015
Revision Date	25-Apr-2020
Revision Note	SDS sections updated; 1

LIND-P001

General Disclaimer
For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between Linde LLC, Linde Merchant Production, Inc. or Linde Gas North America LLC (or any of their affiliates and subsidiaries) and the purchaser.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES
Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as

to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

End of Safety Data Sheet

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/13/2019 Reviewed on 08/13/2019

1 Identification

· **Product identifier**

· **Trade name: Sure Lift™ J6 WB**

· **Article number:** 83-307914
· **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

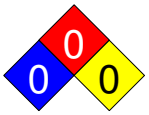
· **Classification of the substance or mixture**
Skin Sens. 1 H317 May cause an allergic skin reaction.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07

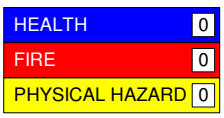
· **Signal word** Warning

· **Hazard-determining components of labeling:**
Distilled Tall Oil Fatty Acids
· **Hazard statements**
May cause an allergic skin reaction.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

(Contd. on page 2)

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Trade name: Sure Lift™ J6 WB

(Contd. of page 1)

· **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:**		
61790-12-3	Distilled Tall Oil Fatty Acids	≥1-<2.2%

· **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:**
Rinse with soap and water, if irritation persists or devlops seek medical attention.
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
· **After eye contact:**
Immediately wash the eyes with large amounts of water, being sure to lift upper and lower lids.
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.
· **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.

(Contd. on page 3)

Safety Data Sheet
acc. to OSHA HCS

Trade name: Sure Lift™ J6 WB

(Contd. of page 2)

· **Environmental precautions:** Do not allow product to reach sewage system or any water course.
· **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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
	monoethanolamine	6 ppm
111-42-2	2,2'-iminodiethanol	3 mg/m³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m³

· **PAC-2:**		
	monoethanolamine	170 ppm
111-42-2	2,2'-iminodiethanol	28 mg/m³
7631-86-9	silicon dioxide, chemically prepared	740 mg/m³

· **PAC-3:**		
	monoethanolamine	1,000 ppm
111-42-2	2,2'-iminodiethanol	130 mg/m³
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m³

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 incompatible materials.
· **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
· **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.

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Trade name: Sure Lift™ J6 WB

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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:	According to product specification
· **Odor:**	Slight
· **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:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **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 (17.3 mm Hg)
· **Density at 20 °C (68 °F):**	0.99241 g/cm³ (8.28166 lbs/gal)
· **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:	0.5 %
Water:	90.8 %
Solids content:	8.6 %
· **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:** May cause eye irritation.
· **Sensitization:**
A component of this product may cause skin 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)**		
111-42-2	2,2'-iminodiethanol	2B
7631-86-9	silicon dioxide, chemically prepared	3

· **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
· **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:**
Must not be disposed of as normal garbage. Do not allow product to reach sewage system.
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, 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.

111-42-2	2,2'-iminodiethanol	<0.1%

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed.

· **Proposition 65**

· **Chemicals known to the State of California (Prop. 65) to cause cancer:**

111-42-2	2,2'-iminodiethanol

· **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)**

111-42-2	2,2'-iminodiethanol	A3

· **MAK (German Maximum Workplace Concentration)**

111-42-2	2,2'-iminodiethanol	3B

· **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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Trade name: Sure Lift™ J6 WB

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· **Hazard pictograms**

GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**
Distilled Tall Oil Fatty Acids
· **Hazard statements**
May cause an allergic skin reaction.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Wear protective gloves.
If skin irritation or rash occurs: Get medical advice/attention.
Specific treatment (see on this label).
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Water hazard class:** Water hazard class 3 (Self-assessment): extremely 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** 08/13/2019 / 189
· **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: Skin sensitisation – Category 1

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1 Identification

· **Product identifier**

· **Trade name: Sure Lift™ J6LVOC**

· **Article number:** 100026
· **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**

Flam. Liq. 2	H225	Highly flammable liquid and vapor.
Acute Tox. 4	H302	Harmful if swallowed.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Dam. 1	H318	Causes serious eye damage.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Carc. 2	H351	Suspected of causing cancer.
Repr. 2	H361	Suspected of damaging fertility or the unborn child.
STOT RE 2	H373	May cause damage to the central nervous system through prolonged or repeated exposure.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS02 GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Stoddard solvent
butanol
Distillates (petroleum), hydrotreated light
· **Hazard statements**
Highly flammable liquid and vapor.
Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.

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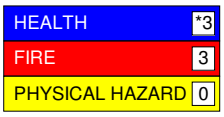
May cause damage to the central nervous system through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

· **Precautionary statements**
If swallowed: Immediately call a poison center/doctor.
Specific treatment (see on this label).
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse mouth.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 3
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *3
Fire = 3
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:**		
8052-41-3	Stoddard solvent	≥10-<35%
540-88-5	tert-butyl acetate	≥10-<30%
616-38-6	dimethyl carbonate	≤10.0%
98-56-6	4-chloro-alpha,alpha,alpha-trifluorotoluene	≥0.1-≤8%
64742-47-8	Distillates (petroleum), hydrotreated light	≥0.1-<3.5%
78-83-1	butanol	≤3.0%
9003-29-6	Butene, homopolymer	≥0.1-≤2.4%

· **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.

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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.
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.*
· **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:**
CO2, sand, extinguishing powder. Do not use water.
Foam
· **For safety reasons unsuitable extinguishing agents:** *Water*
· **Special hazards arising from the substance or mixture** *Formation of toxic gases is possible during heating or in case of fire.*
· **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).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
· **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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
8052-41-3	Stoddard solvent	300 mg/m³
540-88-5	tert-butyl acetate	600 ppm
616-38-6	dimethyl carbonate	11 ppm
78-83-1	butanol	150 ppm
112-80-1	oleic acid, pure	220 mg/m³

· **PAC-2:**		
8052-41-3	Stoddard solvent	1,800 mg/m³

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540-88-5	tert-butyl acetate	1,700 ppm
616-38-6	dimethyl carbonate	120 ppm
78-83-1	butanol	1,300 ppm
112-80-1	oleic acid, pure	2,400 mg/m³

· **PAC-3:**

8052-41-3	Stoddard solvent	29500** mg/m³
540-88-5	tert-butyl acetate	10,000 ppm
616-38-6	dimethyl carbonate	700 ppm
78-83-1	butanol	8000* ppm
112-80-1	oleic acid, pure	15,000 mg/m³

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:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
Keep respiratory protective device available.

· **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.
Protect from heat and direct sunlight.
· **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 constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

8052-41-3 Stoddard solvent	
PEL	Long-term value: 2900 mg/m³, 500 ppm
REL	Long-term value: 350 mg/m³ Ceiling limit value: 1800* mg/m³ *15-min
TLV	Long-term value: 525 mg/m³, 100 ppm
540-88-5 tert-butyl acetate	
PEL	Long-term value: 950 mg/m³, 200 ppm

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REL	Long-term value: 950 mg/m³, 200 ppm
TLV	Short-term value: 712 mg/m³, 150 ppm Long-term value: 238 mg/m³, 50 ppm
78-83-1 butanol	
PEL	Long-term value: 300 mg/m³, 100 ppm
REL	Long-term value: 150 mg/m³, 50 ppm
TLV	Long-term value: 152 mg/m³, 50 ppm

· **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.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
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:	Red
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	>20 °C (>68 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	230 °C (446 °F)
· **Decomposition temperature:**	Not determined.

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· **Auto igniting:**	Product is not selfigniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	1.1 Vol %
Upper:	6 Vol %
· **Vapor pressure at 20 °C (68 °F):**	41 hPa (30.8 mm Hg)
· **Density at 20 °C (68 °F):**	0.86275 g/cm³ (7.19965 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **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:	32.0 %
Solids content:	15.0 %
· **Other information**	No further relevant information available.
· **Volatile Organic Compounds:**	Not determined

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 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:
Irritant

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· **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:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even 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:**
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**	UN1123
· **UN proper shipping name**	
· **DOT**	Butyl acetates
· **ADR**	1123 Butyl acetates
· **IMDG, IATA**	BUTYL ACETATES

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· **Transport hazard class(es)**

· **DOT**

· **Class**	3 Flammable liquids
· **Label**	3

· **ADR, IMDG, IATA**

· **Class**	3 Flammable liquids
· **Label**	3
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	II
· **Environmental hazards:**	Not applicable.
· **Special precautions for user**	Warning: Flammable liquids
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **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
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":**	UN 1123 BUTYL ACETATES, 3, II

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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):**

8052-41-3	Stoddard solvent
540-88-5	tert-butyl acetate
616-38-6	dimethyl carbonate
98-56-6	4-chloro-alpha,alpha,alpha-trifluorotoluene
64742-47-8	Distillates (petroleum), hydrotreated light
78-83-1	butanol
112-80-1	oleic acid, pure
9003-29-6	Butene, homopolymer
112-62-9	Methyl 9-octadecenoate

· **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)**

112-80-1	oleic acid, pure	3A

· **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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Safety Data Sheet
acc. to OSHA HCS

Trade name: Sure Lift™ J6LVOC

(Contd. of page 9)

· **Hazard pictograms**

GHS02 GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Stoddard solvent
butanol
Distillates (petroleum), hydrotreated light

· **Hazard statements**
Highly flammable liquid and vapor.
Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to the central nervous system through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.

· **Precautionary statements**
If swallowed: Immediately call a poison center/doctor.
Specific treatment (see on this label).
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse mouth.
Take off contaminated clothing and wash it before reuse.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Water hazard class:** Water hazard class 2 (Self-assessment): 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** 08/13/2019 / 2
· **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)

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Safety Data Sheet
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Trade name: Sure Lift™ J6LVOC

(Contd. of page 10)

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
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1

Safety Data Sheet

Pave Cure WW

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	Pave Cure WW
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	Concrete paving curing compound
1.3 Company Name:	**SpecChem**
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	**Chemtrec: (800) 424-9300**
Date of Last Revision:	April 10, 2015
Date of Current Revision:	July 1, 2018

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a white liquid with a characteristic hydrocarbon odor.
Health Hazards: May cause skin irritation.
Flammability Hazards: This product is not a flammable liquid.
Reactivity Hazards: None.
Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

US DOT Symbols Not regulated

EU and GHS Symbols

Signal Word Danger

2.1 EU Labeling and Classification:
This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.
EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:
Index Number:
204-007-1 is not listed in Annex I
Substances not listed either individually or in group entries must be self classified.
Components Contributing to Classification: Slack Wax, Oleic Acid, Titanium Dioxide
2.2 Label Elements:
GHS Hazard Classifications: Skin Irritation Category 2
Carcinogenicity Category 1B
Hazard Statements: H315 Causes skin irritation
H350 May cause cancer

Precautionary Statements:
P280 Wear protective gloves.
P264 Wash thoroughly after handling
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.

Response Statements:
P302+P352 IF ON SKIN: Wash with plenty of water.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash clothing before reuse.
P308+P313 IF exposed or concerned: Get medical advice/attention.

Storage Statements:
P405 Store locked up.

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

2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:

The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:

Inhalation: No serious effects anticipated under normal conditions.
Skin Contact: May cause moderate irritation to skin. Repeated exposure may cause skin dryness or cracking.
Eye Contact: Direct contact to the eyes may be irritating.
Ingestion: May cause gastrointestinal irritation, nausea, and vomiting.

Chronic: Repeated exposure may cause skin dryness or cracking.

Target Organs:

Acute: Skin.
Chronic: Skin.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.	EINECS No.	Hazard Classification
Oleic Acid	0-2%	112-80-1	204-007-1	Skin Irrit. 2
Slack Wax	20-25%	64742-61-6	265-165-5	Carc 1B
Titanium Dioxide	2-5%	13463-67-7	236-675-5	Carc 2
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. 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, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact: If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to do. Seek medical attention if irritation persists.

Skin Contact: Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

Inhalation: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion: If product is swallowed, call physician or poison center immediately. If professional advice is not available, do not induce vomiting. Never induce vomiting or give dilutents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

Medical Conditions Generally Aggravated By Exposure: Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact.

4.2 Symptoms and Effects Both Acute and Delayed: Exposure to skin may cause irritation.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

Use the following fire extinguishing materials:

Water Spray: Yes
Foam: Yes
Halon: Yes
Carbon Dioxide: Yes
Dry Chemical: Yes
Other: Any “C” Class

5.2 Unusual Fire and Explosion Hazards:

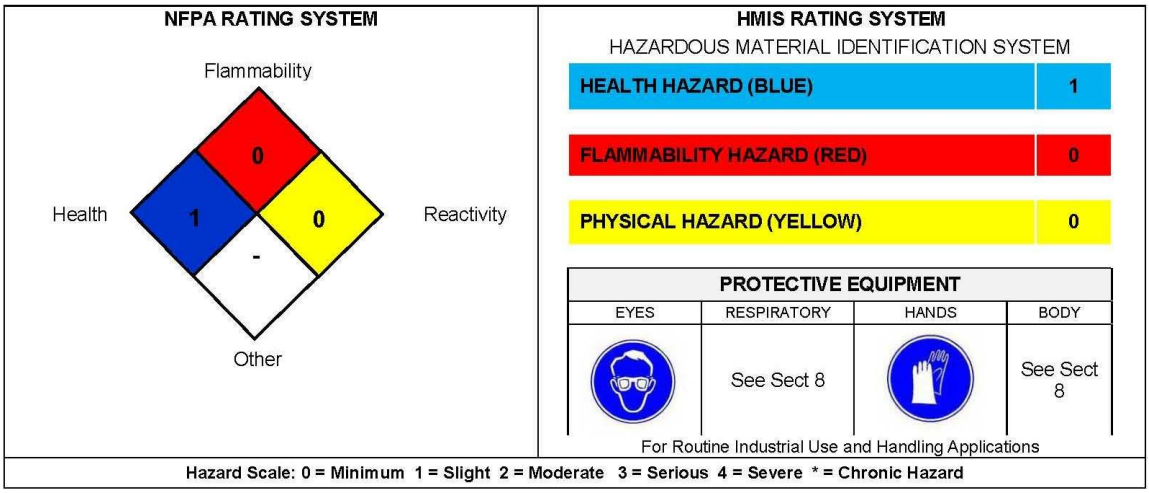
Irritating and toxic fumes may be produced at high temperatures. Use of water may result if the formation of a toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Explosive Sensitivity to Mechanical Impact:	No
Explosive Sensitivity to Static Discharge:	No

5.3 Special Fire-Fighting Procedures:

- Incipient fire responders should wear eye protection.

- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel.
- Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.
- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.



SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Use cautious judgment when cleaning up spill. Wear suitable protective clothing, gloves, and eye/face protection.

6.2 Environmental Precautions:
Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

Small Spills:
- Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- Approach spill areas with caution.
- If liquid was introduced, create a dike or trench to contain material.
- Soak up with absorbent material such as clay, sand or other suitable non-reactive material.

Large Spills:
- Place in leak-proof containers. Seal tightly for proper disposal.
- Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
To prevent eye contact under the foreseeable conditions of use, wear appropriate safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Do not handle or store near heat, sparks, or flame.

7.2 Storage and Handling Practices:
Keep away from incompatible materials. Keep container closed when not in use and store in well ventilated area.

7.3 Specific Uses:
Concrete curing compound.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters:

Ingredients	CAS No.	OSHA PEL	NIOSH PEL
Oleic Acid	112-80-1	Not Listed	Not Listed
Slack Wax	64742-61-6	Not Listed	Not Listed
Titanium Dioxide	13463-67-7	15 mg/mg^3	Not Listed

8.2 Exposure Controls:

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection: Not required for properly ventilated areas. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Eye Protection: Safety glasses or goggles are required.

	If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.
Hand Protection:	Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.
Body Protection:	Use body protect appropriate to task being performed. If necessary, refer to appropriate Standards of Canada, or appropriate standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:
Appearance (Physical State and Color): White colored liquid
Odor: Slight
Odor Threshold: No data available
pH: 9.75 +/- 0.75
Melting/Freezing Point: No data available
Boiling Point: 212°F (100°C)
Flash Point: Not applicable
Evaporation Rate: No data available
Flammability (Solid; Gas): Not applicable
Upper/Lower Flammability or Explosion Limits: Not data available
Vapor Pressure (mm Hg @ 20°C (68° F): No data available
Vapor Density: Heavier than air
Relative Density: No data available
Specific Gravity: 1.0 +/- .01
Solubility in Water: Soluble
Weight per Gallon: 8.3 +/- 0.1
Partition Coefficient (n-octanol/water): No data available
Auto-Ignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: 50 +/- 15 cps
9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity: This product is not reactive.
10.2 Stability: Stable under conditions of normal storage and use.
10.3 Possibility of Hazardous Reactions: Will not occur.
10.4 Conditions to Avoid: Avoid excessive temperatures, exposure to sunlight, sources of ignition.
10.5 Incompatible Substances: Strong oxidizing agents.
10.6 Hazardous Decomposition Products: Carbon monoxide and dioxide smoke.

SECTION 11 – TOXICOLOGY INFORMATION

11.1 Information on Toxicological Effects:

Toxicity Data:

Oleic Acid	112-80-1	LD50 Oral – Rat	74,000 mg/kg
Titanium Dioxide	13463-67-7	LD50 Oral – Rat	>10,000 mg/kg
		LD50 Dermal – Rabbit	>10,000 mg/kg
Slack Wax	64742-61-6	LD50 Oral – Rat	>5,000 mg/kg
		LD50 Dermal – Rabbit	>5,000 mg/kg

Suspected Cancer Agent: Ingredients within this product are found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are considered to be cancer-causing agents by these agencies.
Irritancy: Skin irritant.
Sensitization to the Product: This product is not expected to cause skin sensitization.
Germ Cell Mutagenicity: This product does not contain ingredients that are suspected to be a germ cell mutagenic.
Reproductive Toxicity: This product is not expected to be a human reproductive toxicant.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity:

Oleic Acid	112-80-1	LC50 – Fathead Minnow	205 mg/l – 96h
Titanium Dioxide	13463-67-7	LC50 – Fish	>1,000 mg/l – 96h
		EC50 – Water Flea	>1,000 mg/l—48h

12.2 Persistence and Degradability: No specific data available on this product.
12.3 Bioaccumulative Potential: No specific data available on this product.
12.4 Mobility in Soil: No specific data available on this product.
12.5 Results of PBT and vPvB Assessment: No specific data available on this product.
12.6 Other Adverse Effects: No data available

12.7 Water Endangerment Class: At present, there are no ecotoxicological assessments for this product.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.

13.2 EU Waste Code: Not determined

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:

This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number:	Not applicable
Proper Shipping Name:	Not regulated
Hazard Class Number and Description:	Not applicable
Packing Group:	Not applicable
DOT Label(s) Required:	Not applicable
North American Emergency Response Guidebook Number:	Not applicable

14.2 Environmental Hazards:

Marine Pollutant: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

14.3 Special Precaution for User: None

14.4 International Air Transport Association Shipping Information (IATA): This product is not considered as dangerous goods.

14.5 International Maritime Organization Shipping Information (IMO):

UN Identification Number:	Not applicable
Proper Shipping Name:	Not regulated
Hazard Class Number and Description:	Not applicable
Packing Group:	Not applicable
EMS-No:	Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements:

The components of this product are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:
Acute Health: Yes; Chronic Health: No; Fire: No; Reactivity; No
U.S. CERCLA Reportable Quantity:
Not applicable
U.S. TSCA Inventory Status:
The components of this product are listed on the TSCA Inventory or are exempted from listing.
Other U.S. Federal Regulations:
None known
California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):
This product contains ingredients on the Proposition 65 Lists: Titanium Dioxide CAS# 13463-67-7

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status:
Components are DSL Listed, NDSL Listed and/or are exempt from listing
Other Canadian Regulations:
Not applicable
Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
Canadian WHMIS Classification and Symbols:
This product is Class D2B, Materials causing other toxic effects, per WHMIS Controlled Product Regulations.

15.3 European Economic Community Information:

This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.
Chemical Safety Assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.4 Australian Information for Product:

Components of this product are listed on the International Chemical Inventory list.

15.5 Japanese Information for Product:

Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

15.6 International Chemical Inventories:

Listing of the components on individual country Chemical Inventories is as follows:
Australian Inventory of Chemical Substances (AICS): Listed
Korean Existing Chemicals List (ECL): Listed
Japanese Existing National Inventory of Chemical Substances (ENCS): Listed
Philippines Inventory if Chemicals and Chemical Substances (PICCS): Listed
U.S. TSCA: Listed

SECTION 16 – OTHER INFORMATION

Prepared By: Chris Eigbrett (MSDS to GHS Compliance)
Date of Printing: July 1, 2018

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET

BlueDEF Diesel Exhaust Fluid

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 04/21/2017

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : BlueDEF Diesel Exhaust Fluid

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Solution for NOx reduction in SCR systems

1.3. Details of the supplier of the safety data sheet

Old World Industries, LLC
4065 Commercial Ave.
Northbrook, IL 60062 - USA
T (847) 559-2000
www.oldworldind.com

1.4. Emergency telephone number

Emergency number : (800) 424-9300; (703) 527 3887 (International)
Chemtrec

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labelling

Signal word (GHS-US) : None

Hazard statements (GHS-US) : None

Precautionary statements (GHS-US) : None

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% by wt	GHS-US classification
water	(CAS-No.) 7732-18-5	67.5	Not classified
urea	(CAS-No.) 57-13-6	32.5	Not classified

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

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

No additional information available

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : The EPA has no established reportable quantity for spills for this material, secondary containment is not specified.

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. For minor spillages wash down with excess of water. Mop up small spills.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources. Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Protective goggles.

Hand protection:

Wear protective gloves

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	Colorless
Odor	:	characteristic ammonia odor
Odor threshold	:	No data available
pH	:	9 - 10
Relative evaporation rate (butylacetate=1)	:	< 1
Freezing point	:	-11 °C (12 ºF)
Boiling point	:	> 100 °C (212 ºF)
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	No data available
Vapor pressure	:	Not Applicable
Relative vapor density at 20 °C	:	0.6 H2O, >1
Specific Gravity	:	1.09
Solubility	:	Soluble in water. Water: 100 %
Log Pow	:	No data available
Log Kow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Explosive limits	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids. Strong bases. oxidizing agents (peroxides, chromates, dichromates).

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Fume.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

urea (57-13-6)	
LD50 oral rat	8,471.00 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; 14300 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 3,200.00 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 21,000.00 mg/kg (Rabbit; Literature study)
ATE US (oral)	8,471.00 mg/kg bodyweight

Skin corrosion/irritation : Not classified
pH: 9 - 10

Serious eye damage/irritation : Not classified
pH: 9 - 10

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

urea (57-13-6)	
LC50 fish 1	> 6,810.00 mg/l (LC50; 96 h; Leuciscus idus; Static system)
EC50 Daphnia 1	> 10,000.00 mg/l (EC50; 48 h; Daphnia magna)
Threshold limit algae 1	> 10000 mg/l (EC0; 168 h; Scenedesmus quadricauda; Static system; Fresh water)

12.2. Persistence and degradability

urea (57-13-6)	
Persistence and degradability	Inherently biodegradable. Hydrolysis in water. Highly mobile in soil.
ThOD	0.27 g O_2/g substance

12.3. Bioaccumulative potential

urea (57-13-6)	
BCF fish 1	1.00 (BCF; 72 h; Brachydanio rerio)
BCF other aquatic organisms 1	11,700.00 (BCF)
Log Pow	< -1.73 (Experimental value; EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Bioaccumulation: not applicable.

12.4. Mobility in soil

urea (57-13-6)	
Mobility in soil	Not applicable
Log Koc	Koc,0.037-0.064; Experimental value

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on global warming : No known effects from this product.
No additional information available

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : As a non-hazardous liquid waste, it should be solidified with stabilizing agents such as sand, fly ash, or clay absorbent, so that no free liquid remains before disposal to an industrial waste landfill.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Refer to current TDG Canada for further Canadian regulations

ADR

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

BlueDEF Diesel Exhaust Fluid	
EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed
CERCLA RQ	None. This material is not classified as hazardous under U.S. EPA regulations.
SARA Section 302 Threshold Planning Quantity (TPQ)	No extremely hazardous substances are in this product.
SARA Section 311/312 Hazard Classes	Urea. No hazards resulting from the material as supplied.

urea (57-13-6)	
EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard

water (7732-18-5)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

BlueDEF Diesel Exhaust Fluid	
WHMIS Classification	This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR. Applicable GHS information is listed in section 2.2 of this SDS.

EU-Regulations

No additional information available

National regulations

BlueDEF Diesel Exhaust Fluid
DSL (Canada): The intentional ingredients of this product are listed

urea (57-13-6)
DSL (Canada): The intentional ingredients of this product are listed EINECS (Europe): The intentional ingredients of this product are listed

15.3. US State regulations

California Proposition 65 - This product does not contain any substance(s) known to the state of California to cause cancer, developmental toxicity and/or reproductive toxicity

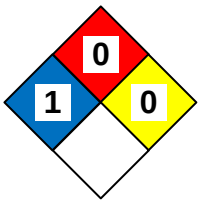
SECTION 16: Other information

Revision date : 04/21/2017

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health : 1 Slight Hazard - Irritation or minor reversible injury possible

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection B - Safety glasses, Gloves

SDS GHS US (GHS HazCom 2012) OWI

Old World Industries, LLC makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Old World Industries, LLC as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does Old World Industries, LLC assume liability arising out of the use by others of this product referred to herein. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

SAFETY DATA SHEET

1. Identification

Product identifier **DIESEL FUELS**

Other means of identification

SDS number 102-GHS

Synonyms Diesel Fuels All Grades, Diesel Fuel No.2, Fuel Oil No.2, High Sulfur Diesel Fuel, Low Sulfur Diesel Fuel, Ultra Low Sulfur Diesel Fuel, CARB (California Air Resource Board) Diesel Fuel, Off-Road Diesel Fuel, Dyed Diesel Fuel, X Grade Diesel Fuel, X-1 Diesel Fuel, R5 ULSD, B5 ULS D See section 16 for complete information.

Recommended use Motor Fuel
Refinery feedstock.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier Valero Marketing & Supply Company and Affiliates
One Valero Way
San Antonio, TX 78269-6000

General Assistance 210-345-4593

E-Mail CorpHSE@valero.com

Contact Person Industrial Hygienist

Emergency Telephone 24 Hour Emergency 866-565-5220
1-800-424-9300 (CHEMTREC USA)

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 3
Health hazards	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 2
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 2
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2

OSHA defined hazards Not classified.

Label elements

Signal word Danger

Hazard statement Flammable liquid and vapor. Harmful if inhaled. Causes skin irritation. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs (blood, thymus, liver) through prolonged or repeated exposure. May be fatal if swallowed and enters airways.

Precautionary statement

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/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 discharges. Do not breathe mist/vapors/spray. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area.

Response	If skin irritation occurs: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If exposed or concerned: Get medical advice/attention. If swallowed: Immediately call a poison center/doctor. Take off contaminated clothing and wash before reuse. In case of fire: Use foam, carbon dioxide, dry powder or water fog for extinction.
Storage	Store locked up. Store in a well-ventilated place. Keep cool.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Fuels, diesel, no. 2	68476-34-6	85 - 100
Biodiesel - Fatty acid methyl esters	67762-38-3	0 - 10
Fuels, diesel, C9-18-alkane branched and linear	1159170-26-9	0 - 5
n-Nonane	111-84-2	1 - 3
Octane (All isomers)	111-65-9	1 - 2
Hexane (Other isomers)	96-14-0	0 - 1
Naphthalene	91-20-3	0 - 1
n-Heptane	142-82-5	0 - 1
n-Hexane	110-54-3	0 - 1

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Ingestion	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash. The toxicological properties of this product have not been thoroughly investigated. Use appropriate precautions. Hydrogen sulfide, a highly toxic gas, may be present. Signs and symptoms of overexposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing, a sensation of dryness and pain in the nose, and loss of consciousness. Odor does not provide a reliable indicator of the presence of hazardous levels in the atmosphere.
Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed. The toxicological properties of this material have not been fully investigated.
General information	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire-fighting measures

Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

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 flammable, and heating may generate vapors which may form explosive vapor/air mixtures. Thermal decomposition or combustion may liberate toxic gases or fumes.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire-fighting equipment/instructions	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Local authorities should be advised if significant spillages cannot be contained. Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas. Use non-sparking tools and explosion-proof equipment. Small Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste. Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Do not allow material to contaminate ground water system. Should not be released into the environment. Clean up in accordance with all applicable regulations.
Environmental precautions	If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Use compatible foam to minimize vapor generation as needed. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 1-800-424-8802. For highway or railways spills, contact Chemtrec at 1-800-424-9300.

7. Handling and storage

Precautions for safe handling	Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Wear personal protective equipment. Avoid breathing mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is combustible, and heating may generate vapors which may form explosive vapor/air mixtures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Naphthalene (CAS 91-20-3)	PEL	50 mg/m3
		10 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3
		500 ppm
Octane (All isomers) (CAS 111-65-9)	PEL	2350 mg/m3
		500 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Fuels, diesel, no. 2 (CAS 68476-34-6)	TWA	100 mg/m3	Inhalable fraction and vapor.
Hexane (Other isomers) (CAS 96-14-0)	STEL	1000 ppm	
	TWA	500 ppm	
Naphthalene (CAS 91-20-3)	STEL	15 ppm	
	TWA	10 ppm	
n-Heptane (CAS 142-82-5)	STEL	500 ppm	
	TWA	400 ppm	
n-Hexane (CAS 110-54-3)	TWA	50 ppm	
n-Nonane (CAS 111-84-2)	TWA	200 ppm	
Octane (All isomers) (CAS 111-65-9)	TWA	300 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Hexane (Other isomers) (CAS 96-14-0)	Ceiling	1800 mg/m3
		510 ppm
	TWA	350 mg/m3
		100 ppm
Naphthalene (CAS 91-20-3)	STEL	75 mg/m3
		15 ppm
	TWA	50 mg/m3
		10 ppm
n-Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
		85 ppm
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3
		50 ppm
n-Nonane (CAS 111-84-2)	TWA	1050 mg/m3
		200 ppm
Octane (All isomers) (CAS 111-65-9)	Ceiling	1800 mg/m3
		385 ppm
	TWA	350 mg/m3
		75 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedion, without hydrolysis	Urine	*
	0.4 mg/l	2,5-Hexanedi - on, without hydrolysis		*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Fuels, diesel, no. 2 (CAS 68476-34-6) Can be absorbed through the skin.
Naphthalene (CAS 91-20-3) Can be absorbed through the skin.
n-Hexane (CAS 110-54-3) Can be absorbed through the skin.

Appropriate engineering controls Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.

Skin protection

Hand protection Wear chemical-resistant, impervious gloves. Suitable gloves can be recommended by the glove supplier. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Other Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.

Respiratory protection Use a properly fitted, air-purifying or air-fed 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. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance Liquid (may be dyed red).

Physical state Liquid.

Form Liquid.

Color Clear. Straw.

Odor Kerosene (strong).

Odor threshold Not available.

pH Not available.

Melting point/freezing point -60.07 °F (-51.15 °C) Estimated

Initial boiling point and boiling range 325 - 700 °F (162.78 - 371.11 °C)

Flash point > 100.0 °F (> 37.8 °C) Closed Cup

Evaporation rate 0.02

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)	0.4 %
Flammability limit - upper (%)	8 %
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	< 1 mm Hg (20°C)
Vapor density	3 (Air = 1)
Relative density	0.82 - 0.87
Relative density temperature	60 °F (15.56 °C)
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	494.96 °F (257.2 °C)
Decomposition temperature	Not available.
Viscosity	2 - 4.5 mm²/s

10. Stability and reactivity

Reactivity	Stable at normal conditions.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	May be fatal if swallowed and enters airways.
Inhalation	Harmful if inhaled. In high concentrations, vapors and spray mists are narcotic and may cause headache, fatigue, dizziness and nausea.
Skin contact	Causes skin irritation.
Eye contact	May cause eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash. The toxicological properties of this product have not been thoroughly investigated. Use appropriate precautions.

Information on toxicological effects

Acute toxicity	Harmful if inhaled. Harmful: may cause lung damage if swallowed. The toxicological properties of this material have not been fully investigated.

Components	**Species**	**Test Results**
Fuels, diesel, no. 2 (CAS 68476-34-6)		
Acute		
Inhalation		
LC50	Rat	4.1 mg/l, 4 hours

Components	Species	Test Results
Naphthalene (CAS 91-20-3)		
Acute		
Dermal		
LD50	Rabbit	> 2 g/kg
Oral		
LD50	Rat	490 mg/kg
n-Heptane (CAS 142-82-5)		
Acute		
Inhalation		
LC50	Rat	103 mg/l, 4 Hours
n-Hexane (CAS 110-54-3)		
Acute		
Oral		
LD50	Rat	28710 mg/kg
n-Nonane (CAS 111-84-2)		
Acute		
Inhalation		
LC50	Rat	3200 mg/l, 4 Hours
Octane (All isomers) (CAS 111-65-9)		
Acute		
Inhalation		
LC50	Rat	118 mg/l, 4 Hours

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization Based on available data, the classification criteria are not met.

Germ cell mutagenicity Based on available data, the classification criteria are not met.

Carcinogenicity Suspected of causing cancer.
International Agency for Research on Cancer (IARC): Whole diesel engine exhaust – IARC Group 1. Exposure may cause lung cancer and also noted a positive association with an increased risk of bladder cancer.
Diesel exhaust has been reported to be an occupational hazard due to NIOSH-reported potential carcinogenic properties.

IARC Monographs. Overall Evaluation of Carcinogenicity

Fuels, diesel, no. 2 (CAS 68476-34-6)	3 Not classifiable as to carcinogenicity to humans.
Naphthalene (CAS 91-20-3)	2B Possibly carcinogenic to humans.

NTP Report on Carcinogens

Naphthalene (CAS 91-20-3)	Reasonably Anticipated to be a Human Carcinogen.

Reproductive toxicity Suspected of damaging fertility or the unborn child.
Napthalene interferes with embryo development in experimental animals at dose levels that cause maternal toxicity. In humans, excessive exposure to this agent may cause hemolytic anemia in the mother and fetus.

Specific target organ toxicity - single exposure Based on available data, the classification criteria are not met.

Specific target organ toxicity - repeated exposure May cause damage to the following organs through prolonged or repeated exposure: Blood. Liver. Thymus.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Contains organic solvents which in case of overexposure may depress the central nervous system causing dizziness and intoxication. Repeated exposure to naphthalene may cause cataracts, allergic skin rashes, destruction of red blood cells, and anemia, jaundice, kidney and liver damage. Danger of serious damage to health by prolonged exposure. Prolonged or repeated overexposure may cause central nervous system, kidney, liver, and lung damage.

Further information Symptoms may be delayed. Hydrogen sulfide, a highly toxic gas, may be present. Signs and symptoms of overexposure to hydrogen sulfide include respiratory and eye irritation, dizziness, nausea, coughing, a sensation of dryness and pain in the nose, and loss of consciousness. Odor does not provide a reliable indicator of the presence of hazardous levels in the atmosphere. Toxicological properties of this material have not been fully investigated.

12. Ecological information

Ecotoxicity Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Components		Species	Test Results
Fuels, diesel, no. 2 (CAS 68476-34-6)			
Aquatic			
Acute			
Crustacea	EL50	Daphnia magna	68 mg/l, 48 hours
Fish	LL50	Oncorhynchus mykiss	65 mg/l, 96 hours
Naphthalene (CAS 91-20-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1.09 - 3.4 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorbuscha)	0.95 - 1.62 mg/l, 96 hours
n-Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	4924 mg/l, 96 hours
n-Hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

Hexane (Other isomers) (CAS 96-14-0)	3.6
Octane (All isomers) (CAS 111-65-9)	5.18
n-Heptane (CAS 142-82-5)	4.66
n-Hexane (CAS 110-54-3)	3.9
n-Nonane (CAS 111-84-2)	5.46

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

Hazardous waste code D001: Waste Flammable material with a flash point <140 °F

US RCRA Hazardous Waste U List: Reference

Naphthalene (CAS 91-20-3) U165

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT

UN number UN1202

UN proper shipping name Diesel fuel

Transport hazard class(es)

Class Combustible Liquid

Subsidiary risk -

Packing group III

Environmental hazards

Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	144, B1, IB3, T2, TP1
Packaging exceptions	150
Packaging non bulk	203
Packaging bulk	242

IATA

UN number	UN1202
UN proper shipping name	Diesel fuel
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Environmental hazards	Yes
ERG Code	3L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1202
UN proper shipping name	DIESEL FUEL
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable. However, this product is a liquid and if transported in bulk covered under MARPOL 73/78, Annex I.

15. Regulatory information

US federal regulations

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

n-Nonane (CAS 111-84-2)	1.0 % One-Time Export Notification only.

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

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Hexane (Other isomers) (CAS 96-14-0)	LISTED
Naphthalene (CAS 91-20-3)	LISTED
n-Heptane (CAS 142-82-5)	LISTED
n-Hexane (CAS 110-54-3)	LISTED
n-Nonane (CAS 111-84-2)	LISTED
Octane (All isomers) (CAS 111-65-9)	LISTED

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Naphthalene	91-20-3	0 - 1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

Hexane (Other isomers) (CAS 96-14-0)
Naphthalene (CAS 91-20-3)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
n-Nonane (CAS 111-84-2)
Octane (All isomers) (CAS 111-65-9)

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

Fuels, diesel, no. 2 (CAS 68476-34-6)
Naphthalene (CAS 91-20-3)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
n-Nonane (CAS 111-84-2)
Octane (All isomers) (CAS 111-65-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Fuels, diesel, no. 2 (CAS 68476-34-6)
Hexane (Other isomers) (CAS 96-14-0)
Naphthalene (CAS 91-20-3)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
n-Nonane (CAS 111-84-2)
Octane (All isomers) (CAS 111-65-9)

US. Rhode Island RTK

Naphthalene (CAS 91-20-3)
n-Hexane (CAS 110-54-3)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Benzene (CAS 71-43-2)
Toluene (CAS 108-88-3)

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
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)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies 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

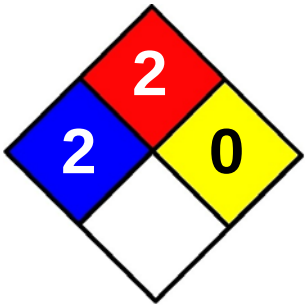
Issue date 13-May-2013

Revision date 23-May-2014

Version # 04

Further information HMIS® is a registered trade and service mark of the NPCA.

NFPA Ratings



Disclaimer This material Safety Data Sheet (SDS) was prepared in accordance with 29 CFR 1910.1200 by Valero Marketing & Supply Co., ("VALERO"). VALERO does not assume any liability arising out of product use by others. The information, recommendations, and suggestions presented in this SDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use , the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.

HIT-HY 200-R

Safety information for 2-Component-products

Issue date: 07/07/2020 Revision date: 07/07/2020 Supersedes: 15/10/2018 Version: 3.8

SECTION 1: Kit identification

1.1 Product identifier

Product name HIT-HY 200-R

Product code BU Anchor

1.2 Details of the supplier of the Safety information for 2-Component-products

Hilti, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
TX 75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

SECTION 2: General information

Storage Storage temperature : 5 - 25 °C

A SDS for each of these components is included. Please do not separate any component SDS from this cover page

This Kit should be handled in accordance with good laboratory practices and appropriate personal protective equipment should be used

SECTION 3: Kit contents

Classification of the Product

GHS-US classification

Eye Irrit. 2 H319 - Causes serious eye irritation.
Skin Sens. 1 H317 - May cause an allergic skin reaction.

Label elements

GHS US labelling

Hazard pictograms (GHS US)

GHS07

Signal word (GHS US) Warning

Hazardous ingredients methacrylates, dibenzoyl peroxide

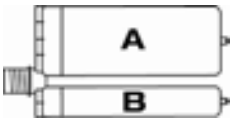
Hazard statements (GHS US) May cause an allergic skin reaction.
Causes serious eye irritation.

Precautionary statements (GHS US) Avoid breathing dust/fume/gas/mist/vapours/spray.
Wash hands, forearms and face thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Specific treatment (see supplemental first aid instruction on this label).

If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
Wash contaminated clothing before reuse.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Additional information

2-Component-foilpack, contains:
Component A: Urethane methacrylate resin, inorganic filler
Component B: Dibenzoyl peroxide, phlegmatized



Name	General description	Quantity	Unit	GHS-US classification
HIT-HY 200-R, A		1	pcs (pieces)	Skin Sens. 1, H317
HIT-HY 200-R, B		1	pcs (pieces)	Eye Irrit. 2, H319 Skin Sens. 1, H317

SECTION 4: General advice

General advice — For professional users only

SECTION 5: Safe handling advice

General measures — Spilled material may present a slipping hazard

Environmental precautions — Prevent entry to sewers and public waters
Notify authorities if liquid enters sewers or public waters

Storage conditions — Keep cool. Protect from sunlight.

Precautions for safe handling — Wear personal protective equipment
Avoid contact with skin and eyes
Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work
Provide good ventilation in process area to prevent formation of vapour

Methods for cleaning up — This material and its container must be disposed of in a safe way, and as per local legislation
Mechanically recover the product
Store away from other materials.

For containment — Collect spillage.

Incompatible materials — Sources of ignition
Direct sunlight

Incompatible products — Strong bases
Strong acids

SECTION 6: First aid measures

First-aid measures after eye contact — Rinse immediately with plenty of water
Remove contact lenses, if present and easy to do. Continue rinsing.
Obtain medical attention if pain, blinking or redness persists

First-aid measures after ingestion — Rinse mouth
Drink plenty of water
Get medical advice/attention.
Do not induce vomiting
Obtain emergency medical attention

First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air Allow the victim to rest
First-aid measures after skin contact	Wash contaminated clothing before reuse. Wash with plenty of water/… If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures general	Take off immediately all contaminated clothing. Never give anything by mouth to an unconscious person If you feel unwell, seek medical advice (show the label where possible)
Symptoms/effects after eye contact	May cause severe irritation
Symptoms/effects after skin contact	May cause an allergic skin reaction.

SECTION 7: Fire fighting measures

Firefighting instructions	Use water spray or fog for cooling exposed containers Exercise caution when fighting any chemical fire Prevent fire fighting water from entering the environment
Protection during firefighting	Self-contained breathing apparatus Do not enter fire area without proper protective equipment, including respiratory protection
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide Carbon monoxide

SECTION 8: Other information

No data available

HIT-HY 200-R, B

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 07/07/2020 Revision date: 05/04/2018 Supersedes: 12/08/2015 Version: 3.6

SECTION 1: Identification

1.1. Identification

Product form	Mixture
Product name	HIT-HY 200-R, B
Product code	BU Anchor

1.2. Recommended use and restrictions on use

Use of the substance/mixture	Composite mortar component for fasteners in the construction industry
Recommended use	For professional use only

1.3. Supplier

Supplier
Hilti, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
Plano, TX 75024 - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

Department issuing data specification sheet
Hilti Entwicklungsgesellschaft mbH
Hiltistraße 6
Kaufering, 86916 - Deutschland
T +49 8191 906876
anchor.hse@hilti.com

1.4. Emergency telephone number

Emergency number

Chem-Trec
Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada)
Tel.: 703 527 3887 (Other countries)

+1 918 8723000
1-800-879-8000 toll free

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Serious eye damage/eye irritation, Category 2	H319	Causes serious eye irritation.
Skin sensitisation, Category 1	H317	May cause an allergic skin reaction.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US)

Signal word (GHS US) Warning

Hazard statements (GHS US)
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.

Precautionary statements (GHS US)	P280 - Wear eye protection, protective clothing, protective gloves. P262 - Do not get in eyes, on skin, or on clothing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention. P302+P352 - If on skin: Wash with plenty of water.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Quartz (SiO2)		40 – 60	Carc. 1A, H350
dibenzoyl peroxide	(CAS-No.) 94-36-0	10 – 25	Org. Perox. B, H241 Eye Irrit. 2A, H319 Skin Sens. 1, H317

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general	Take off immediately all contaminated clothing. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.
First-aid measures after skin contact	Wash contaminated clothing before reuse. Wash with plenty of water/…. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	Rinse mouth. Drink plenty of water. Get medical advice/attention. Do not induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms	No additional information available.
Symptoms/effects after skin contact	May cause an allergic skin reaction.
Symptoms/effects after eye contact	May cause severe irritation.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide. Dry powder. Foam. Sand.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	Self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Spilled material may present a slipping hazard.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection.
Emergency procedures	Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation. Mechanically recover the product. Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Wear personal protective equipment. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.
Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	Keep cool. Protect from sunlight.
Incompatible products	Strong bases. Strong acids.
Incompatible materials	Sources of ignition. Direct sunlight.
Storage temperature	5 – 25 °C
Heat and ignition sources	Keep away from heat and direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

HIT-HY 200-R, B	
No additional information available	
Quartz (SiO2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Silica crystaline - quartz
ACGIH TWA (mg/m³)	0.025 mg/m³ (Respirable fraction)
Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Silica, crystalline quartz, respirable dust
Remark (OSHA)	(3) See Table Z-3.
dibenzoyl peroxide (94-36-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Benzoyl peroxide
ACGIH TWA (mg/m³)	5 mg/m³
Remark (ACGIH)	TLV® Basis: URT & skin irr. Notations: A4 (Not classifiable as a Human Carcinogen)
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Benzoyl peroxide
OSHA PEL (TWA) (mg/m³)	5 mg/m³
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

8.2. Appropriate engineering controls

Environmental exposure controls	Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function's effective duration.

Type	Material	Permeation	Thickness (mm)	Penetration
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,12	

Eye protection:

Wear security glasses which protect from splashes

Type	Use	Characteristics
Safety glasses	Droplet	clear

Skin and body protection:

Wear suitable protective clothing

Personal protective equipment symbol(s):

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Thixotropic paste.
Colour	white
Odour	characteristic
Odour threshold	Not determined
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	Non flammable.
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	1.9 g/ml AW 4.3.23
Solubility	Water: % Not miscible
Partition coefficient n-octanol/water (Log Pow)	No data available
Auto-ignition temperature	Not self-igniting
Decomposition temperature	No data available
Viscosity, kinematic	21052.632 mm²/s
Viscosity, dynamic	40 Pa·s HN-0333

Explosive limits	No data available
Explosive properties	Product is not explosive.
Oxidising properties	No data available

9.2. Other information

SADT	65 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	Not classified
Acute toxicity (dermal)	Not classified
Acute toxicity (inhalation)	Not classified
Skin corrosion/irritation	Not classified
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified
Carcinogenicity	Not classified

Quartz (SiO2)	
IARC group	1 - Carcinogenic to humans

dibenzoyl peroxide (94-36-0)	
IARC group	3 - Not classifiable

Reproductive toxicity	Not classified
STOT-single exposure	Not classified

STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
Viscosity, kinematic	21052.632 mm²/s
Potential adverse human health effects and symptoms	No additional information available.
Symptoms/effects after skin contact	May cause an allergic skin reaction.
Symptoms/effects after eye contact	May cause severe irritation.

SECTION 12: Ecological information

12.1. Toxicity

dibenzoyl peroxide (94-36-0)	
EC50 Daphnia 1	0.11 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP)
LC50 fish 2	0.0602 mg/l (96h; Oncorhynchus mykiss; ECHA)
ErC50 (algae)	0.0711 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
NOEC (acute)	0.0316 mg/l (96h; Oncorhynchus mykiss; ECHA)
NOEC chronic fish	< 0.001

12.2. Persistence and degradability

HIT-HY 200-R, B	
Persistence and degradability	Not established.

Quartz (SiO2)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

dibenzoyl peroxide (94-36-0)	
Persistence and degradability	Readily biodegradable in water. Not established. May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

HIT-HY 200-R, B	
Bioaccumulative potential	Not established.

Quartz (SiO2)	
Bioaccumulative potential	No bioaccumulation data available.

dibenzoyl peroxide (94-36-0)	
Partition coefficient n-octanol/water (Log Pow)	3.71
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).

12.4. Mobility in soil

Quartz (SiO2)	
Ecology - soil	Low potential for mobility in soil.

dibenzoyl peroxide (94-36-0)	
Surface tension	No data available (test not performed)
Partition coefficient n-octanol/water (Log Koc)	3.8 (log Koc, OECD 121: Estimation of the Adsorption Coefficient (Koc) on Soil and on Sewage Sludge using High Performance Liquid Chromatography (HPLC), Experimental value)
Ecology - soil	Low potential for mobility in soil.

12.5. Other adverse effects

Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste): Disposal must be done according to official regulations.

Product/Packaging disposal recommendations: After curing, the product can be disposed of with household waste. . Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IATA / IMDG / RID

ADR	IMDG	IATA	RID
14.1. UN number			
Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated
Environmentally hazardous substances derogation applies (quantity of liquids ≤ 5 litres or net mass of solids ≤ 5 kg). The environmentally hazardous substance mark is therefore not required, as stated in the ADR regulation, section 5.2.1.8.1.			
No supplementary information available			

14.6. Special precautions for user

Overland transport
Not regulated
Transport by sea
Not regulated
Air transport
Not regulated
Rail transport
Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

dibenzoyl peroxide	CAS-No. 94-36-0	10 – 25%

15.2. International regulations

CANADA

Quartz (SiO2)
Listed on the Canadian DSL (Domestic Substances List)

dibenzoyl peroxide (94-36-0)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

National regulations

Quartz (SiO2)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

SECTION 16: Other information

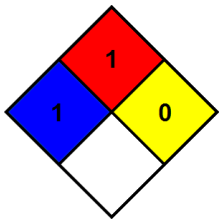
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date	05/04/2018
Other information	None.

Full text of H-statements:

H241	Heating may cause a fire or explosion.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H350	May cause cancer.

NFPA health hazard	1 - Materials that, under emergency conditions, can cause significant irritation.
NFPA fire hazard	1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	0 - Material that in themselves are normally stable, even under fire conditions.



SDS_US_Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

HIT-HY 200-R, A

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 07/07/2020 Revision date: 07/07/2020 Supersedes: 10/15/2018 Version: 3.7

SECTION 1: Identification

1.1. Identification

Product form	Mixture
Product name	HIT-HY 200-R, A
Product code	BU Anchor

1.2. Recommended use and restrictions on use

Use of the substance/mixture	Composite mortar component for fasteners in the construction industry
Recommended use	For professional use only

1.3. Supplier

Supplier
Hilti, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
Plano, TX 75024 - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

Department issuing data specification sheet
Hilti Entwicklungsgesellschaft mbH
Hiltistraße 6
Kaufering, 86916 - Deutschland
T +49 8191 906876
anchor.hse@hilti.com

1.4. Emergency telephone number

Emergency number

Chem-Trec
Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada)
Tel.: 703 527 3887 (Other countries)

+1 918 8723000
1-800-879-8000 toll free

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin sensitisation, Category 1	H317	May cause an allergic skin reaction.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US)

Signal word (GHS US)	Warning
Hazard statements (GHS US)	H317 - May cause an allergic skin reaction.
Precautionary statements (GHS US)	P280 - Wear eye protection, protective clothing, protective gloves. P262 - Do not get in eyes, on skin, or on clothing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

contact lenses, if present and easy to do. Continue rinsing.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P302+P352 - If on skin: Wash with plenty of water.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Quartz (SiO2)		40 – 60	Carc. 1A, H350
2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester	(CAS-No.) 2082-81-7	10 – 25	Skin Sens. 1B, H317
2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol	(CAS-No.) 27813-02-1	5 – 10	Eye Irrit. 2A, H319 Skin Sens. 1, H317
1,1'-(p-tolylimino)dipropan-2-ol	(CAS-No.) 38668-48-3	0.1 – 1	Acute Tox. 2 (Oral), H300 Eye Irrit. 2A, H319

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general: Take off immediately all contaminated clothing. Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms: No additional information available.

Symptoms/effects after skin contact: May cause an allergic skin reaction.

Symptoms/effects after eye contact: May cause severe irritation.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Water spray. Carbon dioxide. Dry powder. Foam. Sand.

Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire: Thermal decomposition generates : Carbon dioxide. Carbon monoxide.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting: Self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures: Spilled material may present a slipping hazard.

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Emergency procedures: Ventilate area.

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

No additional information available

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

No additional information available

7.2. Conditions for safe storage, including any incompatibilities

Incompatible products: Strong bases. Strong acids.

Incompatible materials: Sources of ignition. Direct sunlight.

Heat and ignition sources: Keep away from heat and direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

HIT-HY 200-R, A
No additional information available

1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)
No additional information available

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)
No additional information available

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)
No additional information available

Quartz (SiO2)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Silica crystaline - quartz
ACGIH TWA (mg/m³)	0.025 mg/m³ (Respirable fraction)
Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)
Regulatory reference	ACGIH 2020
USA - OSHA - Occupational Exposure Limits	
Local name	Silica, crystalline quartz, respirable dust
Remark (OSHA)	(3) See Table Z-3.

Additional information: The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function's effective duration.

Type	Material	Permeation	Thickness (mm)	Penetration
Disposable gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,12	

Eye protection:

Wear security glasses which protect from splashes

Type	Use	Characteristics
Safety glasses	Droplet	clear

Skin and body protection:

Wear suitable protective clothing

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Thixotropic paste.
Colour	Light grey
Odour	characteristic
Odour threshold	Not determined
pH	No data available
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	> 109 °C DIN EN ISO 1523
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	Non flammable.
Vapour pressure	No data available
Relative vapour density at 20 °C	No data available
Relative density	No data available
Density	1.8 g/ml AW 4.3.23
Solubility	Water: % Not miscible
Partition coefficient n-octanol/water (Log Pow)	No data available
Auto-ignition temperature	Not self-igniting
Decomposition temperature	No data available
Viscosity, kinematic	27777.778 mm²/s
Viscosity, dynamic	50 Pa·s HN-0333
Explosive limits	No data available
Explosive properties	Product is not explosive.
Oxidising properties	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) Not classified
Acute toxicity (dermal) Not classified
Acute toxicity (inhalation) Not classified

1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)	
LD50 oral rat	25 mg/kg
LD50 dermal rat	> 2000 mg/kg

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)	
LD50 oral rat	10066 mg/kg
LD50 dermal rat	> 3000 mg/kg

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)	
LD50 oral rat	> 5000 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Literature study; >=2000 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rabbit	≥ 5000 mg/kg bodyweight (Rabbit; Experimental value)

Skin corrosion/irritation Not classified
Serious eye damage/irritation Not classified
Respiratory or skin sensitisation May cause an allergic skin reaction.
Germ cell mutagenicity Not classified
Carcinogenicity Not classified

Quartz (SiO2)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity Not classified

STOT-single exposure Not classified

STOT-repeated exposure Not classified

Aspiration hazard Not classified
Viscosity, kinematic 27777.778 mm²/s

Potential adverse human health effects and symptoms No additional information available.
Symptoms/effects after skin contact May cause an allergic skin reaction.
Symptoms/effects after eye contact May cause severe irritation.

SECTION 12: Ecological information

12.1. Toxicity

1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)	
LC50 fish 1	≈ 17 mg/l
LC50 other aquatic organisms 1	245 mg/l
EC50 Daphnia 1	28.8 mg/l
NOEC (acute)	57.8 mg/l

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)	
LC50 other aquatic organisms 1	9.79 mg/l
NOEC (acute)	7.51 mg/l
NOEC (chronic)	20 mg/l

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)	
LC50 fish 1	493 mg/l (48 h; Leuciscus idus; GLP)
EC50 Daphnia 1	> 143 mg/l (48 h; Daphnia magna; GLP)
ErC50 (algae)	> 97.2 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, GLP)
Threshold limit algae 1	> 97.2 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)
Threshold limit algae 2	> 97.2 mg/l (72 h; Pseudokirchneriella subcapitata; GLP)

12.2. Persistence and degradability

HIT-HY 200-R, A	
Persistence and degradability	Not established.

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)	
Biodegradation	84 %

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)	
Persistence and degradability	Readily biodegradable in water.

Quartz (SiO2)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

HIT-HY 200-R, A	
Bioaccumulative potential	Not established.

1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)	
BCF fish 1	≈
Partition coefficient n-octanol/water (Log Kow)	2.1

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)	
Partition coefficient n-octanol/water (Log Pow)	3.1

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)	
BCF fish 1	≤ 100
BCF fish 2	3.2 Quantitative structure-activity relationship (QSAR)
Partition coefficient n-octanol/water (Log Pow)	0.97 (OECD 102 method)
Bioaccumulative potential	Low bioaccumulation potential (BCF < 500).

Quartz (SiO2)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)	
Partition coefficient n-octanol/water (Log Koc)	1.9 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

Quartz (SiO2)	
Ecology - soil	Low potential for mobility in soil.

12.5. Other adverse effects

Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Regional legislation (waste): Disposal must be done according to official regulations.

Product/Packaging disposal recommendations: After curing, the product can be disposed of with household waste. . Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IATA / IMDG / RID

ADR	IMDG	IATA	RID
14.1. UN number			
Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name			
Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)			
Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group			
Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards			
Not regulated	Not regulated	Not regulated	Not regulated

No supplementary information available

14.6. Special precautions for user

Overland transport
Not regulated
Transport by sea
Not regulated
Air transport
Not regulated
Rail transport
Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

1,1'-(p-tolylimino)dipropan-2-ol (38668-48-3)
Listed on the Canadian DSL (Domestic Substances List)

2-Propenoic acid, 2-methyl-, 1,4-butanediyl ester (2082-81-7)
Listed on the Canadian DSL (Domestic Substances List)

2-Propenoic acid, 2-methyl-, monoester with 1,2-propanediol (27813-02-1)
Listed on the Canadian DSL (Domestic Substances List)

Quartz (SiO2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

National regulations

Quartz (SiO2)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

⚠ **WARNING:** This product can expose you to 1,2-dihydroxybenzene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date 07/07/2020

Other information None.

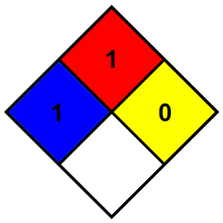
Full text of H-statements:

H300	Fatal if swallowed.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H350	May cause cancer.

NFPA health hazard 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity 0 - Material that in themselves are normally stable, even under fire conditions.



Indication of changes:

Section	Changed item	Change	Comments
15	U.S. - California - Proposition 65 - Other information	Modified	

SDS_US_Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

HIT-RE 500 V3

Safety information for 2-Component-products

Issue date: 13/05/2020 Revision date: 13/05/2020 Supersedes: 25/02/2019 Version: 2.3

SECTION 1: Kit identification

1.1 Product identifier

Product name HIT-RE 500 V3

Product code BU Anchor

1.2 Details of the supplier of the Safety information for 2-Component-products

Hilti, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
TX 75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

SECTION 2: General information

Storage Storage temperature : 5 - 25 °C

A SDS for each of these components is included. Please do not separate any component SDS from this cover page

This Kit should be handled in accordance with good laboratory practices and appropriate personal protective equipment should be used

SECTION 3: Kit contents

Classification of the Product

GHS-US classification

Skin Corr. 1B	H314 -	Causes severe skin burns and eye damage.
Skin Sens. 1	H317 -	May cause an allergic skin reaction.
Muta. 2	H341 -	Suspected of causing genetic defects.
Repr. 1B	H360 -	May damage fertility or the unborn child.
STOT SE 3	H335 -	May cause respiratory irritation.

Label elements

GHS US labelling

Hazard pictograms (GHS US)

GHS05 GHS07 GHS08

Signal word (GHS US) Danger

Hazardous ingredients Epoxy resin, Amines

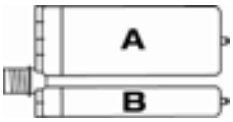
Hazard statements (GHS US) Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause respiratory irritation.
Suspected of causing genetic defects.
May damage fertility or the unborn child.

Precautionary statements (GHS US) Wear eye protection, protective clothing, protective gloves.
Do not get in eyes, on skin, or on clothing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If skin irritation or rash occurs: Get medical advice/attention.
If eye irritation persists: Get medical advice/attention.
If on skin: Wash with plenty of water.

Additional information

2-component-foilpack, contains:
Component A: Epoxy resin, Reactive diluent, inorganic filler
Component B: Amine hardener, inorganic filler



Name	General description	Quantity	Unit	GHS-US classification
HIT-RE 500 V3, B		1	pcs (pieces)	Skin Corr. 1B, H314 Skin Sens. 1, H317 STOT SE 3, H335
HIT-RE 500 V3, A		1	pcs (pieces)	Skin Corr. 1C, H314 Skin Sens. 1, H317 Muta. 2, H341 Repr. 1B, H360

SECTION 4: General advice

General advice — For professional users only

SECTION 5: Safe handling advice

General measures — Spilled material may present a slipping hazard

Environmental precautions — Prevent entry to sewers and public waters
Notify authorities if liquid enters sewers or public waters
Avoid release to the environment
Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations.
After curing, the product can be disposed of with household waste.

Storage conditions — Protect from sunlight. Store in a well-ventilated place.

Technical measures — Comply with applicable regulations

Precautions for safe handling — Wear personal protective equipment
Avoid contact with skin and eyes
Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work
Avoid contact during pregnancy/while nursing

Methods for cleaning up — This material and its container must be disposed of in a safe way, and as per local legislation
Mechanically recover the product
On land, sweep or shovel into suitable containers
Store away from other materials.

For containment — Collect spillage.

Incompatible materials — Sources of ignition
Direct sunlight

Incompatible products — Strong bases
Strong acids

SECTION 6: First aid measures

First-aid measures after eye contact — Get immediate medical advice/attention.

	Immediately rinse with water for a prolonged period while holding the eyelids wide open Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist
First-aid measures after ingestion	Do not induce vomiting Rinse mouth Immediately call a POISON CENTER/doctor.
First-aid measures after inhalation	Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	Wash with plenty of water/… Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get immediate medical advice/attention.
First-aid measures general	Never give anything by mouth to an unconscious person If you feel unwell, seek medical advice (show the label where possible)
Symptoms/effects	Causes severe skin burns and eye damage.
Symptoms/effects after eye contact	Causes serious eye damage.
Symptoms/effects after inhalation	May cause an allergic skin reaction.

SECTION 7: Fire fighting measures

Firefighting instructions	Use water spray or fog for cooling exposed containers Exercise caution when fighting any chemical fire Prevent fire fighting water from entering the environment
Protection during firefighting	Self-contained breathing apparatus Do not enter fire area without proper protective equipment, including respiratory protection
Hazardous decomposition products in case of fire	Thermal decomposition generates : Carbon dioxide Carbon monoxide

SECTION 8: Other information

No data available

HIT-RE 500 V3, B

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 05/13/2020 Revision date: 05/13/2020 Supersedes: 02/25/2019 Version: 1.4

SECTION 1: Identification

1.1. Identification

Product form	Mixture
Product name	HIT-RE 500 V3, B
Product code	BU Anchor

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	Composite mortar component for fasteners in the construction industry

1.3. Details of the supplier of the safety data sheet

Supplier
Hilti, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
TX 75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

Department issuing data specification sheet
Hilti Entwicklungsgesellschaft mbH
Hiltistraße 6
86916 Kaufering - Deutschland
T +49 8191 906876
anchor.hse@hilti.com

1.4. Emergency telephone number

Emergency number	Chem-Trec Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada) Tel.: 703 527 3887 (Other countries) +1 918 8723000 1-800-879-8000 toll free

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corr. 1B	H314 -	Causes severe skin burns and eye damage.
Skin Sens. 1	H317 -	May cause an allergic skin reaction.
STOT SE 3	H335 -	May cause respiratory irritation.

Full text of H statements : see section 16

2.2. Label elements

GHS US labelling

Hazard pictograms (GHS US)

GHS05 GHS07

Signal word (GHS US)	Danger
Hazard statements (GHS US)	H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H335 - May cause respiratory irritation.
Precautionary statements (GHS US)	P280 - Wear eye protection, protective clothing, protective gloves. P262 - Do not get in eyes, on skin, or on clothing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention.

P302+P352 - If on skin: Wash with plenty of water.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
2-methyl-1,5-pentanediamine	(CAS-No.) 15520-10-2	25 - 35	Flam. Liq. 4, H227 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335
Quartz (SiO2)		10 - 25	Carc. 1A, H350
Phenol, styrenated	(CAS-No.) 61788-44-1	5 - 10	Skin Irrit. 2, H315 Skin Sens. 1, H317
m-Xylylenediamine	(CAS-No.) 1477-55-0	5 - <8	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Aquatic Chronic 3, H412
2,4,6-tris(dimethylaminomethyl)phenol	(CAS-No.) 90-72-2	1 - 2,5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319
3-Aminopropyltriethoxysilan	(CAS-No.) 919-30-2	1 - 2,5	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact: Wash with plenty of water/…. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get immediate medical advice/attention.

First-aid measures after eye contact: Get immediate medical advice/attention. Immediately rinse with water for a prolonged period while holding the eyelids wide open. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist.

First-aid measures after ingestion: Do not induce vomiting. Rinse mouth. Immediately call a POISON CENTER/doctor.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms: No additional information available.

Symptoms/effects: Causes severe skin burns and eye damage.

Symptoms/effects after inhalation: May cause an allergic skin reaction.

Symptoms/effects after eye contact: Causes serious eye damage.

4.3. Immediate medical attention and special treatment, if necessary

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Reactivity	Corrosive vapours.

5.3. Advice for firefighters

Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	Self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Spilled material may present a slipping hazard.

6.1.1. For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection.
Emergency procedures	Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment. Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. After curing, the product can be disposed of with household waste.

6.3. Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation. Mechanically recover the product. On land, sweep or shovel into suitable containers. Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Wear personal protective equipment. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact during pregnancy/while nursing.

Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	Comply with applicable regulations.
Storage conditions	Protect from sunlight. Store in a well-ventilated place.
Incompatible products	Strong bases. Strong acids.
Incompatible materials	Sources of ignition. Direct sunlight.
Storage temperature	41 - 77 °F
Heat and ignition sources	Keep away from heat and direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

HIT-RE 500 V3, B		
ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (R - Respirable particulate matter)
ACGIH	Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)
OSHA	OSHA PEL (TWA) (mg/m³)	15 mg/m³ (Total dust) 5 mg/m³ (Respirable fraction)

2-methyl-1,5-pentanediamine (15520-10-2)
Not applicable

Phenol, styrenated (61788-44-1)
Not applicable

m-Xylylenediamine (1477-55-0)		
ACGIH	ACGIH Ceiling (ppm)	0.018 ppm
ACGIH	Remark (ACGIH)	Eye, skin, & GI irr

3-Aminopropyltriethoxysilan (919-30-2)
Not applicable

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)
Not applicable

Quartz (SiO2)		
ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (Respirable fraction)
ACGIH	Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)
OSHA	Remark (OSHA)	(3) See Table Z-3.

Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

8.2. Exposure controls

Appropriate engineering controls	Ensure good ventilation of the work station.
Personal protective equipment	Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

Materials for protective clothing	Long sleeved protective clothing.

Hand protection	Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function's effective duration.
Eye protection	Wear security glasses which protect from splashes.
Skin and body protection	Wear suitable protective clothing.
Environmental exposure controls	No specific measures are required provided the product is handled in accordance with the general rules of occupational hygiene and safety.
Consumer exposure controls	Avoid contact during pregnancy/while nursing.
Other information	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Thixotropic paste.
Colour	red
Odour	Amine-like
Odour threshold	No data available
pH	11.5
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data available
Explosive properties	No data available
Oxidising properties	No data available
Vapour pressure	No data available
Relative density	No data available
Relative vapour density at 20 °C	No data available
Density	1.31 g/cm³
Solubility	insoluble in water.
Log Pow	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	50 - 70 Pa·s HN-0333

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : fume. Carbon monoxide. Carbon dioxide. Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

2-methyl-1,5-pentanediamine (15520-10-2)	
LD50 oral rat	1690 mg/kg (Rat)
LD50 dermal rat	1870 mg/kg
LC50 inhalation rat (mg/l)	4.9 mg/l
ATE US (oral)	1690 mg/kg bodyweight
ATE US (dermal)	1870 mg/kg bodyweight
ATE US (vapours)	4.9 mg/l/4h
ATE US (dust,mist)	4.9 mg/l/4h

Phenol, styrenated (61788-44-1)	
LD50 oral rat	> 2500 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 inhalation rat (mg/l)	158.31 mg/l/4h
ATE US (vapours)	158.31 mg/l/4h
ATE US (dust,mist)	158.31 mg/l/4h

m-Xylylenediamine (1477-55-0)	
LD50 oral rat	1090 mg/kg
LD50 dermal rat	> 3100 mg/kg
ATE US (oral)	660 mg/kg bodyweight
ATE US (dust,mist)	1.34 mg/l/4h

3-Aminopropyltriethoxysilan (919-30-2)	
LD50 oral rat	1.57 ml/kg
ATE US (oral)	1570 mg/kg bodyweight

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
LD50 oral rat	2169 mg/kg (Rat; Equivalent or similar to OECD 401; Literature study; 2169 mg/kg bodyweight; Rat; Experimental value)
LD50 dermal rat	> 2000 mg/kg (Rat; Literature study; Other; >1 ml/kg; Rat; Experimental value)
ATE US (oral)	500 mg/kg bodyweight

Skin corrosion/irritation: Causes severe skin burns and eye damage.
pH: 11.5

Serious eye damage/irritation: Serious eye damage, category 1, implicit
pH: 11.5

Respiratory or skin sensitisation: May cause an allergic skin reaction.

Germ cell mutagenicity	Not classified Based on available data, the classification criteria are not met
Carcinogenicity	Not classified

Quartz (SiO2)	
IARC group	1 - Carcinogenic to humans

Reproductive toxicity	Not classified Based on available data, the classification criteria are not met
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	Not classified
Aspiration hazard	Not classified
Potential adverse human health effects and symptoms	No additional information available.
Symptoms/effects after inhalation	May cause an allergic skin reaction.
Symptoms/effects after eye contact	Causes serious eye damage.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water: Harmful to aquatic life with long lasting effects.

2-methyl-1,5-pentanediamine (15520-10-2)	
LC50 fish 1	130 mg/l (LC50; 48 h)
LOEC (acute)	1800 mg/l
NOEC (acute)	1000 mg/l

Phenol, styrenated (61788-44-1)	
LC50 fish 1	5.6 mg/l
LC50 other aquatic organisms 1	9.7 mg/l
EC50 Daphnia 1	1.44 mg/l
NOEC (acute)	3.2 mg/l
Threshold limit algae 1	0.326 mg/l (72 h; Algae)
Threshold limit algae 2	0.14 mg/l (72 h; Algae)

m-Xylylenediamine (1477-55-0)	
LC50 fish 1	75 mg/l
LC50 other aquatic organisms 1	20.3 ppb
EC50 Daphnia 1	15 mg/l
LOEC (chronic)	15 mg/l
NOEC (acute)	10.5 mg/kg
NOEC (chronic)	4.7 mg/l
NOEC chronic crustacea	4.7 mg/l

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
LC50 fish 1	> 100 mg/l (96 h; Pisces; Nominal concentration)
EC50 Daphnia 1	10 - 100 mg/l (Invertebrata; Estimated value)
EC50 other aquatic organisms 1	84 mg/l (72 h; Desmodesmus subspicatus; growth rate; ECHA)
LC50 fish 2	70.9 mg/l (96 h; Pisces)
ErC50 (algae)	84 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, GLP)
NOEC (chronic)	2 mg/l (28 d; activated sludge, domestic; respiration rate; ECHA)

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Threshold limit algae 1	10 - 100,Algae
Threshold limit algae 2	84 mg/l (72 h; Scenedesmus subspicatus; Growth rate)

12.2. Persistence and degradability

HIT-RE 500 V3, B	
Persistence and degradability	May cause long-term adverse effects in the environment.

Phenol, styrenated (61788-44-1)	
Biochemical oxygen demand (BOD)	0.000231 g O_2 /g substance
Chemical oxygen demand (COD)	0.004827 g O_2 /g substance

Quartz (SiO2)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

HIT-RE 500 V3, B	
Bioaccumulative potential	Not established.

2-methyl-1,5-pentanediamine (15520-10-2)	
Log Pow	0.27 (Estimated value)
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).

Phenol, styrenated (61788-44-1)	
BCF fish 2	3246 mg/l
Log Pow	6.24 - 7.77 (Experimental value; OECD 123: Partition Coefficient (1-Octanol/Water): Slow-Stirring Method)
Bioaccumulative potential	Bioaccumulative potential.

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Log Pow	0.77 (Literature; 0.219; Experimental value; Equivalent or similar to OECD 107; 21.5 °C)
Bioaccumulative potential	Low bioaccumulation potential (Log Kow < 4).

Quartz (SiO2)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

Phenol, styrenated (61788-44-1)	
Ecology - soil	No (test)data on mobility of the substance available.

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Log Koc	1.32 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

Quartz (SiO2)	
Ecology - soil	Low potential for mobility in soil.

12.5. Other adverse effects

Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste)	Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	After curing, the product can be disposed of with household waste. . Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials	Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	RID
14.1. UN number			
3259	3259	3259	3259
14.2. UN proper shipping name			
AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	Amines, solid, corrosive, n.o.s. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)	AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine)
Transport document description			
UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II, (E)	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II	UN 3259 Amines, solid, corrosive, n.o.s. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II	UN 3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-methyl-1,5-pentanediamine, m-Xylylenediamine), 8, II
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
II	II	II	II
14.5. Environmental hazards			
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available			

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	C8
Special provisions (ADR)	274
Limited quantities (ADR)	1kg
Packing instructions (ADR)	P002, IBC08
Mixed packing provisions (ADR)	MP10
Transport category (ADR)	2

Orange plates	
Tunnel restriction code (ADR)	E

- Transport by sea

Special provisions (IMDG)	274
Limited quantities (IMDG)	1 kg
Packing instructions (IMDG)	P002
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B
Stowage category (IMDG)	A
Stowage and segregation (IMDG)	Separated from' acids.
MFAG-No	154

- Air transport

PCA packing instructions (IATA)	859
PCA max net quantity (IATA)	15kg
CAO packing instructions (IATA)	863
Special provisions (IATA)	A3

- Rail transport

Special provisions (RID)	274
Limited quantities (RID)	1kg
Packing instructions (RID)	P002, IBC08
Carriage prohibited (RID)	No

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

15.2. International regulations

CANADA

No additional information available

m-Xylylenediamine (1477-55-0)
Listed on the Canadian DSL (Domestic Substances List)

2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)
Listed on the Canadian DSL (Domestic Substances List)

Quartz (SiO2)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available

National regulations

Quartz (SiO2)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
2-methyl-1,5-pentanediamine(15520-10-2)	
Phenol, styrenated(61788-44-1)	
m-Xylylenediamine(1477-55-0)	
3-Aminopropyltriethoxysilan(919-30-2)	
2,4,6-tris(dimethylaminomethyl)phenol (90-72-2)	
Quartz (SiO2)()	

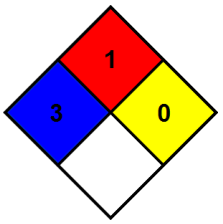
SECTION 16: Other information

Revision date	05/13/2020
Abbreviations and acronyms	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. European Agreement concerning the International Carriage of Dangerous Goods by Road. Acute Toxicity Estimate. Bioconcentration factor. Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008. Derived Minimal Effect level. Derived-No Effect Level. International Air Transport Association. Median effective concentration. International Maritime Dangerous Goods. Median lethal concentration. Median lethal dose. Lowest Observed Adverse Effect Level. No-Observed Adverse Effect Concentration. No-Observed Adverse Effect Level. No-Observed Effect Concentration. Persistent Bioaccumulative Toxic. Predicted No-Effect Concentration. Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. Regulations concerning the International Carriage of Dangerous Goods by Rail. Safety Data Sheet. Very Persistent and Very Bioaccumulative.
Other information	None.

Full text of H-statements:

H227	Combustible liquid
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
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.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H350	May cause cancer.
H412	Harmful to aquatic life with long lasting effects.

NFPA health hazard	3 - Materials that, under emergency conditions, can cause serious or permanent injury.
NFPA fire hazard	1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating

Health	3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical	0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
Personal protection	B B - Safety glasses, Gloves

Indication of changes:

Section	Changed item	Change	Comments
2.1	GHS-US classification		
3	Composition/information on ingredients	Modified	

SDS_US_Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

HIT-RE 500 V3, A

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Issue date: 05/13/2020 Revision date: 05/13/2020 Supersedes: 02/25/2019 Version: 2.3

SECTION 1: Identification

1.1. Identification

Product form	Mixture
Product name	HIT-RE 500 V3, A
Product code	BU Anchor

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	Composite mortar component for fasteners in the construction industry

1.3. Details of the supplier of the safety data sheet

Supplier
Hilti, Inc.
Legacy Tower, Suite 1000
7250 Dallas Parkway
TX 75024 Plano - USA
T +1 9724035800
1-800-879-8000 toll free - F +1 918 254 0522

Department issuing data specification sheet
Hilti Entwicklungsgesellschaft mbH
Hiltistraße 6
86916 Kaufering - Deutschland
T +49 8191 906876
anchor.hse@hilti.com

1.4. Emergency telephone number

Emergency number	Chem-Trec Tel.: 1 800 424 9300 (USA, PR, Virgin Islands, Canada) Tel.: 703 527 3887 (Other countries) +1 918 8723000 1-800-879-8000 toll free

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Skin Corr. 1C	H314 -	Causes severe skin burns and eye damage.
Skin Sens. 1	H317 -	May cause an allergic skin reaction.
Muta. 2	H341 -	Suspected of causing genetic defects.
Repr. 1B	H360 -	May damage fertility or the unborn child.

Full text of H statements : see section 16

2.2. Label elements

GHS US labelling

Hazard pictograms (GHS US)

GHS05 GHS07 GHS08

Signal word (GHS US)	Danger
Hazard statements (GHS US)	H314 - Causes severe skin burns and eye damage. H317 - May cause an allergic skin reaction. H341 - Suspected of causing genetic defects. H360 - May damage fertility or the unborn child.
Precautionary statements (GHS US)	P280 - Wear eye protection, protective clothing, protective gloves. P262 - Do not get in eyes, on skin, or on clothing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P302+P352 - If on skin: Wash with plenty of water.

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS-US classification
Quartz (SiO2)		25 - 40	Carc. 1A, H350
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane	(CAS-No.) 1675-54-3	25 - 40	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol	(CAS-No.) 9003-36-5	10-20	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 Skin Sens. 1, H317
butanedioldiglycidyl ether	(CAS-No.) 2425-79-8	5 - 10	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
trimethylolpropane triglycidylether	(CAS-No.) 30499-70-8	5 - 10	Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Muta. 2, H341 Repr. 1B, H360 Aquatic Chronic 2, H411
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	(CAS-No.) 2530-83-8	2.5 - 5	Eye Dam. 1, H318

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Allow affected person to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact: Gently wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Get immediate medical advice/attention.

First-aid measures after eye contact: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion: Rinse mouth. Get medical advice/attention. Do not induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Potential adverse human health effects and symptoms: No additional information available.

Symptoms/effects after inhalation: May cause an allergic skin reaction.

Symptoms/effects after skin contact: Causes skin irritation.

Symptoms/effects after eye contact: Causes serious eye irritation.

4.3. Immediate medical attention and special treatment, if necessary

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Water spray. Carbon dioxide. Dry powder. Foam. Sand.
Unsuitable extinguishing media	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	Self-contained breathing apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	Spilled material may present a slipping hazard.

6.1.1. For non-emergency personnel

Emergency procedures	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	Use personal protective equipment as required. Equip cleanup crew with proper protection.
Emergency procedures	Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment. Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. After curing, the product can be disposed of with household waste.

6.3. Methods and material for containment and cleaning up

For containment	Collect spillage.
Methods for cleaning up	This material and its container must be disposed of in a safe way, and as per local legislation. Mechanically recover the product. On land, sweep or shovel into suitable containers. Store away from other materials.
Other information	Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	Wear personal protective equipment. Avoid contact with skin and eyes. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

Hygiene measures	Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	Protect from sunlight.
Incompatible products	Strong bases. Strong acids.
Incompatible materials	Sources of ignition. Direct sunlight.
Storage temperature	41 - 77 °F
Heat and ignition sources	Keep away from heat and direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

HIT-RE 500 V3, A		
ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (R - Respirable particulate matter)
ACGIH	Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)

Quartz (SiO2)		
ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³ (Respirable fraction)
ACGIH	Remark (ACGIH)	TLV® Basis: Pulm fibrosis; lung cancer. Notations: A2 (Suspected Human Carcinogen)
OSHA	Remark (OSHA)	(3) See Table Z-3.

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)
Not applicable

butanedioldiglycidyl ether (2425-79-8)
Not applicable

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)
Not applicable

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)
Not applicable

trimethylolpropane triglycidylether (30499-70-8)
Not applicable

Additional information	The product has a pasty consistency. Exposure limit values for respirable dusts are not relevant for this product.

8.2. Exposure controls

Appropriate engineering controls	No specific measures identified.
Personal protective equipment	Safety glasses. Gloves. Protective clothing. Avoid all unnecessary exposure.

Materials for protective clothing	Long sleeved protective clothing.
Hand protection	Wear protective gloves. The permeation time is not the maximum wearing time! Generally speaking, it must be reduced. Contact with either mixtures of substances or different substances may shorten the protective function's effective duration.
Eye protection	Wear security glasses which protect from splashes.
Skin and body protection	Wear suitable protective clothing.

Environmental exposure controls	No specific measures are required provided the product is handled in accordance with the general rules of occupational hygiene and safety.
Consumer exposure controls	Avoid contact during pregnancy/while nursing.
Other information	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Solid
Appearance	Thixotropic paste.
Colour	Light grey
Odour	characteristic
Odour threshold	No data available
pH	6.6
Melting point	No data available
Freezing point	No data available
Boiling point	No data available
Flash point	No data available
Relative evaporation rate (butylacetate=1)	No data available
Flammability (solid, gas)	No data available
Explosive limits	No data available
Explosive properties	No data available
Oxidising properties	No data available
Vapour pressure	No data available
Relative density	No data available
Relative vapour density at 20 °C	No data available
Density	1.45 g/cm³
Solubility	insoluble in water.
Log Pow	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	No data available
Viscosity, kinematic	No data available
Viscosity, dynamic	45 - 59 Pa·s 23 °C

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Thermal decomposition generates : fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Not classified

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
LD50 oral rat	> 5000 mg/kg bodyweight (Rat; ECHA)
LD50 dermal rat	> 2000 mg/kg bodyweight (Rat; ECHA)

butanedioldiglycidyl ether (2425-79-8)	
LD50 oral rat	2980 mg/kg (Rat)
LD50 dermal rabbit	1130 mg/kg (Rabbit)
ATE US (oral)	1163 mg/kg bodyweight
ATE US (dermal)	1130 mg/kg bodyweight
ATE US (gases)	4500 ppmv/4h
ATE US (vapours)	11 mg/l/4h
ATE US (dust,mist)	1.5 mg/l/4h

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
LD50 oral rat	8025 mg/kg bodyweight (Rat; Equivalent or similar to OECD 401; Experimental value)
LD50 dermal rabbit	4250 mg/kg bodyweight (Rabbit; Experimental value; Equivalent or similar to OECD 402)
ATE US (oral)	8025 mg/kg bodyweight
ATE US (dermal)	4250 mg/kg bodyweight

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LD50 dermal rat	> 2000 mg/kg (Rat; Experimental value; OECD 402: Acute Dermal Toxicity)

Skin corrosion/irritation: Causes severe skin burns and eye damage.
pH: 6.6

Serious eye damage/irritation: Serious eye damage, category 1, implicit
pH: 6.6

Respiratory or skin sensitisation: May cause an allergic skin reaction.

Germ cell mutagenicity: Suspected of causing genetic defects.

Carcinogenicity: Not classified

Quartz (SiO2)	
IARC group	1 - Carcinogenic to humans

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
IARC group	3 - Not classifiable

Reproductive toxicity: May damage fertility or the unborn child.

STOT-single exposure: Not classified

STOT-repeated exposure: Not classified

Aspiration hazard	Not classified
Potential adverse human health effects and symptoms	No additional information available.
Symptoms/effects after inhalation	May cause an allergic skin reaction.
Symptoms/effects after skin contact	Causes skin irritation.
Symptoms/effects after eye contact	Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water: Toxic to aquatic life with long lasting effects.

butanedioldiglycidyl ether (2425-79-8)	
LC50 fish 1	24 mg/l (96 h; Pisces) ECHA
LC50 other aquatic organisms 1	> 160 mg/l
NOEC (acute)	40 mg/l
Threshold limit algae 1	88930 mg/l (96 h; Algae)

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
LC50 fish 1	55 mg/l (96 h; Cyprinus carpio; Young)
EC50 Daphnia 1	473 - 710 mg/l (48 h; Daphnia magna)
LC50 fish 2	237 mg/l 96 h; Salmo gairdneri (Oncorhynchus mykiss)
Threshold limit algae 1	119 mg/l (7 days; Anabaena flosaquae)
Threshold limit algae 2	250 mg/l (72 h; Selenastrum capricornutum)

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
LC50 fish 1	2.3 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nominal concentration)
EC50 Daphnia 1	2 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
LC50 fish 2	2.3 mg/l (96 h; Oncorhynchus mykiss; Nominal concentration)
Threshold limit algae 1	> 11 mg/l (72 h; Scenedesmus sp.)
Threshold limit algae 2	4.2 mg/l (72 h; Scenedesmus sp.)

12.2. Persistence and degradability

HIT-RE 500 V3, A	
Persistence and degradability	May cause long-term adverse effects in the environment.

Quartz (SiO2)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

butanedioldiglycidyl ether (2425-79-8)	
Biochemical oxygen demand (BOD)	0.01982 g O_2 /g substance

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

HIT-RE 500 V3, A	
Bioaccumulative potential	Not established.

Quartz (SiO2)	
Bioaccumulative potential	No bioaccumulation data available.

butanedioldiglycidyl ether (2425-79-8)	
Log Pow	-0.15

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)	
Log Pow	-0.92 (Estimated value)

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
BCF other aquatic organisms 1	31 (Estimated value, Fresh weight)
Log Pow	3 (Estimated value, 25 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

Quartz (SiO2)	
Ecology - soil	Low potential for mobility in soil.

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)	
Surface tension	59 mN/m (20 °C, 0.09 g/l)
Log Koc	2.65 (log Koc, SRC PCKOCWIN v2.0, QSAR)
Ecology - soil	Low potential for adsorption in soil.

12.5. Other adverse effects

Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste): Disposal must be done according to official regulations.

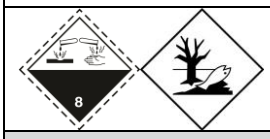
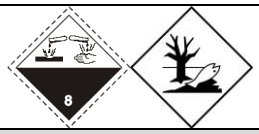
Product/Packaging disposal recommendations: After curing, the product can be disposed of with household waste. . Full or only partially emptied cartridges must be disposed of as special waste in accordance with official regulations. Packaging contaminated by the product : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

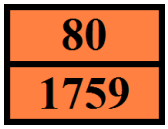
In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	RID
14.1. UN number			
1759	1759	1759	1759
14.2. UN proper shipping name			
CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether)	CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether)	Corrosive solid, n.o.s. (trimethylolpropane triglycidylether)	CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether)
Transport document description			
UN 1759 CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether), 8, III, (E), ENVIRONMENTALLY HAZARDOUS	UN 1759 CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether), 8, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1759 Corrosive solid, n.o.s. (trimethylolpropane triglycidylether), 8, III, ENVIRONMENTALLY HAZARDOUS	UN 1759 CORROSIVE SOLID, N.O.S. (trimethylolpropane triglycidylether), 8, III, ENVIRONMENTALLY HAZARDOUS

ADR	IMDG	IATA	RID
14.3. Transport hazard class(es)			
8	8	8	8
			
14.4. Packing group			
III	III	III	III
14.5. Environmental hazards			
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes	Dangerous for the environment : Yes
No supplementary information available			

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	C10
Special provisions (ADR)	274
Limited quantities (ADR)	5kg
Packing instructions (ADR)	P002, IBC08, LP02, R001
Mixed packing provisions (ADR)	MP10
Transport category (ADR)	3
Orange plates	
Tunnel restriction code (ADR)	E

- Transport by sea

Special provisions (IMDG)	223, 274
Packing instructions (IMDG)	P002, LP02
EmS-No. (Fire)	F-A
EmS-No. (Spillage)	S-B
Stowage category (IMDG)	A

- Air transport

PCA packing instructions (IATA)	860
PCA max net quantity (IATA)	25kg
CAO packing instructions (IATA)	864
Special provisions (IATA)	A3, A803

- Rail transport

Special provisions (RID)	274
Packing instructions (RID)	P002, IBC08, LP02, R001
Carriage prohibited (RID)	No

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

butanedioldiglycidyl ether (2425-79-8)	
EPA TSCA Regulatory Flag	TP - TP - indicates a substance that is the subject of a proposed TSCA section 4 test rule.

trimethylolpropane triglycidylether (30499-70-8)	
EPA TSCA Regulatory Flag	XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

15.2. International regulations

CANADA

Quartz (SiO2)
Listed on the Canadian DSL (Domestic Substances List)

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)
Listed on the Canadian DSL (Domestic Substances List)

butanedioldiglycidyl ether (2425-79-8)
Listed on the Canadian DSL (Domestic Substances List)

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)
Listed on the Canadian DSL (Domestic Substances List)

2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane (1675-54-3)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations
No additional information available

National regulations

Quartz (SiO2)
Listed on IARC (International Agency for Research on Cancer)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	**State or local regulations**
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol (9003-36-5)	
butanedioldiglycidyl ether (2425-79-8)	

Component	State or local regulations
2,2'-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bisoxirane(1675-54-3)	
trimethylolpropane triglycidylether(30499-70-8)	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane(2530-83-8)	
Quartz (SiO2)()	

SECTION 16: Other information

Revision date: 05/13/2020

Abbreviations and acronyms: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways. European Agreement concerning the International Carriage of Dangerous Goods by Road. Acute Toxicity Estimate. Bioconcentration factor. Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008. Derived Minimal Effect level. Derived-No Effect Level. International Air Transport Association. Median effective concentration. International Maritime Dangerous Goods. Median lethal concentration. Median lethal dose. Lowest Observed Adverse Effect Level. No-Observed Adverse Effect Concentration. No-Observed Adverse Effect Level. No-Observed Effect Concentration. Persistent Bioaccumulative Toxic. Predicted No-Effect Concentration. Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. Regulations concerning the International Carriage of Dangerous Goods by Rail. Safety Data Sheet. Very Persistent and Very Bioaccumulative.

Other information: None.

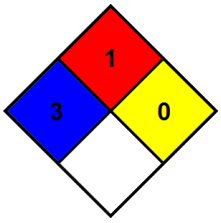
Full text of H-statements:

H302	Harmful if swallowed.
H312	Harmful in contact with skin.
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.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
H411	Toxic to aquatic life with long lasting effects.

NFPA health hazard: 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard: 1 - Materials that must be preheated before ignition can occur.

NFPA reactivity: 0 - Material that in themselves are normally stable, even under fire conditions.



Hazard Rating	
Health	3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability	1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
Physical	1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
Personal protection	B
	B - Safety glasses, Gloves

Indication of changes:

Section	Changed item	Change	Comments
9	pH	Added	
14	Transportation information	Modified	
16	Additional information	Added	

SDS_US_Hilti

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SET-XP® *High-Strength Epoxy Adhesive*
SAFETY DATA SHEET

1. Identification

Product Identification

Product Identifier: **SET-XP®**
Recommended Use: SET-XP® is a high-strength, anchoring adhesive for cracked and uncracked concrete.
Use Restrictions: To ensure proper installation use according to package directions, complete application instructions can be found in Simpson Strong-Tie catalogs or online at strongtie.com.

Company Identification

Company: Simpson Strong-Tie Company Inc.
Address: 5956 W. Las Positas Blvd.
Pleasanton, CA 94588
Phone: 1-800-999-5099
Website: www.strongtie.com
Emergency: 1-800-535-5053 (US/Canada) / 1-352-323-3500 (International)
For most current SDS, please visit our website at **www.strongtie.com/sds**

2. Hazard Identification

General Information

SET-XP High-Strength Epoxy Adhesive is for anchoring doweling in cracked and uncracked concrete and masonry. It is a two-part (1:1) system packaged as a single unit in a dual cartridge. The two parts of this product have been individually assessed according to the Globally Harmonized System (GHS). Exposure to the individual components will only occur with improper use. The resin and hardener are dispensed and mixed simultaneously through the mixing nozzle. The mixed product can be assumed to carry the hazards of each component until the product has fully hardened. The final cured product will be uniformly teal in color and can be considered nonhazardous. Some hazards may apply upon grinding or cutting through hardened product. This Safety Data Sheet covers the hazards and responses for the safe use of this product.

Resin (White Side) GHS Classification

Classification according to HazCom2012 (GHS)

Physical Hazards:	Not Classified.		
Health Hazards:	Skin Corrosion/Irritation	Category 2	H315: Causes skin irritation
	Serious Eye Damage/Irritation	Category 2	H319: Causes serious eye irritation
	Sensitization, Skin	Category 1	H317: May cause an allergic skin reaction
	Germ Cell Mutagenicity	Category 2	H341: Suspected of causing genetic defects
	Carcinogenicity	Category 2	H351: Suspected of causing cancer
Environmental Hazards:	Chronic Aquatic Hazard	Category 2	H411: Toxic to aquatic life with long lasting effects

Main Symptoms: Irritation of eyes and skin. Symptoms include redness, itching, burning, tearing, swelling, and blurred vision. May cause rash/allergic reaction to the skin. Long term exposure may cause chronic effects.

GHS Label Elements

Exclamation Point **Chronic Health** **Environmental Hazard**

Contains: Resins, Butyl Glycidyl Ether, Titanium Dioxide
Signal Word: **WARNING!**
Hazard Statements:

H315:	Causes skin irritation.
H319:	Causes serious eye irritation.
H317:	May cause an allergic skin reaction.
H341:	Suspected of causing genetic defects.
H351:	Suspected of causing cancer.
H411:	Toxic to aquatic life with long lasting effects.

Precautionary Statements:
Prevention:

P102:	Keep out of reach of children.
P103:	Read label before use.

	P202:	Do not handle until all safety precautions have been read and understood.
	P261:	Avoid breathing dust, mist, or vapors.
	P264:	Wash 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.
	P273:	Avoid release to environment.
	P280:	Wear protective gloves/protective clothing/eye protection/face protection.
Response:	P302+P352:	IF ON SKIN: Wash with plenty of water.
	P333+P313:	If skin irritation or rash occurs: Get medical advice/attention.
	P362+P364:	Take off contaminated clothing and wash before re-use.
	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.
	P337+P313:	If eye irritation persists: Get medical advice/attention.
	P308+P313:	If exposed or concerned: Call a poison center/doctor.
	P391:	Collect spillage.
Storage:	P403:	Store in a well-ventilated place.
	P405:	Store locked up.
	P411:	Store between 45-90°F (7-32°C).
Disposal:	P501:	Dispose of contents/container in accordance with local/regional regulations.

Supplemental Label Information: None known.

Hardener (Green Side) GHS Classification

Classification according to HazCom2012 (GHS)

Physical Hazards: Not Classified.

Health Hazards:

Skin Corrosion/Irritation	Category 1	H314: Causes severe skin burns
Serious Eye Damage/Irritation	Category 1	H318: Causes serious eye damage
Sensitization, Skin	Category 1	H317: May cause an allergic skin reaction
Germ Cell Mutagenicity	Category 2	H341: Suspected of causing genetic defects
STOT, Repeated Exposure	Category 2	H373: May cause damage to organs through prolonged or repeated exposure

Environmental Hazards: Not Classified.

Main Symptoms: Damage to the eyes and skin. Symptoms include burns, redness, itching, tearing, swelling, and blurred vision. May cause rash/allergic reaction to the skin. Long term exposure may cause chronic effects.

GHS Label Elements

Corrosive | Exclamation Point | Chronic Health

Contains:	Crystalline Silica (Quartz), Phenols, Amines	
Signal Word:	**DANGER!**	
Hazard Statements:	H314:	Causes severe skin burns and eye damage.
	H318:	Causes serious eye damage.
	H317:	May cause an allergic skin reaction.
	H341:	Suspected of causing genetic defects.
	H373:	May cause damage to organs through prolonged or repeated exposure.
Precautionary Statements:		
Prevention:	P102:	Keep out of reach of children.
	P103:	Read label before use.
	P202:	Do not handle until all safety precautions have been read and understood.
	P260:	Do not breathe dust, mist, or vapor.
	P264:	Wash 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 must not be allowed out of the workplace.
	P280:	Wear protective gloves/protective clothing/eye protection/face protection.
	P284:	In case of inadequate ventilation wear respiratory protection.
Response:	P301+P330+P331:	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P310:	Immediately call a POSION CENTER/doctor.
	P303+P361+P353:	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
	P333+P313:	If skin irritation or rash occurs: Get medical advice/attention.
	P363:	Wash contaminated clothing before reuse.
	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.
	P315:	Get immediately medical advice/attention.
	P337+P313:	If eye irritation persists: Get medical advice/attention.
	P308+P313:	If exposed or concerned: Get medical advice/attention.
Storage:	P403+P233:	Store in a well-ventilated place. Keep container tightly closed.
	P405:	Store locked up.
	P411:	Store between 45-90°F (7-32°C).
Disposal:	P501:	Dispose of contents/container in accordance with local/regional regulations.

Supplemental Label Information: None known.

Hazards Not Otherwise Classified (HNOC)

The above hazards are for the uncured components of SET-XP. Upon combination of the two components, an innocuous solid which does not present any immediate hazards is formed. Upon grinding or cutting the cured product, the following hazards may apply. Ensure good work practice and use of personal protective equipment as needed to control exposure to processing dust.


Chronic Health

Health Hazard:	Carcinogenicity	Category 1A
OSHA Hazard:	STOT, Repeated Exposure	Category 1
	Combustible Dust	
Hazard Statement:	May cause cancer. May cause damage to organs (lungs) with prolonged and repeated exposure. Can form explosive air-dust mixtures, avoid creating dust.	
Precautionary Statement:	Do not breathe dust. Do not allow dust to build up on surfaces.	

3. Composition Information

General Information

This product is a mixture. Hazardous ingredients for each component are listed below. May include other nonhazardous ingredients. May include other trace ingredients, see Section 15.

List of abbreviations and symbols:
Classification: Global Harmonized System Classifications
The full text for H-phrases is displayed in section 16. All concentrations are in percent by weight unless otherwise noted.

Resin (White Side)

Chemical Name	Weight %	CAS Number	EC Number
Bisphenol-A Based Epoxy Resin	30-50	25068-38-6	500-033-5
Classifications: Skin Irrit. 2: H315, Eye Irrit. 2: H319, Skin Sens. 1: H317, STOT SE 3: H335, Aquatic Chronic 2: H411			
Phenolic Novolac Resin	40-70	28064-14-4	608-164-0
Classifications: Skin Irrit. 2: H315, Eye Irrit. 2: H319, Skin Sens. 1: H317, STOT SE 3: H335, Aquatic Chronic 2: H411			
Butyl Glycidyl Ether	1-5	2426-08-6	219-376-4
Classifications: Flam. Liq. 3: H226, Acute Tox. 4: H302, Acute Tox. 3: H311+H331, Skin Sens. 1: H317, GCM 2: H341, Carc. 2: H351, STOT SE 3: H335, Aquatic 3: H402+H412			
Titanium Dioxide	1-5	13463-67-7	236-675-5
Classifications: Carc. 2: H351			

Hardener (Green Side)

Chemical Name	Weight %	CAS Number	EC Number
Crystalline Silica, Quartz **Classifications:** Carc. 1A: H350, STOT RE 1: H372	20-40	14808-60-7	238-878-4
Polyamido Amine **Classifications:** Skin Corr. 1: H314, Eye Dam. 1: H318, Skin Sens. 1: H317, Aquatic Chronic 2: H411	10-30	68953-36-6	273-201-6
2,4,6-tris-(dimethylaminomethyl)phenol **Classifications:** Acute Tox. 4: H302, Skin Irrit. 2: H315, Eye Irrit. 2: H319	1-5	90-72-2	202-013-9
Phenol **Classifications:** Acute Tox. 3: H301+H311+H331, Skin Corr. 1: H314, GCM 2: H341, STOT RE 2: H373	1-5	108-95-2	203-632-7
Benzene-1,3-Dimethaneamine **Classifications:** Acute Tox. 4: H302+H312+H332, Skin Corr. 1: H314, Aquatic 3: H402+H412	1-5	1477-55-0	216-032-5
Tetraethylenepentamine **Classifications:** Acute Tox. 4: H302+H312, Skin Corr. 1: H314, Skin Sens. 1: 317, Aquatic Chronic 2: H411	1-5	112-57-2	203-986-2
Carbon Black **Classifications:** Carc. 2: H351	< 1	1333-86-4	215-609-9

4. First-Aid Measures

General Information

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. If exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

Routes of Exposure

Eye Contact: Immediately flush eyes with plenty of cool water for at least 15 minutes while holding the eyes open. Remove contact lenses if present and easy to do. If redness, burning, blurred vision, or swelling persists, **consult a physician immediately.**

Skin Contact: Remove contaminated clothing and product; immediately wash affected area with soap and water. Do not apply greases or ointments. Chemical burns must be treated by a **physician.**

Ingestion: Rinse mouth immediately. Give large amounts of milk or water if the person is conscious. Only induce vomiting at the instruction of medical personnel. **Consult a physician immediately.**

Inhalation: Remove patient to fresh air. Give oxygen or artificial respiration if needed. If patient continues to experience difficulty breathing, **consult a physician.**

Most Important Symptoms

Damage to the eyes and skin. Symptoms include burns, redness, itching, tearing, swelling, and blurred vision. Permanent eye damage, including blindness, could result. Rash/dermatitis.

5. Fire-Fighting Measures

Suitable Extinguishing Media: Extinguish with foam, carbon dioxide, dry powder, or water fog.

Additional Information: None known.

Hazards during Fire-Fighting: Hazardous decomposition products may occur when materials polymerize at temperatures above 500°F (260°C). Irritating and toxic gases/fumes may be released during a fire. Water run-off can cause environmental damage.

Fire-Fighting Procedures: Use standard fire-fighting procedures and consider the hazards of other involved materials. In case of fire and/or explosion, do not breathe fumes. Self-contained breathing apparatus and full protective clothing must be worn. Move containers from fire area if you can do so without risk. Cool containers by flooding quantities of water until well after fire is out. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.

6. Accidental Release Measures

Personal Precautions

Non-emergency personnel: Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep unnecessary personnel away. Wear appropriate personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Avoid inhalation of vapors or mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

Emergency personnel: Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate personal protection.

Clean-Up Methods

Small spills (uncured):	Wipe up with absorbent material (e.g. cloth, fleece). Place in leak-proof containers. Seal tightly for proper disposal. Clean surface thoroughly to remove residual contamination. If desired, approved solvents, such as ketones (MEK, acetone, etc.), lacquer thinner, or adhesive remover can be used. Do NOT use solvents to clean adhesives from skin. Take appropriate precautions when handling flammable solvents. Solvents may damage surfaces to which they are applied.
Large spills (uncured):	Stop the flow of material, if this is without risk. Dike far ahead of spill to contain material. Use a non-combustible material like vermiculite, sand or earth to soak up the product. Place in leak-proof containers. Seal tightly for proper disposal. Following product recovery, flush area with water.
Cured Material:	Chip or grind off surface. The product contains components that are considered carcinogenic in respirable form. If you are grinding or cutting cured product, ensure good work practice and use of personal protective equipment as needed to control exposure to respirable dust. Take precautionary measures; do not allow dust to build up.

Environmental Precautions

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

7. Handling and Storage

Handling

Mechanical ventilation or local exhaust ventilation is recommended. Keep away from open flames, hot surfaces and sources of ignition. Wear appropriate personal protective equipment. When using, do not eat, drink or smoke. Do not inhaled dust, mist, or vapor. Use only in well-ventilated places. Avoid contact with eyes, skin, and clothing. Pregnant women should not work with this product if there is risk of exposure. Wash thoroughly after handling. Wash contaminated clothing before reuse. Observe good industrial hygiene practices. To obtain optimal performance from Simpson Strong-Tie products and to achieve maximum allowable design load, the products must be properly installed and used in accordance with the installation instructions and design limits provided by Simpson Strong-Tie.

Storage

Full Unused Cartridges: Store away from incompatible materials (See Section 10 of the SDS). Keep in original container. Keep container tightly closed. Store in a dry, well-ventilated place out of direct sunlight between 45-90°F (7-32°C). Keep away from heat and sources of ignition. Protect container from physical damage. Keep out of reach of children.

Partially Used Cartridges: To store partially used cartridge, temporarily replace cap or leave hardened nozzle in place. To re-use, attach new nozzle. Do not try to dispense after adhesive hardens in nozzle. CAUTION: Adhesive will start to gel in the nozzle. Adhesive will gel faster at higher temperatures. Material under pressure can blowout the back of the cartridge if the adhesive in the nozzle hardens. Use only an appropriate Simpson Strong-Tie® mixing nozzle in accordance with Simpson Strong-Tie instructions. Modification or improper use of mixing nozzle may impair adhesive performance. Keep out of reach of children.

8. Exposure Controls / Personal Protection

Personal Protective Equipment

Protective Measure:	Wear appropriate personal protective equipment.
Eye Protection:	Wear chemical splash goggles or safety glasses with side shield.
Hand Protection:	Wear chemical-resistant gloves such as: Nitrile, neoprene, butyl.
Skin and Body Protection:	Wear long sleeve shirt/long pants and other clothing as required to minimize contact.
Respirator Protection:	The use of a respirator is not required during normal use of this product. If grinding or cutting cured product or if using in an area without proper ventilation, the use of an approved respirator is recommended.
General Hygiene:	Always observe good personal hygiene measures such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Engineering Controls

Mechanical ventilation or local exhaust ventilation is recommended, ventilation rates should be matched to conditions to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and emergency shower.

Exposure Limits

Component	OSHA (PEL)	ACGIH (TLV)	NIOSH Pocket Guide
Quartz (CAS 14808-60-7)	$\frac{10}{\%SiO_2 + 2}$ mg/m^3	0.025 mg/m³ (respirable)	0.05 mg/m³ (respirable)
Phenol* (CAS 108-95-2)	19 mg/m³ 5 ppm	19 mg/m³ 5 ppm	19 mg/m³ 5 ppm
Benzene-1,3-Dimethaneamine* (CAS 1477-55-0)	0.1 mg/m³ (ceiling)	0.1 mg/m³ (ceiling)	0.1 mg/m³ (ceiling)
Butyl Glycidyl Ether (CAS 2426-08-6)	270 mg/m³ 50 ppm	3 ppm	30 mg/m³ (ceiling) 5.6 ppm (ceiling)
Titanium Dioxide (CAS 13463-67-7)	5 mg/m³ (respirable) 15 mg/m³ (total dust)	10 mg/m³	N/E
Carbon Black (CAS 1333-86-4)	3.5 mg/m³	3 mg/m³	0.1 mg/m³

***Skin Designation:** Material can be absorbed through skin.

9. Physical and Chemical Properties

Property	Resin	Hardener
Physical State:	Liquid, Paste	Liquid, Paste
Color:	White	Dark Green
Odor:	Sweet	Ammonia
pH:	6.9	10.3
Flammability limit – lower %:	No data	No data
Flammability limit – upper %:	No data	No data
Vapor Pressure:	Non-volatile	No data
Vapor Density:	No data	No data
Solubility:	Insoluble in water	Slightly soluble in water
Freezing/Melting Point:	No data	No data
Boiling Point:	> 500 °F (>260 °C)	No data
Flash Point:	250 °F (121 °C) Open Cup	262 °F (128 °C) Closed Cup
Evaporation Rate:	No data	No data
Decomposition Temperature:	No data	No data
Specific Gravity:	1.21 at 72°F (22°C)	1.59 at 72°F (22°C)
VOC (after cure):	3 g/L	3 g/L
Kow:	No data	No data
Viscosity:	No data	No data

10. Stability and Reactivity

Reactivity: This product is stable and non-reactive under normal conditions.
Chemical Stability: Stable under normal storage conditions.
Condition to Avoid: High heat and open flame.
Substances to Avoid: **Resin:** Oxidizing agents, acids, organic bases, and amines. **Hardener:** Strong oxidizing agents, peroxides, phenols, and acids
Hazardous Reactions: Hazardous polymerization does not occur.
Decomposition Products: Carbon dioxide, carbon monoxide, oxides of nitrogen, and other organic compounds.

11. Toxicological Information

Likely Routes of Exposure

Ingestion: Corrosive material; causes severe irritation or burns to the gastrointestinal tract and respiratory tract.
Inhalation: Prolonged inhalation may cause temporary respiratory irritation.
Skin contact: Causes severe skin burns. May cause an allergic skin reaction.
Eye contact: Causes severe eye damage.
Symptoms: Burns, redness, itching, tearing, swelling, and blurred vision. Rash/dermatitis. Severe irritation or burns to the gastrointestinal tract and respiratory system.

Information on Toxicological Effects

Acute Effects

Toxicity: Not expected to be acutely toxic.

Component		Species	Test Result
SET-XP Resin			
	Acute, *Oral,* LD50	Rat	> 5000
	Acute, *Dermal,* LD50	Rabbit	> 2000
SET-XP Hardener			
	Acute, *Oral,* LD50	Rat	> 5000
	Acute, *Dermal,* LD50	Rabbit	> 2000

Skin corrosion/irritation: Causes severe skin irritation and burns.
Eye damage/eye irritation: Causes serious eye irritation and damage.
Respiratory sensitization: No data available.
Skin sensitization: May cause an allergic skin reaction.
Aspiration hazard: Due to the nature of this product, it is not expected to be an aspiration hazard.
Specific target organ toxicity
Single exposure: No data available.

Chronic Effects

Germ cell mutagenicity: This product contains components that are suspected of causing genetic defects.
Carcinogenicity: Suspected of causing cancer. The product also contains components which are considered carcinogens only in their respirable form. Due to the nature of this product, exposure to respirable particles is likely only when grinding or cutting cured product. Ensure good work practice and use of personal protective equipment as needed to control exposure.
Reproductive toxicity: The available data does not indicate that any ingredients of this product are reproductive toxins.
Specific target organ toxicity
Repeated exposure: May cause damage to organs through prolonged or repeated exposure.

Carcinogen / Reproductive Toxin / Mutagen Information

Component	% In Blend (approx.)	IARC Monographs	NTP	ACGIH	Other
Quartz (CAS 14808-60-7)	20-40	1	KNOWN	A2	CA65
Titanium Dioxide (CAS 13463-67-7)	< 5	2B	---	---	CA65
Carbon Black (CAS 1333-86-4)	< 1	2B	---	---	CA65
Phenol (CAS 108-95-2)	1-5	3	---	A4	in vitro tests show limited mutagenic properties in human cells

IARC: 1- Carcinogenic 2- Possibly carcinogenic 3 – Not classifiable as to carcinogenicity 4 – Probably not carcinogenic
NTP: Known to be human carcinogen or Reasonably anticipated to be a human carcinogen
ACGIH – A1 – Confirmed carcinogen A2 – Suspected carcinogen A3 – Animal carcinogen A4 – Not classified A5 – Not suspected
CA65 – California Prop 65

Further Information

Toxicological, ecotoxicological, physical, and chemical properties may not have been fully investigated. Hazard data above is estimated based on best available information. Some workers with pre-existing medical conditions such as: asthma, allergies, or impaired pulmonary and/or liver functions, or who may be particularly susceptible to this material, may be affected by exposure to this material.

12. Ecological Information

General Information

Information given is based on data on the components and the ecotoxicology of similar products. SET-XP Resin is classified as toxic to aquatic life with long lasting effects. SET-XP Hardener is not classified as an environmental hazard. Avoid release to the environment.

Supporting Data

Component	Species	Test Result
SET-XP Resin Mixture		
Aquatic Acute, Algae, EC50	Algae	>1000 mg/l, 72 hours
Aquatic Acute, Crustacea, EC50	Daphnia Magna	324.87 mg/l, 48 hours
Aquatic Acute, Fish, LC50	Fish	707.11 mg/l, 96 hours

Component	Estimate
SET-XP Hardener Mixture Estimate	
Aquatic, Fish, LC50	169 mg/l, 96 hours
Aquatic, Crustacea, EC50	12 mg/l, 48 hours
Aquatic, Algae, EC50	21 mg/l, 72 hours

Persistence and degradability: This product is not expected to be readily biodegradable.
Bioaccumulative potential: No data available for this product.
Mobility in soil: This product is non-volatile.

Further Information

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this product.

13. Disposal Consideration

Waste Disposal of Substance: 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 regulations.

Container Disposal: Empty containers or liners may retain some product residues; follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Disposal of Cured Product: Chip or grind off surface. Solid material does not need special disposal consideration.

14. Transportation Information

This information does not cover all specific regulatory or operational requirements of this product. The classifications for transportation may vary by container volume or different regional or national regulations.

	Resin (White Side)	Hardener (Green Side)
UN number:	UN3082	UN2735
UN proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Bisphenol-A-Epichlorohydrin), 9, III, Marine Pollutant	AMINES, LIQUID, CORROSIVE, N.O.S. (Benzene-1,3-Dimethaneamine), 8, II
Precautions:	Marine Pollutant	Corrosive
Required Labels:	9	8
ERG Code (IATA):	9L	8L
EmS (IMDG):	F-A, S-F	F-A, S-B
Special Precautions for Users:	Read safety instructions, SDS and emergency procedures before handling.	

Based on packaging size, Limited Quantity exemptions may apply. Please consult the 49 CFR HMR, IATA DGR, and IMDG Code to ensure that shipments comply with these regulations.

15. Regulatory Information

United States

Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not regulated.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not listed.
CERCLA Hazardous Substance List (40 CFR 302.4):
Phenol (CAS 108-95-2) LISTED

Superfund Amendments and Reauthorization Act of 1986 (SARA):

Hazard Categories:	Immediate	Delayed	Fire	Pressure	Reactivity
Resin	Yes	Yes	No	No	No
Hardener	Yes	Yes	No	No	No

SARA 302 Extremely hazardous substance:

Component	CAS	Reportable Quant.	Threshold Planning Quant. Lower Value	Threshold Planning Quant. Upper Value
Phenol	108-95-2	1000	500 lbs	10000 lbs

SARA 311/312 Hazardous chemical: Yes

SARA 313 (TRI reporting):

Chemical Name	CAS Number	% In Blend (approx.)
Phenol	108-95-2	1-5
Aluminum Oxide	1344-28-1	< 1

California Proposition 65:

WARNING: This product can expose you to chemicals which are known to the State of California to cause cancer, reproductive harm, or other birth defects. For more information, go to www.P65Warnings.ca.gov.

Carcinogen / Reproductive Toxin / Mutagen Information					
Component	**% In Blend (approx.)**	**IARC Monographs**	**NTP**	**ACGIH**	**Other**
Quartz (CAS 14808-60-7)	20-40	1	KNOWN	A2	CA65 (Carcinogenic)
Titanium Dioxide (CAS 13463-67-7)	< 5	2B	---	---	CA65 (Carcinogenic)
Carbon Black (CAS 1333-86-4)	< 1	2B	---	---	CA65 (Carcinogenic)
IARC: 1- Carcinogenic 2- Possibly carcinogenic 3 – Not classifiable as to carcinogenicity 4 – Probably not carcinogenic NTP: Known to be human carcinogen or Reasonably anticipated to be a human carcinogen ACGIH – A1 – Confirmed carcinogen A2 – Suspected carcinogen A3 – Animal carcinogen A4 – Not classified A5 – Not suspected CA65 – California Prop 65					

Canada

This product has been classified according to the hazard criteria of the HPR and the SDS contains all of the information required by the HPR.

International

The product is classified in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

This product is not subject to or not applicable for any of the following International Regulations; **Stockholm Convention, Rotterdam Convention, Kyoto Protocol, Montreal Protocol, Basel Convention.**

International Inventories

Australia	One or more components of this product are not listed on the Australian Inventory of Chemical Substances (AICS).
Canada	All components of this product are included on the Domestic Substances List (DSL).
China	One or more components of this product are not listed on the Inventory of Existing Chemical Substances in China (IECSC).
Europe	One or more components of this product are not included on the European Inventory of Existing Commercial Chemical Substances (EINECS) or are not exempt from listing.
Japan	One or more components of this product are not listed on the Inventory of Existing and New Chemical Substances (ENCS).
Korea	All components of this product are included on the Existing Chemicals List (ECL).
New Zealand	One or more components of this product have an unknown status on the New Zealand Inventory. Contact Simpson Strong-Tie Environmental Health and Safety if the status of this product on the inventory is desired.
Philippines	One or more components in this product are not listed in the Philippine Inventory of Chemicals and Chemical Substances (PICCS).
United States & Puerto Rico	All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory or are not required to be listed.

16. Other Information

Date Prepared or Revised: October 2019
Supersedes: September 2016
Contact Simpson Strong-Tie Environmental Health and Safety at EHS@strongtie.com

Abbreviations

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS No.:	Chemical Abstract Service Registry Number
CERCLA:	Comprehensive Environmental Response, Compensation and Liability Act (U.S. EPA)
HPR:	Hazardous Product Regulations (Canada)
DOT:	Department of Transportation (U.S.)
GHS:	Globally Harmonized System of Classification and Labeling of Chemicals
HMIS:	Hazardous Materials Identification System
IARC:	International Agency for Research on Cancer
IATA:	International Air Transport Association
IMDG:	International Maritime Dangerous Goods code
NIOSH:	National Institute of Occupational Safety and Health (U.S.)
NFPA:	National Fire Protection Association (US)
NTP:	National Toxicology Program (US)
OSHA:	Occupational Safety and Health Administration (U.S.)
PEL:	Permissible Exposure Limit
SARA:	Superfund Amendments and Reauthorization Act (U.S. EPA)
STEL:	Short Term Exposure Limit (15 minute Time Weighted Average)
STOT:	Specific Target Organ Toxicity (GHS Classification)
TLV:	Threshold Limit Value
TSCA:	Toxic Substances Control Act (U.S.)
TWA:	Time Weighted Average (exposure for 8-hour workday)
VOC:	Volatile Organic Compounds
WHMIS:	Canadian Workplace Hazardous Materials Information System

Full Text of H – Phrases Under Section 3

H226:	Flammable liquid and vapor.
H301:	Toxic if swallowed.
H302:	Harmful if swallowed.
H311:	Toxic in contact with skin.
H312:	Harmful in contact with skin.
H331:	Toxic if inhaled.
H332:	Harmful if inhaled.
H335:	May cause respiratory irritation.
H350:	May cause cancer.
H372:	Causes damage to organs through prolonged or repeated exposure.
H402:	Harmful to aquatic life.
H412:	Harmful to aquatic life with long lasting effects.

Disclaimer

This Safety Data Sheet (SDS) is prepared by Simpson Strong-Tie Co. in compliance with the requirements of OSHA 29 CFR Part 1910.1200. The information it contains is offered in good faith as accurate as of the date of this SDS. This SDS is provided solely for the purpose of conveying health, safety, and environmental information. No warranty, expressed or implied, is given. Health and Safety precautions may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations.

Internal

FOR INTERNAL USE ONLY

SET-XP Resin:	SET-XP Hardener:
XCOM3B – 50% Cartridge	XCOM3B – 50% Cartridge
	XCORR – 50% Cartridge

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/20/2020 Reviewed on 08/20/2020

1 Identification

· **Product identifier**

· **Trade name: Pro-Poxy 100 - Part A**

· **Article number:** 140048A
· **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 Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2A	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS07 GHS09

· **Signal word** Warning

· **Hazard-determining components of labeling:**
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
oxirane, mono[(C12-14-alkyloxy)methyl] derivs
· **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Avoid release to the environment.
Wear protective gloves / eye protection / face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.

(Contd. on page 2)

Safety Data Sheet
acc. to OSHA HCS

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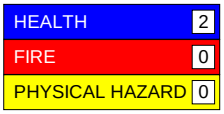
Trade name: Pro-Poxy 100 - Part A

(Contd. of page 1)

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 2
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 2
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:**		
25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)	>70-≤90%
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs	10%

· **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.
· **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.

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acc. to OSHA HCS

Printing date 08/20/2020 Reviewed on 08/20/2020

Trade name: Pro-Poxy 100 - Part A

(Contd. of page 2)

· **Special hazards arising from the substance or mixture** No further relevant information available.
· **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 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.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.

(Contd. on page 4)

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acc. to OSHA HCS

Printing date 08/20/2020 Reviewed on 08/20/2020

Trade name: Pro-Poxy 100 - Part A

(Contd. of page 3)

· **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 yellow
· **Odor:**	Slight
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **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:**	Not determined.
· **Density at 20 °C (68 °F):**	1.11918 g/cm³ (9.33956 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **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.

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Trade name: Pro-Poxy 100 - Part A

(Contd. of page 4)

· **Other information** No further relevant information available.

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 irritant with the danger of severe eye injury.
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.
· **Behavior in environmental systems:**
· **Bioaccumulative potential** No further relevant information available.
· **Mobility in soil** No further relevant information available.
· **Ecotoxical effects:**
· **Remark:** Toxic for fish
· **Additional ecological information:**
· **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
Water hazard class 2 (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system.

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Trade name: Pro-Poxy 100 - Part A

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Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
· **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, 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:**	Product contains environmentally hazardous substances: reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
· **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:** · **U.S. Domestic Ground Non-Bulk (119 gal or less per container) Shipments:**	Same as listed for Standard Shipments above. 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: Pro-Poxy 100 - Part A

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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):**

25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)	ACTIVE
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs	ACTIVE

· **Hazardous Air Pollutants**
None of the ingredients is 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 GHS09

· **Signal word** Warning

· **Hazard-determining components of labeling:**
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)
oxirane, mono[(C12-14-alkyloxy)methyl] derivs

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Trade name: Pro-Poxy 100 - Part A

(Contd. of page 7)

· **Hazard statements**
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
Toxic to aquatic life with long lasting effects.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
Avoid release to the environment.
Wear protective gloves / eye protection / face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Water hazard class:** Water hazard class 2 (Self-assessment): 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** 08/20/2020 / 4
· **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 Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Skin Sens. 1: Skin sensitisation – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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1 Identification

· **Product identifier**

· **Trade name: Pro-Poxy 100 - Part B**

· **Article number:** 140048B
· **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**

Acute Tox. 4	H302	Harmful if swallowed.
Skin Corr. 1B	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Repr. 1B	H360	May damage fertility or the unborn child.
STOT SE 3	H335	May cause respiratory irritation.
Aquatic Acute 1	H400	Very toxic to aquatic life.
Aquatic Chronic 1	H410	Very toxic to aquatic life with long lasting effects.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labeling:**
2-piperazin-1-ylethylamine
4-nonylphenol, branched
3-aminomethyl-3,5,5-trimethylcyclohexylamine
3,6,9-triazaundecamethylenediamine
3,6-diazaoctanethylenediamin
· **Hazard statements**
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
May cause respiratory irritation.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

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Trade name: Pro-Poxy 100 - Part B

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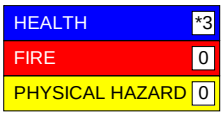
· **Precautionary statements**
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
Specific treatment (see on this label).
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 3
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *3
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:**		
84852-15-3	4-nonylphenol, branched	25%
140-31-8	2-piperazin-1-ylethylamine	25%
100-51-6	Benzyl alcohol	≥5-≤10%
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	≥5-≤10%
112-57-2	3,6,9-triazaundecamethylenediamine	≥5-≤6%
	Trade Secret	≥1-≤6%
112-24-3	3,6-diazaoctanethylenediamin	≥2.5-≤3%

· **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.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
· **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.

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Trade name: Pro-Poxy 100 - Part B

(Contd. of page 2)

· **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.
· **After swallowing:**
Immediately call a doctor.
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.
· **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**
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:** Keep respiratory protective device available.

· **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.

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· **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 constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

100-51-6 Benzyl alcohol	
WEEL	Long-term value: 10 ppm
112-57-2 3,6,9-triazaundecamethylenediamine	
WEEL	Long-term value: 5 mg/m³ Skin; DSEN
112-24-3 3,6-diazaoctanethylenediamin	
WEEL	Long-term value: 6 mg/m³, 1 ppm Skin

· **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.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
· **Breathing equipment:** Suitable respiratory protective device recommended.
· **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:**	Ammonia-like
· **Odor threshold:**	Not determined.

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· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **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:**	Not determined.
· **Density at 20 °C (68 °F):**	0.94663 g/cm³ (7.89963 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **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:	5-10 %
· **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:**

· LD/LC50 values that are relevant for classification:		
140-31-8 2-piperazin-1-ylethylamine		
Oral	LD50	2,140 mg/kg (rat)
Dermal	LD50	880 mg/kg (rabbit)
112-57-2 3,6,9-triazaundecamethylenediamine		
Dermal	LD50	660 mg/kg (rabbit)

· **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:
Harmful
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.

· 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.
· **Ecotoxical effects:**
· **Remark:** Very toxic for fish
· **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.
Also poisonous for fish and plankton in water bodies.
Very toxic for aquatic organisms
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.

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· **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**	UN2735
· **UN proper shipping name**	
· **DOT**	Amines, liquid, corrosive, n.o.s. (4-nonylphenol, branched, Tetraethylenepentamine)
· **ADR**	2735 AMINES, LIQUID, CORROSIVE, N.O.S. (4-nonylphenol, branched, TETRAETHYLENEPENTAMINE), ENVIRONMENTALLY HAZARDOUS
· **IMDG**	AMINES, LIQUID, CORROSIVE, N.O.S. (4-nonylphenol, branched, TETRAETHYLENEPENTAMINE), MARINE POLLUTANT
· **IATA**	AMINES, LIQUID, CORROSIVE, N.O.S. (4-nonylphenol, branched, TETRAETHYLENEPENTAMINE)
· **Transport hazard class(es)**	
· **DOT**	

· **Class**	8 Corrosive substances
· **Label**	8
· **ADR, IATA**	

· **Class**	8 Corrosive substances
· **Label**	8

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· **IMDG**

· **Class**	8 Corrosive substances
· **Label**	8
· **Packing group**	
· **DOT, ADR, IMDG, IATA**	III
· **Environmental hazards:**	Product contains environmentally hazardous substances: 4-nonylphenol, branched
· **Marine pollutant:**	Symbol (fish and tree)
· **Special precautions for user**	Warning: Corrosive substances
· **Danger code (Kemler):**	80
· **EMS Number:**	F-A,S-B
· **Segregation groups**	Alkalis
· **Stowage Category**	B
· **Stowage Code**	SW2 Clear of living quarters.
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **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
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **Excepted quantities (EQ)**	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· **UN "Model Regulation":**	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (4-NONYLPHENOL, BRANCHED, TETRAETHYLENEPENTAMINE), 8, III, ENVIRONMENTALLY HAZARDOUS

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.

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Trade name: Pro-Poxy 100 - Part B

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· **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.

84852-15-3	4-nonylphenol, branched	25%

· **TSCA (Toxic Substances Control Act):**

68953-36-6	Polyamido Amine	ACTIVE
84852-15-3	4-nonylphenol, branched	ACTIVE
140-31-8	2-piperazin-1-ylethylamine	ACTIVE
100-51-6	Benzyl alcohol	ACTIVE
2855-13-2	3-aminomethyl-3,5,5-trimethylcyclohexylamine	ACTIVE
112-57-2	3,6,9-triazaundecamethylenediamine	ACTIVE
	Trade Secret	ACTIVE
112-24-3	3,6-diazaoctanethylenediamin	ACTIVE

· **Hazardous Air Pollutants**
None of the ingredients is 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**

GHS05 GHS07 GHS08 GHS09

· **Signal word** Danger

· **Hazard-determining components of labeling:**
2-piperazin-1-ylethylamine
4-nonylphenol, branched

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Trade name: Pro-Poxy 100 - Part B

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3-aminomethyl-3,5,5-trimethylcyclohexylamine
3,6,9-triazaundecamethylenediamine
3,6-diazaoctanethylenediamin

· **Hazard statements**
Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May damage fertility or the unborn child.
May cause respiratory irritation.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

· **Precautionary statements**
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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).
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Water hazard class:** *Water hazard class 3 (Self-assessment): extremely 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** *08/20/2020 / 4*
· **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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
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
Acute Tox. 4: Acute toxicity – Category 4
Skin Corr. 1B: Skin corrosion/irritation – Category 1B
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Repr. 1B: Reproductive toxicity – Category 1B
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

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 CP™ Concrete Patch**
Product ID No.	:	70011281
Trade Name/Synonyms	:	CP
Material Use	:	Fast Setting Trowelable Patch for Repairing Concrete.
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 84% 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
Calcium aluminate cement	65997-16-2	10 – 30
Portland cement	65997-15-1	10 – 30
Calcium sulfate	7778-18-9	5 – 10
Limestone	1317-65-3	5 – 10
Vinyl acetate copolymer	24937-78-8	1 - 5
Amorphous fumed silica	69012-64-2	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
Amorphous fumed silica	69012-64-2	2 mg/m^3 (respirable)	N/Av	N/Av	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 incompatability

: 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
Amorphous fumed silica	69012-64-2	N/Av	>22,500	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 Information	**None**				

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	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
Crystalline silica, quartz	14808-60-7	No	YES	YES	YES	YES	YES
Amorphous fumed silica	69012-64-2	No	YES	No	YES	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.

Prepared By:
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Visit our Website: http://www.ardexamericas.com

Revision date: **:** 24-Aug-2016

End of Document

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Identifier	:	**ARDEX FEATHER FINISH® WHITE**
Product ID No.	:	70012151
Trade Name/Synonyms	:	SD-F White
Material Use	:	Cement-based Finishing Underlayment
Uses Advised Against	:	No information available.

Manufacturer's name and address:

ARDEX Americas
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)**

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, formaldehyde, 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: 1-800-424-8802). 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). Do not breathe 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	N/Av	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 < 1% crystalline silica)	N/Av	15 mg/m^3 (Total dust); 5 mg/m^3 (respirable)	N/Av
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	N/Av	15 mg/m^3	N/Av

		(Total dust); 3 mg/m^3 (respirable)		(Total dust); 5 mg/m^3 (respirable)	
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. rubber, nitrile). For hands, use protective gloves that provides comprehensive protection (e.g. rubber, nitrile).

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. 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**	: white 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 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	NY	PA	RI
Limestone	1317-65-3	No	YES	No	YES	No	YES	YES
Portland cement	65997-15-1	No	YES	No	YES	No	YES	YES
Calcium sulfate	7778-18-9	No	YES	No	YES	No	YES	No

Cellulose	9004-34-6	No	YES	No	YES	No	YES	YES
Crystalline silica, quartz	14808-60-7	No	YES	YES	YES	No	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 Americas 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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End of Document

Safety Data Sheet
acc. to OSHA HCS

Printing date 03/04/2019 Reviewed on 03/04/2019

1 Identification

· **Product identifier**

· **Trade name: Clean Strip™ J1A**

· **Article number:** 83-69201
· **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**
STOT SE 3 H335 May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

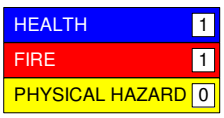
GHS07

· **Signal word** Warning

· **Hazard-determining components of labeling:**
Distillates (petroleum), hydrotreated light naphthenic
· **Hazard statements**
May cause respiratory irritation.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor if you feel unwell.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
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

· **HMIS-ratings (scale 0 - 4)**



Health = 1
Fire = 1
Reactivity = 0

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· **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:**		
64742-53-6	Distillates (petroleum), hydrotreated light naphthenic	≥10-<60%
64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	≥10-<40%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

· **Description of first aid measures**
· **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.
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.
· **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).
Dispose contaminated material as waste according to item 13.

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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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	140 mg/m³
112-80-1	oleic acid, pure	220 mg/m³

· **PAC-2:**		
64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	1,500 mg/m³
112-80-1	oleic acid, pure	2,400 mg/m³

· **PAC-3:**		
64742-65-0	Distillates (petroleum), solvent-dewaxed heavy paraffinic	8,900 mg/m³
112-80-1	oleic acid, pure	15,000 mg/m³

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:** Keep respiratory protective device available.

· **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.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
· **Breathing equipment:** Suitable respiratory protective device recommended.

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· **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:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	>218 °C (>424.4 °F)
· **Flash point:**	140 °C (284 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	307 °C (584.6 °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:**	Not determined.
· **Density at 20 °C (68 °F):**	0.861 g/cm³ (7.18505 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **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:**	
Solids content:	72.5 %

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· **Other information**	No further relevant information available.
· **Volatile Organic Compounds:**	Contains less than 250 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:** No irritant effect known.
· **on the eye:** No irritating effect known.
· **Sensitization:** No sensitizing effects known.
· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant
Carcinogenic.

· **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:** Water hazard class 1 (Self-assessment): slightly hazardous for water
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

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· **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, 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:**	Not Regulated by D.O.T.
· **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.

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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)**

112-80-1	oleic acid, pure	3A

· **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:**
Distillates (petroleum), hydrotreated light naphthenic
· **Hazard statements**
May cause respiratory irritation.
· **Precautionary statements**
Avoid breathing dust/fume/gas/mist/vapors/spray
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a poison center/doctor if you feel unwell.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **Water hazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.

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· **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** 03/04/2019 / 155
· **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
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Safety Data Sheet

SpecStrip

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	SpecStrip
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	General purpose reactive form release agent.
1.3 Company Name:	**SpecChem**
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	**Chemtrec: (800) 424-9300**
Date of Last Revision:	January 10, 2015
Date of Current Revision:	July 1, 2018

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is an amber colored liquid with a characteristic hydrocarbon odor.
Health Hazards: May cause skin irritation.
Flammability Hazards: This product is not a flammable liquid with a flash point of >200°F (93°C).
Reactivity Hazards: None.
Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

US DOT Symbols Not Regulated

EU and GHS Symbols

Signal Word Warning

2.1 EU Labeling and Classification:
This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.
EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:
Index Number:
204-007-1 is not listed in Annex I
Substances not listed either individually or in group entries must be self classified.

Components Contributing to Classification: Oleic Acid
2.2 Label Elements:
GHS Hazard Classifications: Skin Irritation Category 2
Hazard Statements: H315 Causes skin irritation

Precautionary Statements: P280 Wear protective gloves.
P264 Wash thoroughly after handling

Response Statements: P302+P352 IF ON SKIN: Wash with plenty of water.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash clothing before reuse.

Storage Statements: None applicable

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

2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:

The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:

Inhalation: No serious effects anticipated under normal conditions.
Skin Contact: May cause moderate irritation to skin. Repeated exposure may cause skin dryness or cracking.
Eye Contact: Direct contact to the eyes may be irritating.
Ingestion: May cause gastrointestinal irritation, nausea, and vomiting.

Chronic: Repeated exposure may cause skin dryness or cracking.

Target Organs:

Acute: Skin
Chronic: Skin

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.	EINECS No.	Hazard Classification
Oleic Acid	< 3%	112-80-1	204-007-1	Skin Irrit. 2
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. 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, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact: If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to do. Seek medical attention if irritation persists.

Skin Contact: Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

Inhalation: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion: If product is swallowed, call physician or poison center immediately. If professional advice is not available, do not induce vomiting. Never induce vomiting or give dilutents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

Medical Conditions Generally Aggravated By Exposure: Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact.

4.2 Symptoms and Effects Both Acute and Delayed: Exposure to skin may cause irritation.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

Use the following fire extinguishing materials:

Water Spray: Yes
Foam: Yes
Halon: Yes
Carbon Dioxide: Yes
Dry Chemical: Yes
Other: Any “C” Class

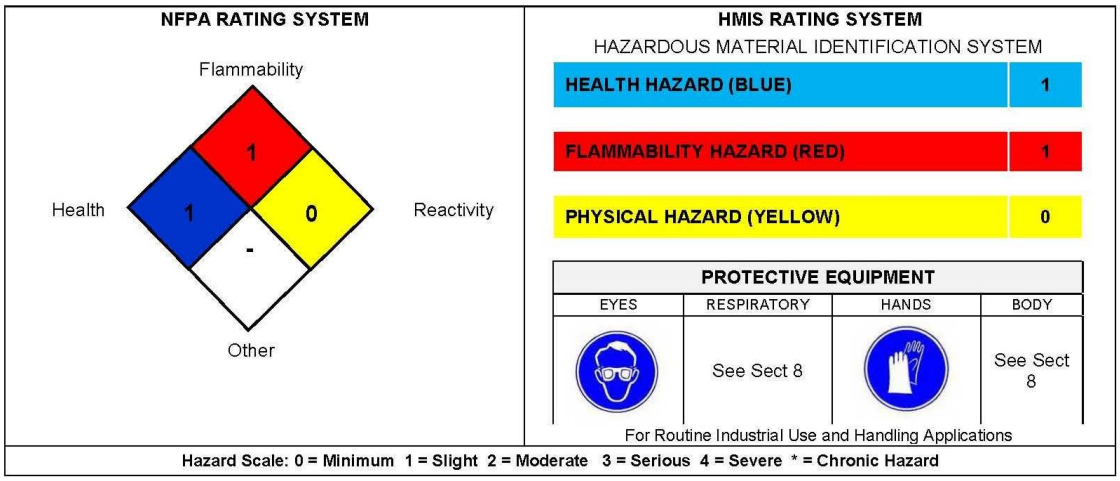
5.2 Unusual Fire and Explosion Hazards:

Irritating and toxic fumes may be produced at high temperatures. Use of water may result if the formation of a toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Explosive Sensitivity to Mechanical Impact: No
Explosive Sensitivity to Static Discharge: No

5.3 Special Fire-Fighting Procedures:

- Incipient fire responders should wear eye protection.
- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel.
- Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.
- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.



SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Use cautious judgment when cleaning up spill. Wear suitable protective clothing, gloves, and eye/face protection.

6.2 Environmental Precautions:
Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

Small Spills:

- Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- Approach spill areas with caution.
- If liquid was introduced, create a dike or trench to contain material.
- Soak up with absorbent material such as clay, sand or other suitable non-reactive material.

Large Spills:

- Place in leak-proof containers. Seal tightly for proper disposal.
- Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
To prevent eye contact under the foreseeable conditions of use, wear appropriate safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling. Do not handle or store near heat, sparks, or flame.

7.2 Storage and Handling Practices:
Keep away from incompatible materials. Keep container closed when not in use and store in well ventilated area.

7.3 Specific Uses:
General purpose reactive form release agent..

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters:

Ingredients	CAS No.	OSHA PEL	NIOSH PEL
Oleic Acid	112-80-1	Not Listed	Not Listed

8.2 Exposure Controls:

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection: Not required for properly ventilated areas. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Eye Protection: Safety glasses or goggles are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

Hand Protection: Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.

Body Protection: Use body protect appropriate to task being performed.

If necessary, refer to appropriate Standards of Canada, or appropriate standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:
Appearance (Physical State and Color): Amber colored liquid
Odor: Characteristic hydrocarbon
Odor Threshold: No data available
pH: No data available
Melting/Freezing Point: No data available
Boiling Point: 519-680°F (310-360°C)
Flash Point: >200°F (93°C)
Evaporation Rate: No data available
Flammability (Solid; Gas): Not applicable
Upper/Lower Flammability or Explosion Limits: Not data available
Vapor Pressure (mm Hg @ 20°C (68° F): No data available
Vapor Density: Heavier than air
Relative Density: No data available
Specific Gravity: 0.89
Solubility in Water: less than .1%
Weight per Gallon: 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

9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity: This product is not reactive.
10.2 Stability: Stable under conditions of normal storage and use.
10.3 Possibility of Hazardous Reactions: Will not occur.
10.4 Conditions to Avoid: Avoid excessive temperatures.
10.5 Incompatible Substances: Strong oxidizing agents.
10.6 Hazardous Decomposition Products: Carbon monoxide and dioxide smoke.

SECTION 11 – TOXICOLOGY INFORMATION

11.1 Information on Toxicological Effects:

Toxicity Data:

Oleic Acid	112-80-1	LD50 Oral – Rat	74,000 mg/kg

Suspected Cancer Agent: Ingredients within this product are found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are considered to be cancer-causing agents by these agencies.

Irritancy: Skin irritant.

Sensitization to the Product: This product is not expected to cause skin sensitization.

Germ Cell Mutagenicity: This product contains ingredients that are suspected to be a germ cell mutagenic.

Reproductive Toxicity: This product is not expected to be a human reproductive toxicant.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity:

Oleic Acid	112-80-1	LC50 – Fathead Minnow	205 mg/l – 96h

12.2 Persistence and Degradability: No specific data available on this product.

12.3 Bioaccumulative Potential: No specific data available on this product.

12.4 Mobility in Soil: No specific data available on this product.

12.5 Results of PBT and vPvB Assessment: No specific data available on this product.

12.6 Other Adverse Effects: No data available

12.7 Water Endangerment Class: At present, there are no ecotoxicological assessments for this product.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.

13.2 EU Waste Code: Not determined

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:

This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number:	Not applicable
Proper Shipping Name:	Not regulated
Hazard Class Number and Description:	Not applicable
Packing Group:	Not applicable
DOT Label(s) Required:	Not applicable
North American Emergency Response Guidebook Number:	Not applicable
14.2 Environmental Hazards:	
Marine Pollutant:	The components of this product are designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).
14.3 Special Precaution for User:	None
14.4 International Air Transport Association Shipping Information (IATA):	None.
14.5 International Maritime Organization Shipping Information (IMO):	
UN Identification Number:	Not applicable
Proper Shipping Name:	Not regulated
Hazard Class Number and Description:	Not applicable
Packing Group:	Not applicable
EMS-No:	Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements:

The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:

Acute Health: Yes; Chronic Health: No; Fire: No; Reactivity; No

U.S. CERCLA Reportable Quantity:

Not applicable

U.S. TSCA Inventory Status:

The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations:

None known

California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):

This product does not contain ingredients on the Proposition 65 Lists.

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status:

Components are DSL Listed, NDSL Listed and/or are exempt from listing

Other Canadian Regulations:

Not applicable

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian WHMIS Classification and Symbols:
This product is Class B2, Flammable Liquid, and D2B, Materials causing other toxic effects, per WHMIS Controlled Product Regulations.

15.3 European Economic Community Information:
This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.

Chemical Safety Assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.4 Australian Information for Product:
Components of this product are listed on the International Chemical Inventory list.

15.5 Japanese Information for Product:
Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

15.6 International Chemical Inventories:
Listing of the components on individual country Chemical Inventories is as follows:
Australian Inventory of Chemical Substances (AICS): Listed
Korean Existing Chemicals List (ECL): Listed
Japanese Existing National Inventory of Chemical Substances (ENCS): Listed
Philippines Inventory if Chemicals and Chemical Substances (PICCS): Listed
U.S. TSCA: Listed

SECTION 16 – OTHER INFORMATION

Date of Printing: July 1, 2018

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET

Safety Data Sheet

Bio Strip WB

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	Bio Strip WB
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	Water based form release agent
1.3 Company Name:	**SpecChem**
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	**Chemtrec: (800) 424-9300**
Date of Last Revision:	January 27, 2015
Date of Current Revision:	July 1, 2018

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a milky white colored liquid with minimal odor.
Health Hazards: May cause skin irritation.
Flammability Hazards: This product is not a flammable liquid with a flash point of >200°F (93°C).
Reactivity Hazards: None.
Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

US DOT Symbols	Not regulated
EU and GHS Symbols	Not Applicable
Signal Word	Not Applicable

2.1 EU Labeling and Classification:
This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.

Components Contributing to Classification:	Not Applicable
2.2 Label Elements:	
GHS Hazard Classifications:	Not Applicable
Hazard Statements:	Not Applicable
Precautionary Statements:	Not Applicable
Response Statements:	Not Applicable
Storage Statements:	Not Applicable.
Disposal Statements:	Not Applicable

2.3 Health Hazards or Risks From Exposure:
Symptoms of Overexposure by Route of Exposure:
The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:
Inhalation: No serious effects anticipated under normal conditions.
Skin Contact: May cause moderate irritation to skin. Repeated exposure may cause skin dryness or cracking.
Eye Contact: Vapours and direct contact to the eyes may be irritating.
Ingestion: May cause lung damage if aspirated.
Chronic: Repeated exposure may cause skin dryness or cracking.
Target Organs:
Acute: Skin
Chronic: Skin

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.	EINECS No.	Hazard Classification
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. 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, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact: If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to do. Seek medical attention if irritation persists.

Skin Contact: Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

Inhalation: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion: If product is swallowed, call physician or poison center immediately. If professional advice is not available, do not induce vomiting. Never induce vomiting or give dilutents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

Medical Conditions Generally Aggravated By Exposure: Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact.

4.2 Symptoms and Effects Both Acute and Delayed: Exposure to skin may cause irritation.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

Use the following fire extinguishing materials:

Water Spray: Yes
Foam: Yes
Halon: Yes
Carbon Dioxide: Yes
Dry Chemical: Yes
Other: Any "C" Class

5.2 Unusual Fire and Explosion Hazards:

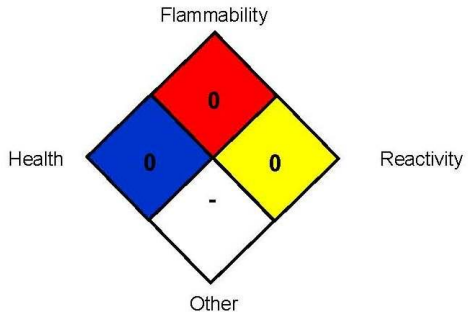
Irritating and toxic fumes may be produced at high temperatures. Use of water may result if the formation of a toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Explosive Sensitivity to Mechanical Impact: No
Explosive Sensitivity to Static Discharge: No

5.3 Special Fire-Fighting Procedures:

- Incipient fire responders should wear eye protection.
- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel.
- Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.
- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.

NFPA RATING SYSTEM



HMIS RATING SYSTEM

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH HAZARD (BLUE)	0
FLAMMABILITY HAZARD (RED)	0
PHYSICAL HAZARD (YELLOW)	0

PROTECTIVE EQUIPMENT			
EYES	RESPIRATORY	HANDS	BODY
	See Sect 8		See Sect 8

For Routine Industrial Use and Handling Applications

Hazard Scale: 0 = Minimum 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic Hazard

SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Use cautious judgment when cleaning up spill.
6.2 Environmental Precautions:
Construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

Small Spills:
- Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- Approach spill areas with caution.
- If liquid was introduced, create a dike or trench to contain material.
- Soak up with absorbent material such as clay, sand or other suitable non-reactive material.

Large Spills:
- Place in leak-proof containers. Seal tightly for proper disposal.
- Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
To prevent eye contact under the foreseeable conditions of use, wear appropriate safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling.
7.2 Storage and Handling Practices:
Keep away from incompatible materials. Keep container closed when not in use and store in well ventilated area.

7.3 Specific Uses:
Water based form release agent.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters: No data available

8.2 Exposure Controls:
Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection:	Not required for properly ventilated areas. Maintain airborne contaminant concentrations below guidelines listed above, if applicable. If necessary, use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.
Eye Protection:	Safety glasses or goggles are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.
Hand Protection:	Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.
Body Protection:	Use body protect appropriate to task being performed. If necessary, refer to appropriate Standards of Canada, or appropriate standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:

Appearance (Physical State and Color): Milky white colored liquid
Odor: Mild to no odor
Odor Threshold: No data available
pH: No data available
Melting/Freezing Point: No data available
Boiling Point: 212°F (100°C)
Flash Point: >200°F (93°C)
Evaporation Rate: less than 0.01
Flammability (Solid; Gas): Not applicable
Upper/Lower Flammability or Explosion Limits: Not data available
Vapor Pressure (mm Hg @ 20°C (68° F): No data available

Vapor Density: Greater than 5.0
Relative Density: No data available
Specific Gravity: 0.99
Solubility in Water: Complete
Weight per Gallon: 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
9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity: This product is not reactive.
10.2 Stability: Stable under conditions of normal storage and use.
10.3 Possibility of Hazardous Reactions: Will not occur.
10.4 Conditions to Avoid: Avoid excessive temperatures.
10.5 Incompatible Substances: Strong oxidizing agents.
10.6 Hazardous Decomposition Products: Carbon monoxide and dioxide smoke.

SECTION 11 – TOXICOLOGY INFORMATION

11.1 Information on Toxicological Effects:

Toxicity Data: No data available
Suspected Cancer Agent: Ingredients within this product are not found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore are considered to be cancer-causing agents by these agencies.
Irritancy: Skin irritant.
Sensitization to the Product: This product is not expected to cause skin sensitization.
Germ Cell Mutagenicity: This product contains ingredients that are suspected to be a germ cell mutagenic.
Reproductive Toxicity: This product is not expected to be a human reproductive toxicant.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity: No data available
12.2 Persistence and Degradability: No specific data available on this product.
12.3 Bioaccumulative Potential: No specific data available on this product.
12.4 Mobility in Soil: No specific data available on this product.
12.5 Results of PBT and vPvB Assessment: No specific data available on this product.
12.6 Other Adverse Effects: No data available
12.7 Water Endangerment Class: At present, there are no ecotoxicological assessments for this product.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.

13.2 EU Waste Code: Not determined

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:

This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number: Not applicable
Proper Shipping Name: Not regulated
Hazard Class Number and Description: Not applicable
Packing Group: Not applicable
DOT Label(s) Required: Not applicable
North American Emergency Response Guidebook Number: Not applicable

14.2 Environmental Hazards:

Marine Pollutant: The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).

14.3 Special Precaution for User: None

14.4 International Air Transport Association Shipping Information (IATA): Not regulated.

14.5 International Maritime Organization Shipping Information (IMO):

UN Identification Number: Not applicable
Proper Shipping Name: Not regulated
Hazard Class Number and Description: Not applicable
Packing Group: Not applicable
EMS-No: Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements:

The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:

Acute Health: No; Chronic Health: No; Fire: No; Reactivity; No

U.S. CERCLA Reportable Quantity:

None

U.S. TSCA Inventory Status:

The components of this product are listed on the TSCA Inventory or are exempted from listing.
Other U.S. Federal Regulations:
None known
California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):
This product does not contain ingredients on the Proposition 65 Lists.

15.2 Canadian Regulations:
Canadian DSL/NDSL Inventory Status:
Components are DSL Listed, NDSL Listed and/or are exempt from listing
Other Canadian Regulations:
Not applicable
Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
Canadian WHMIS Classification and Symbols:
This product is not considered hazardous per WHMIS Controlled Product Regulations.
15.3 European Economic Community Information:
This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.
Chemical Safety Assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
15.4 Australian Information for Product:
Components of this product are listed on the International Chemical Inventory list.
15.5 Japanese Information for Product:
Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.
15.6 International Chemical Inventories:
Listing of the components on individual country Chemical Inventories is as follows:
Australian Inventory of Chemical Substances (AICS): Listed
Korean Existing Chemicals List (ECL): Listed
Japanese Existing National Inventory of Chemical Substances (ENCS): Listed
Philippines Inventory if Chemicals and Chemical Substances (PICCS): Listed
U.S. TSCA: Listed

SECTION 16 – OTHER INFORMATION

Prepared By: Chris Eigbrett (MSDS to GHS Compliance)
Date of Printing: January 10, 2014

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety

information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET

Safety Data Sheet

Atlas Tech-Grout

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	Atlas Tech-Grout
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	Multi-purpose grout
1.3 Company Name:	**Atlas Construction Supply, Inc.**
Company Address:	4640 Brinell Street
Company Address Cont:	San Diego, CA 92111
Business Phone:	(858) 277-2100
Website:	www.atlasform.com
1.4 Emergency Telephone Number:	**Chemtrec: (800) 424-9300**
Date of Current Revision:	February 1, 2015
Date of Last Revision:	May 17, 2012

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a gray powder with minimal odor.
Health Hazards: May cause skin and respiratory irritation and burns to the eyes. Contact with skin may cause an allergic reaction. Repeated exposure may cause damage to the lungs. Contains components that are defined as human carcinogens.
Flammability Hazards: This product is not considered flammable.
Reactivity Hazards: None.
Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

US DOT Symbols Not Regulated

EU and GHS Symbols

Signal Word Danger

2.1 EU Labeling and Classification:
This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.
EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:
Index Number:
266-043-4 is not listed in Annex I
CAS 26499-65-0 is not listed in ESIS
215-279-6 is not listed in Annex I
CAS 93763-70-3 is not listed in ESIS
215-138-9 is not listed in Annex I
215-168-2 is not listed in Annex I

202-049-5 index number is 601-052-00-2
Substances not listed either individually or in group entries must be self classified.

Components Contributing to Classification: Portland Cement, Plaster of Paris, Limestone, Perlite, Calcium Oxide, Diiron Trioxide, Naphthalene

2.2 Label Elements:

GHS Hazard Classifications:
Carcinogenicity Category 2
STOT – SE Category 3 (Respiratory System)
Skin Irritation Category 2
Skin Sensitization Category 1
Eye Damage Category 1

Hazard Statements:
H351 Suspected of causing cancer
H335 May cause respiratory irritation
H315 Causes skin irritation
H317 May cause an allergic skin reaction
H318 Causes serious eye damage

Precautionary Statements:
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breath dust/fume/gas/mist/vapours/spray.
P264 Wash 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
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/eye protection/face protection..

Response Statements:
P308+P313 IF exposed or concerned: Get medical advice/attention.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/Doctor if you feel unwell.
P302+P352 IF ON SKIN: Wash with plenty of water.
P333+P312 If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
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

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

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

2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:

The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:

Inhalation: May cause respiratory irritation.
Skin Contact: May cause irritation to skin.
Eye Contact: Contact with the eyes may cause burns or irritation.
Ingestion: May cause gastrointestinal irritation, nausea, and vomiting.

Chronic: Repeated exposure may cause skin dryness or cracking.

Target Organs:

Acute: Eyes, Skin, Respiratory
Chronic: Lung, Skin

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.	EINECS No.	Hazard Classification
Portland Cement	30-35%	65997-15-1	266-043-4	STOT SE3, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1
Plaster of Paris	40–50%	26499-65-0	Not Listed	STOT SE3, Skin Irrit. 3, Eye Irrit. 2B
Limestone	10-15%	1317-65-3	215-279-6	Skin Irrit. 3, Eye Irrit. 2B
Perlite	< 10%	93763-70-3	Not Listed	STOT SE3, Eye Irrit. 2B
Calcium Oxide	< 2%	1305-78-8	215-138-9	STOT SE3, Skin Irrit. 2, Eye Dam. 1
Diiron Trioxide	< 2%	1309-37-1	215-168-2	STOT SE3, Skin Irrit. 2, Eye Irrit. 2A
Naphthalene	< 0.4%	91-20-3	202-049-5	Acute Tox. 4, Carc.2, Aquatic Acute 1, Aquatic Chronic 1
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. 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, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact: If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to

do. Seek medical attention if irritation persists.

Skin Contact: Wash skin thoroughly with soap and water after handling. Seek medical attention if irritation develops and persists.

Inhalation: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion: If product is swallowed, call physician or poison center immediately. If professional advice is not available, do not induce vomiting. Never induce vomiting or give dilutents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

Medical Conditions Generally Aggravated By Exposure: Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact.

4.2 Symptoms and Effects Both Acute and Delayed: Exposure to skin and respiratory may cause irritation. Contact with the eyes may cause burns. Contact with skin may cause an allergic reaction. Repeated exposure may cause damage to the lungs.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

Use the following fire extinguishing materials:

Water Spray: Yes
Foam: Yes
Halon: Yes
Carbon Dioxide: Yes
Dry Chemical: Yes
Other: Any “C” Class

5.2 Unusual Fire and Explosion Hazards:

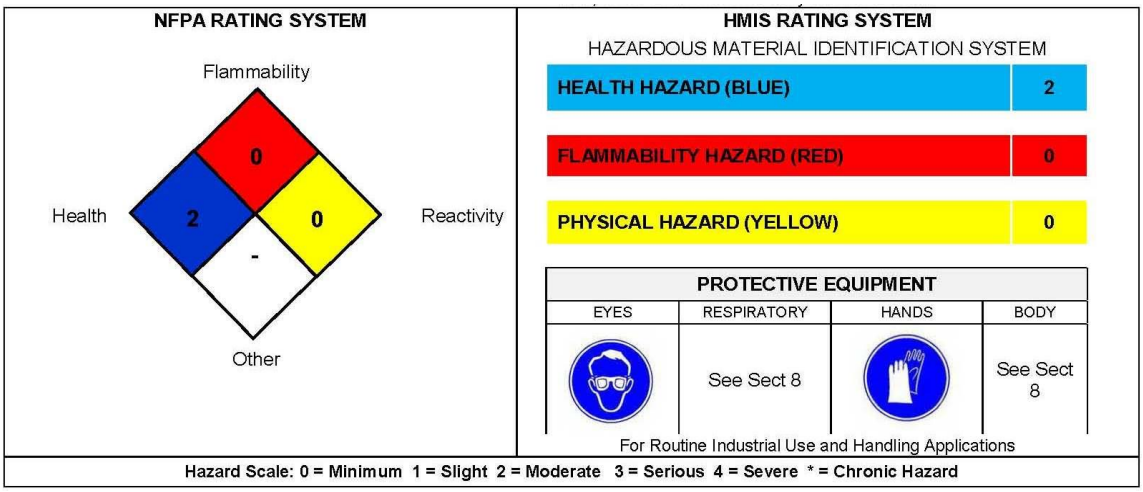
Irritating and toxic fumes may be produced at high temperatures. Use of water may result if the formation of a toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Explosive Sensitivity to Mechanical Impact:	No
Explosive Sensitivity to Static Discharge:	No

5.3 Special Fire-Fighting Procedures:

- Incipient fire responders should wear eye protection.
- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel.
- Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.

- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.



SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Use cautious judgment when cleaning up spill. Wear suitable protective clothing, gloves, and eye/face protection.

6.2 Environmental Precautions:
If liquid was introduced, construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

Small Spills:

- Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- Approach spill areas with caution.
- If liquid was introduced, create a dike or trench to contain material.
- Soak up with absorbent material such as clay, sand or other suitable non-reactive material.

Large Spills:

- Place in leak-proof containers. Seal tightly for proper disposal.
- Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
To prevent eye contact under the foreseeable conditions of use, wear appropriate safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling.

7.2 Storage and Handling Practices:
Keep away from incompatible materials. Keep container closed when not in use and store in well ventilated area.

7.3 Specific Uses:
Multi-purpose grout.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters:

Ingredients	CAS No.	OSHA PEL	NIOSH PEL	ACGIH TWA
Portland Cement	65997-15-1	TWA 5 mg/m3 (resp) TWA 15 mg/m3 (total)	TWA 5 mg/m3 (resp) TWA 10 mg/m3 (total)	10 mg/m3 (total)
Plaster of Paris	26499-65-0	TWA 5 mg/m3 (resp) TWA 15 mg/m3 (total)	TWA 5 mg/m3 (resp) TWA 10 mg/m3 (total)	TWA 10 mg/m3
Limestone	1317-65-3	TWA 5 mg/m3 (resp) TWA 15 mg/m3 (total)	TWA 5 mg/m3 (resp) TWA 10 mg/m3 (total)	Not Listed
Perlite	93763-70-3	TWA 5 mg/m3 (resp) TWA 15 mg/m3 (total)	TWA 5 mg/m3 (resp) TWA 10 mg/m3 (total)	Not Listed
Calcium Oxide	1305-78-8	TWA 5 mg/m3	TWA 2 mg/m3	TWA 2 mg/m3
Diiron Trioxide	1309-37-1	TWA 5 mg/m3 (resp) TWA 15 mg/m3 (total)	TWA 5 mg/m3	5 mg/m3
Naphthalene	91-20-3	TWA 10 ppm (50 mg/m3)	TWA 10 ppm (50 mg/m3)	Not Listed

8.2 Exposure Controls:

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection: Maintain airborne contaminant concentrations below guidelines listed above. Use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Eye Protection: Safety glasses or goggles are required.

	If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.
Hand Protection:	Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards.
Body Protection:	Use body protect appropriate to task being performed. If necessary, refer to appropriate Standards of Canada, or appropriate standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:
Appearance (Physical State and Color): Gray powder
Odor: Minimal
Odor Threshold: No data available
pH: No data available
Melting/Freezing Point: No data available
Boiling Point: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability (Solid; Gas): No data available
Upper/Lower Flammability or Explosion Limits: No data available
Vapor Pressure (mm Hg @ 20°C (68° F): No data available
Vapor Density: No data available
Relative Density: No data available
Specific Gravity: 2.6 - 3.2
Solubility in Water: Miscible
Weight per Gallon: 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
Volatile Organic Compound: Not Applicable

9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity: This product is not reactive.
10.2 Stability: Stable under conditions of normal storage and use.
10.3 Possibility of Hazardous Reactions: Will not occur.
10.4 Conditions to Avoid: No data available.
10.5 Incompatible Substances: Hydrogen fluoride.
10.6 Hazardous Decomposition Products: No data available.

SECTION 11 – TOXICOLOGY INFORMATION

11.1 Information on Toxicological Effects:

Toxicity Data:

Naphthalene	91-20-3	LD50 Oral – Rat	490 mg/kg

Suspected Cancer Agent: Naphthalene (CAS 91-20-3) is found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore is considered to be a cancer-causing agent by these agencies.
Irritancy: Skin, eye, and respiratory irritant.
Sensitization to the Product: This product is expected to cause skin sensitization.
Germ Cell Mutagenicity: This product does not contain ingredients that are suspected to be a germ cell mutagenic.
Reproductive Toxicity: This product is not expected to be a human reproductive toxicant.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity: No data available
12.2 Persistence and Degradability: No specific data available on this product.
12.3 Bioaccumulative Potential: No specific data available on this product.
12.4 Mobility in Soil: No specific data available on this product.
12.5 Results of PBT and vPvB Assessment: No specific data available on this product.
12.6 Other Adverse Effects: No data available
12.7 Water Endangerment Class: At present, there are no ecotoxicological assessments for this product.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.
13.2 EU Waste Code: Not determined

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:

This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number:	Not applicable
Proper Shipping Name:	Not regulated
Hazard Class Number and Description:	Not applicable
Packing Group:	Not applicable
DOT Label(s) Required:	Not applicable
North American Emergency Response Guidebook Number:	Not applicable
14.2 Environmental Hazards:	
Marine Pollutant:	The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).
14.3 Special Precaution for User:	None
14.4 International Air Transport Association Shipping Information (IATA):	Not regulated.
14.5 International Maritime Organization Shipping Information (IMO):	
UN Identification Number:	Not applicable
Proper Shipping Name:	Not regulated
Hazard Class Number and Description:	Not applicable
Packing Group:	Not applicable
EMS-No:	Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements:

The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:

Acute Health: Yes; Chronic Health: Yes; Fire: No; Reactivity; No

U.S. CERCLA Reportable Quantity:

None

U.S. TSCA Inventory Status:

The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations:

None known

California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):

This product does contain “Silica, crystalline”, which is on the Proposition 65 Lists.

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status:

Components are DSL Listed, NDSL Listed and/or are exempt from listing
Other Canadian Regulations:
Not applicable
Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.
Canadian WHMIS Classification and Symbols:
This product is Class E, Corrosive, and D2B, Materials causing other toxic effects, per WHMIS Controlled Product Regulations

15.3 European Economic Community Information:
This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.
Chemical Safety Assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.
15.4 Australian Information for Product:
Components of this product are listed on the International Chemical Inventory list.
15.5 Japanese Information for Product:
Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.
15.6 International Chemical Inventories:
Listing of the components on individual country Chemical Inventories is as follows:
Australian Inventory of Chemical Substances (AICS): Listed
Korean Existing Chemicals List (ECL): Listed
Japanese Existing National Inventory of Chemical Substances (ENCS): Listed
Philippines Inventory if Chemicals and Chemical Substances (PICCS): Listed
U.S. TSCA: Listed

SECTION 16 – OTHER INFORMATION

Prepared By: Chris Eigbrett (MSDS to GHS Compliance)
Date of Printing: February 1, 2015

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. The manufacturer assumes no responsibility for injury to vendee or third party person proximately caused by the material if

reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, The manufacturer
assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET

Safety Data Sheet

SC Multipurpose Grout

Version 1

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	SC Multipurpose Grout
Synonyms:	N/A
CAS No:	Mixture
1.2 Product Use:	Multi-purpose grout
1.3 Company Name:	**SpecChem**
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	**Chemtrec: (800) 424-9300**
Date of Last Revision:	February 1, 2015
Date of Current Revision:	July 1, 2018

SECTION 2 – HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: This product is a gray powder with minimal odor.
Health Hazards: May cause skin and respiratory irritation and burns to the eyes. Contact with skin may cause an allergic reaction. Repeated exposure may cause damage to the lungs. Contains components that are defined as human carcinogens.
Flammability Hazards: This product is not considered flammable.
Reactivity Hazards: None.
Environmental Hazards: The environmental effects of this product have not been investigated, however release may cause long term adverse environmental effects.

US DOT Symbols Not Regulated

EU and GHS Symbols

Signal Word Danger

2.1 EU Labeling and Classification:
This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives.
EU HAZARD CLASSIFICATION OF INGREDIENTS PER DIRECTIVE 1272/2008/EC:
Index Number:
266-043-4 is not listed in Annex I
CAS 26499-65-0 is not listed in ESIS
215-279-6 is not listed in Annex I
CAS 93763-70-3 is not listed in ESIS
215-138-9 is not listed in Annex I
215-168-2 is not listed in Annex I

202-049-5 index number is 601-052-00-2
Substances not listed either individually or in group entries must be self classified.

Components Contributing to Classification:	Portland Cement, Plaster of Paris, Limestone, Perlite, Calcium Oxide, Diiron Trioxide, Naphthalene
2.2 Label Elements:	
GHS Hazard Classifications:	Carcinogenicity Category 2 STOT – SE Category 3 (Respiratory System) Skin Irritation Category 2 Skin Sensitization Category 1 Eye Damage Category 1
Hazard Statements:	H351 Suspected of causing cancer H335 May cause respiratory irritation H315 Causes skin irritation H317 May cause an allergic skin reaction H318 Causes serious eye damage
Precautionary Statements:	P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P260 Do not breath dust/fume/gas/mist/vapours/spray. P264 Wash 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 P270 Do not eat, drink or smoke when using this product. P280 Wear protective gloves/eye protection/face protection..
Response Statements:	P308+P313 IF exposed or concerned: Get medical advice/attention. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTER/Doctor if you feel unwell. P302+P352 IF ON SKIN: Wash with plenty of water. P333+P312 If skin irritation or rash occurs: Get medical advice/attention. P362+P364 Take off contaminated clothing and wash it before reuse. 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

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

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

2.3 Health Hazards or Risks From Exposure:

Symptoms of Overexposure by Route of Exposure:

The most significant routes of overexposure for this product are by contact with skin or eyes. The symptoms of overexposure are described in the following paragraphs.

Acute:

Inhalation: May cause respiratory irritation.
Skin Contact: May cause irritation to skin.
Eye Contact: Contact with the eyes may cause burns or irritation.
Ingestion: May cause gastrointestinal irritation, nausea, and vomiting.

Chronic: Repeated exposure may cause skin dryness or cracking.

Target Organs:

Acute: Eyes, Skin, Respiratory
Chronic: Lung, Skin

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredients	WT%	CAS No.	EINECS No.	Hazard Classification
Portland Cement	< 50%	65997-15-1	266-043-4	STOT SE3, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1
Crystalline Silica (Quartz)/ Silica Sand	< 50%	14808-60-7	238-878-4	Carc. 2, STOT RE2
Limestone	10-15%	1317-65-3	215-279-6	Skin Irrit. 3, Eye Irrit. 2B
Fly Ash	< 15%	681131-74-8	N/A	N/A
Napthalene	< 0.4%	91-20-3	202-049-5	Acute Tox. 4, Carc. 2, Aquatic Acute 1, Aquatic Chr 1
Balance of other ingredients are non-hazardous or less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitizers).				

Note: All WHMIS required information is included in appropriate sections based on the ANSI Z400.1-2010 format. 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, EU Directives and the Japanese Industrial Standard JIS Z 7250:2000

SECTION 4 – FIRST AID MEASURES

4.1 Description of First Aid Measures:

Eye Contact: If product enters the eyes, flush with plenty of water or eye wash solution for several minutes. Remove contacts if present and easy to do. Seek medical attention if irritation persists.

Skin Contact: Wash skin thoroughly with soap and water after handling. Seek medical

attention if irritation develops and persists.

Inhalation: If breathing becomes difficult, remove victim to fresh air. If necessary, use artificial respiration to support vital functions. Seek medical attention.

Ingestion: If product is swallowed, call physician or poison center immediately. If professional advice is not available, do not induce vomiting. Never induce vomiting or give dilutents (milk or water) to someone who is unconscious, having convulsions, or who cannot swallow. Seek medical advice. Take a copy of the label and/or SDS with the victim to the health professional.

Medical Conditions Generally Aggravated By Exposure: Pre-existing skin, respiratory system or eye problems may be aggravated by prolonged contact.

4.2 Symptoms and Effects Both Acute and Delayed: Exposure to skin and respiratory may cause irritation. Contact with the eyes may cause burns. Contact with skin may cause an allergic reaction. Repeated exposure may cause damage to the lungs.

4.3 Recommendations to Physicians: Treat symptoms and eliminate overexposure.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 Fire Extinguishing Materials:

Use the following fire extinguishing materials:
Water Spray: Yes
Foam: Yes
Halon: Yes
Carbon Dioxide: Yes
Dry Chemical: Yes
Other: Any “C” Class

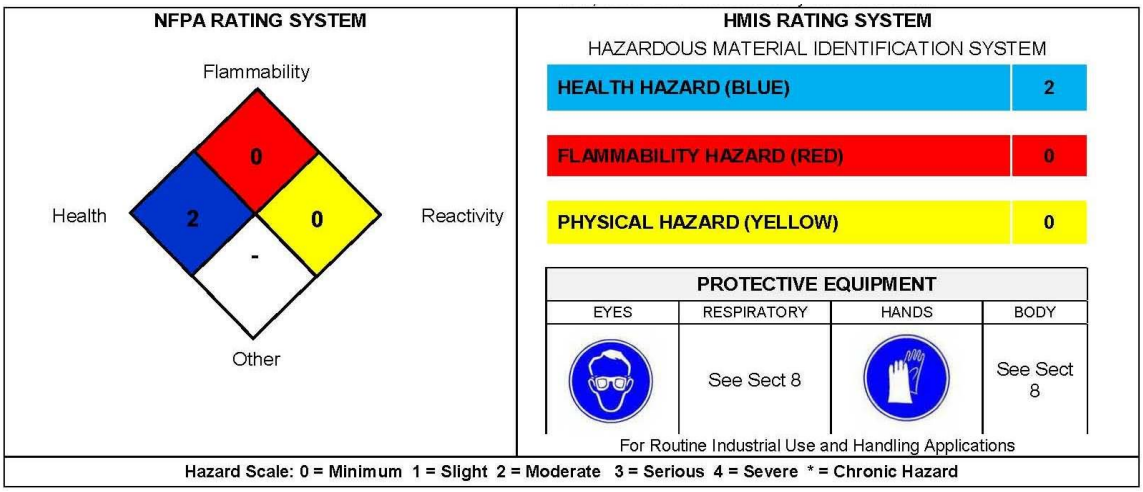
5.2 Unusual Fire and Explosion Hazards:
Irritating and toxic fumes may be produced at high temperatures. Use of water may result if the formation of a toxic aqueous solution. Do not allow run-off from fire fighting to enter drains or water courses.

Explosive Sensitivity to Mechanical Impact:	No
Explosive Sensitivity to Static Discharge:	No

5.3 Special Fire-Fighting Procedures:

- Incipient fire responders should wear eye protection.
- Structural firefighters must wear Self-Contained Breathing Apparatus (SCBA) and full protective equipment.
- Isolate materials not yet involved in the fire and protect personnel.
- Move containers from fire area if this can be done without risk; otherwise, cool with carefully applied water spray.

- If possible, prevent run-off water from entering storm drains, bodies of water, or other environmentally sensitive areas.



SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:
Use cautious judgment when cleaning up spill. Wear suitable protective clothing, gloves, and eye/face protection.

6.2 Environmental Precautions:
If liquid was introduced, construct a dike to prevent spreading. Keep out of sewers, storm drains, surface waters, and soils.

6.3 Spill and Leak Response:

Small Spills:

- Collect material via broom or mop. Place in tightly sealed containers for proper disposal.
- Approach spill areas with caution.
- If liquid was introduced, create a dike or trench to contain material.
- Soak up with absorbent material such as clay, sand or other suitable non-reactive material.

Large Spills:

- Place in leak-proof containers. Seal tightly for proper disposal.
- Dispose of in accordance with U.S. Federal, State, and local hazardous waste disposal regulations and those of Canada and its Provinces, those of Australia, Japan and EU Member States (see Section 13, Disposal Considerations).

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling:
To prevent eye contact under the foreseeable conditions of use, wear appropriate safety eyewear. When handling, do not eat, drink, or smoke. Wash thoroughly after handling.

7.2 Storage and Handling Practices:
Keep away from incompatible materials. Keep container closed when not in use and store in well ventilated area.

7.3 Specific Uses:
Multi-purpose grout.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Exposure Parameters:

Ingredients	CAS No.	OSHA PEL	NIOSH PEL	ACGIH TWA
Portland Cement	65997-15-1	TWA 5 mg/m3 (resp) TWA 15 mg/m3 (total)	TWA 5 mg/m3 (resp) TWA 10 mg/m3 (total)	10 mg/m3 (total)
Crystalline Silica (Quartz)/ Silica Sand	14808-60-7	TWA 0.1 mg/m3 (resp) TWA 0.3 mg/m3 (total)	Ca TWA 0.05 mg/m3	0.025 mg/m3
Naphthalene	91-20-3	TWA 10 ppm (50 mg/m3)	TWA 10 ppm (50 mg/m3)	Not Listed
Fly Ash	681131-74-8	TWA 5 mg/m3	TWA 5mg/m3	Not Listed

8.2 Exposure Controls:

Ventilation and Engineering Controls: Use with adequate ventilation to ensure exposure levels are maintained below the limits provided above.

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132), or standards of EU member states (including EN 149 for respiratory PPE, and EN 166 for face/eye protection), and those of Japan. Please reference applicable regulations and standards for relevant details.

Respiratory Protection: Maintain airborne contaminant concentrations below guidelines listed above. Use only respiratory protection authorized in the U.S. Federal OSHA Respiratory Protection Standard (29 CFR 1910.134), equivalent U.S. State standards, Canadian CSA Standard Z94.4-93, the European Standard EN149, or EU member states.

Eye Protection: Safety glasses or goggles are required. If necessary, refer to U.S. OSHA 29 CFR 1910.133, Canadian Standards, and the European Standard EN166, Australian Standards, or relevant Japanese Standards.

Hand Protection: Chemical resistant gloves are required to prevent skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138, the European

Body Protection:	Standard DIN EN 374, the appropriate Standards of Canada, Australian Standards, or relevant Japanese Standards. Use body protect appropriate to task being performed. If necessary, refer to appropriate Standards of Canada, or appropriate standards of the EU, Australian Standards, or relevant Japanese Standards. If a hazard of injury to the feet exists due to falling objects, rolling objects, where objects may pierce the soles of the feet or where employee's feet may be exposed to electrical hazards, use foot protection, as described in U.S. OSHA 29 CFR 1910.136.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties:
ppearance (Physical State and Color): Gray powder
Odor: Minimal
Odor Threshold: No data available
pH: No data available
Melting/Freezing Point: No data available
Boiling Point: No data available
Flash Point: No data available
Evaporation Rate: No data available
Flammability (Solid; Gas): No data available
Upper/Lower Flammability or Explosion Limits: No data available
Vapor Pressure (mm Hg @ 20°C (68° F): No data available
Vapor Density: No data available
Relative Density: No data available
Specific Gravity: 2.6 - 3.2
Solubility in Water: Miscible
Weight per Gallon: 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
9.2 Other Information: No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity:	This product is not reactive.
10.2 Stability:	Stable under conditions of normal storage and use.
10.3 Possibility of Hazardous Reactions:	Will not occur.
10.4 Conditions to Avoid:	No data available.

10.5 Incompatible Substances: Hydrogen fluoride.
10.6 Hazardous Decomposition Products: No data available.

SECTION 11 – TOXICOLOGY INFORMATION

11.1 Information on Toxicological Effects:
Toxicity Data:

Naphthalene	91-20-3	LD50 Oral – Rat	490 mg/kg
Crystalline Silica (Quartz/ Silica Sand	14808-60-7		

Suspected Cancer Agent: Naphthalene (CAS 91-20-3) and Crystalline Silica (Quartz)/Silica Sand is found on one or more of the following lists: FEDERAL OSHA Z LIST, NTP, IARC, or CAL/OSHA and therefore is considered to be a cancer-causing agent by these agencies.
Irritancy: Skin, eye, and respiratory irritant.
Sensitization to the Product: This product is expected to cause skin sensitization.
Germ Cell Mutagenicity: This product does not contain ingredients that are suspected to be a germ cell mutagenic.
Reproductive Toxicity: This product is not expected to be a human reproductive toxicant.

Toxicity

SECTION 12 – ECOLOGICAL INFORMATION

12.1 Toxicity: No data available
12.2 Persistence and Degradability: No specific data available on this product.
12.3 Bioaccumulative Potential: No specific data available on this product.
12.4 Mobility in Soil: No specific data available on this product.
12.5 Results of PBT and vPvB Assessment: No specific data available on this product.
12.6 Other Adverse Effects: No data available
12.7 Water Endangerment Class: At present, there are no ecotoxicological assessments for this product.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations, those of Australia, EU Member States and Japan.
13.2 EU Waste Code: Not determined

SECTION 14 - TRANSPORTATION INFORMATION

14.1 U.S. Department of Transportation (DOT) Shipping Regulations:
This product is classified (per 49 CFR 172.101) by the U.S. Department of Transportation, as follows.

UN Identification Number:	Not applicable
Proper Shipping Name:	Not regulated
Hazard Class Number and Description:	Not applicable
Packing Group:	Not applicable
DOT Label(s) Required:	Not applicable
North American Emergency Response Guidebook Number:	Not applicable
14.2 Environmental Hazards:	
Marine Pollutant:	The components of this product are not designated by the Department of Transportation to be Marine Pollutants (49 CFR 172.101, Appendix B).
14.3 Special Precaution for User:	None
14.4 International Air Transport Association Shipping Information (IATA):	Not regulated.
14.5 International Maritime Organization Shipping Information (IMO):	
UN Identification Number:	Not applicable
Proper Shipping Name:	Not regulated
Hazard Class Number and Description:	Not applicable
Packing Group:	Not applicable
EMS-No:	Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations Specific for the Substance or Mixture:

United States Regulations:

U.S. SARA Reporting Requirements:

The components of this product are not subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act.

U.S. SARA 311/312:

Acute Health: Yes; Chronic Health: Yes; Fire: No; Reactivity; No

U.S. CERCLA Reportable Quantity:

None

U.S. TSCA Inventory Status:

The components of this product are listed on the TSCA Inventory or are exempted from listing.

Other U.S. Federal Regulations:

None known

California Safe Drinking Water and Toxic Enforcement Act (Proposition 66):

This product does contain “Silica, crystalline”, which is on the Proposition 65 Lists.

15.2 Canadian Regulations:

Canadian DSL/NDSL Inventory Status:

Components are DSL Listed, NDSL Listed and/or are exempt from listing

Other Canadian Regulations:

Not applicable

Canadian Environmental Protection Act (CEPA) Priorities Substances Lists:

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian WHMIS Classification and Symbols:
This product is Class E, Corrosive, and D2B, Materials causing other toxic effects, per WHMIS Controlled Product Regulations

15.3 European Economic Community Information:
This product meets the definition of a hazardous substance or preparation as defined by the European Union Council Directives 67/548/EEC, 1999/45/EC, 1272/2008/EC and subsequent Directives. See Section 2 for Details.

Chemical Safety Assessment:
No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

15.4 Australian Information for Product:
Components of this product are listed on the International Chemical Inventory list.

15.5 Japanese Information for Product:
Japanese Minister of International Trade and Industry (MITI) Status: The components of this product are not listed as Class I specified Chemical Substances, Class II Specified Chemical Substances, or Designated Chemical Substances by the Japanese MITI.

15.6 International Chemical Inventories:
Listing of the components on individual country Chemical Inventories is as follows:
Australian Inventory of Chemical Substances (AICS): Listed
Korean Existing Chemicals List (ECL): Listed
Japanese Existing National Inventory of Chemical Substances (ENCS): Listed
Philippines Inventory if Chemicals and Chemical Substances (PICCS): Listed
U.S. TSCA: Listed

SECTION 16 – OTHER INFORMATION

Prepared By: Chris Eigbrett (MSDS to GHS Compliance)
Date of Printing: July 1, 2018

The information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET

OXYGEN
Safety Data Sheet

1. IDENTIFICATION

Product identifier
Product Name OXYGEN

Other means of identification
Safety data sheet number LIND-P097
UN / ID no. UN1072
Trade name MAPAX® O

Recommended use of the chemical and restrictions on use
Recommended Use Industrial and professional use. Medical. Food and Beverage.
Uses advised against Consumer use.

Details of the supplier of the safety data sheet
Linde Gas North America LLC
10 Riverview Drive
Danbury, CT 06810
Phone: 908-329-9700
www.lindeus.com

* May include subsidiaries or affiliate companies / divisions.

For additional product information contact your local customer service.

Emergency telephone number
Company Phone Number +1 800-645-4633

CHEMTREC: 1-800-424-9300 (North America) +1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status
This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Oxidizing gases	Category 1
Gases under pressure	Compressed gas

Label elements

Signal word Danger

Hazard Statements
May cause or intensify fire; oxidizer
Contains gas under pressure; may explode if heated

Precautionary Statements - Prevention
Do not handle until all safety precautions have been read and understood
Keep and store away from clothing and other combustible materials
Keep valves and fittings free from grease and oil
Use and store only outdoors or in a well ventilated place
Use a backflow preventive device in piping
Use only equipment of compatible materials of construction and rated for cylinder pressure
Use only with equipment cleaned for oxygen service
Open valve slowly
Close valve after each use and when empty

Precautionary Statements - Response
In case of fire: Stop leak if safe to do so

Precautionary Statements - Storage
Protect from sunlight when ambient temperature exceeds 52°C / 125°F

Hazards not otherwise classified (HNOC)
Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Volume %	Chemical Formula
OXYGEN	7782-44-7	>99	O_2

4. FIRST AID MEASURES

Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Move victim to fresh air. Seek immediate medical attention / advice.

Skin contact None under normal use. Get medical attention if symptoms occur.

Eye contact	None under normal use. Get medical attention if symptoms occur.
Ingestion	Not an expected route of exposure.

Most important symptoms and effects, both acute and delayed

Symptoms	Oxygen is not acutely toxic under normal pressure. Oxygen is more toxic when inhaled at elevated pressures. Depending upon pressure and duration of exposure, pure oxygen at elevated pressures may cause cramps, dizziness, difficulty breathing, convulsions, edema and death.

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	None.

Specific extinguishing methods
Continue to cool fire exposed cylinders until flames are extinguished. Damaged cylinders should be handled only by specialists.

Specific hazards arising from the chemical
May cause or intensify fire; oxidizer. Will support and accelerate combustion of combustible materials (wood, paper, oil, debris, etc). Cylinders may rupture under extreme heat.

Protective equipment and precautions for firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Monitor oxygen level. Eliminate all ignition sources if safe to do so.

Environmental precautions

Environmental precautions	Prevent spreading of vapors through sewers, ventilation systems and confined areas.

Methods and material for containment and cleaning up

Methods for containment	Stop the flow of gas or remove cylinder to outdoor location if this can be done without risk. If leak is in container or container valve, contact the appropriate emergency telephone number in Section 1 or call your closest Linde location.
Methods for cleaning up	Return cylinder to Linde or an authorized distributor.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Keep valves and fittings free from grease and oil. Use only equipment of compatible materials of construction. Open valve slowly. "NO SMOKING" signs should be posted in storage and use areas. Separate flammable gas cylinders from oxygen and other oxidizers by a minimum distance of 20 ft. or by a 5 ft. high barrier with a minimum fire resistance rating of a half an hour. Dry product is

non-corrosive and may be used with all materials of construction. Moisture causes metal oxides which are formed with air to be hydrated so that they include volume and lose their protective role (rust formation). Concentrations of SO_2, Cl_2, salt, etc. in the moisture enhances the rusting of metals in air. Carbon steels and low alloy steels are acceptable for use at lower pressures. For high pressure applications stainless steels are acceptable as are copper and its alloys, nickel and its alloys, brass bronze, silicon alloys, Monel®, Inconel®, and beryllium. Lead and silver or lead tin alloys are good gasket materials. Teflon®, Teflon® composites, or Kel-F® are preferred non-metallic gasket materials. Oxygen should not be used as a substitute for compressed air in pneumatic equipment since they generally contain flammable lubricants. Equipment able to use oxygen must be "cleaned for oxygen service". Check with the equipment supplier to verify oxygen compatibility for the service conditions.

Protect cylinders from physical damage; do not drag, roll, slide or drop. When moving cylinders, even for short distance, use a cart designed to transport cylinders. Never attempt to lift a cylinder by its valve protection cap. Never insert an object (e.g. wrench, screwdriver, pry bar,etc.) into valve cap openings. Doing so may damage valve, causing leak to occur. Use an adjustable strap wrench to remove over-tight or rusted caps. Use only with adequate ventilation. Use only with equipment rated for cylinder pressure. Use a backflow preventive device in piping. Close valve after each use and when empty. If user experiences any difficulty operating cylinder valve discontinue use and contact supplier.

Never put cylinders into trunks of cars or unventilated areas of passenger vehicles. Never attempt to refill a compressed gas cylinder without the owner's written consent. Never strike an arc on a compressed gas cylinder or make a cylinder a part of an electrical circuit. Ensure the complete gas system has been checked for leaks before use.

Only experienced and properly instructed persons should handle gases under pressure. Always store and handle compressed gas cylinders in accordance with Compressed Gas Association, pamphlet CGA-P1, Safe Handling of Compressed Gases in Containers.

For additional recommendations, consult Compressed Gas Association's Pamphlets SB-7, G-4.3, G-4.1, G-4.4, P-2.5, G-4.9, P-14, and SB-2.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Store in cool, dry, well-ventilated area of non-combustible construction away from heavily trafficked areas and emergency exits. Keep at temperatures below 52°C / 125°F. Cylinders should be stored upright with valve protection cap in place and firmly secured to prevent falling. Full and empty cylinders should be segregrated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time. Stored containers should be periodically checked for general condition and leakage. Do not store near combustible materials
Incompatible materials	Reducing agents. Combustible material. Organic material. Oil. Grease.

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

Appropriate engineering controls

Engineering Controls	Ventilation systems. Use local exhaust in combination with general ventilation as necessary to keep oxygen concentrations below 23.5%. Consider installation of leak detection systems in areas of use and storage. Systems under pressure should be regularly checked for leakages.

Individual protection measures, such as personal protective equipment

Eye / face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Work gloves and safety shoes are recommended when handling cylinders. Gloves must be clean and free from grease or oil.
Respiratory protection	No special protective equipment required.
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	Gas.
Appearance	Colorless.
Odor	Odorless.
Odor threshold	No information available
pH	Not applicable
Melting / freezing point	-218.8 °C / -361.8 °F
Evaporation rate	Not applicable
Flammability (solid, gas)	See Section 5.
Lower flammability limit:	Not applicable
Upper flammability limit:	Not applicable
Flash point	Not applicable
Autoignition temperature	No data available
Decomposition temperature	No data available
Oxidizing properties	Oxidizer
Water solubility	Slightly soluble
Partition coefficient	0.65
Kinematic viscosity	Not applicable

Chemical Name	Molecular weight	Boiling point / range	Vapor Pressure	Vapor density (air =1)	Gas Density kg / m³@20°C	Critical Temperature
OXYGEN	31.99	-182.9 °C	Above critical temperature	1.11	1.331	-118.6 °C

10. STABILITY AND REACTIVITY

Reactivity
Not reactive under normal conditions

Chemical stability
Stable under normal conditions.

Explosion data

Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.

Possibility of Hazardous Reactions
May cause or intensify fire; oxidizer. Will support and accelerate combustion of combustible materials (wood, paper, oil, debris, etc).

Conditions to avoid
None under recommended storage and handling conditions (see Section 7).

Incompatible materials

Reducing agents. Combustible material. Organic material. Oil. Grease.

Hazardous Decomposition Products
None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness, cessation of breathing. Poisoning began in dogs 36 hours after inhalation of pure oxygen at atmospheric pressure. Distress was seen within 48 hours and death within 60 hours.
Skin contact	No data available.
Eye contact	The incompletely developed retinal circulation is more susceptible to toxic levels of oxygen. In premature infants, arterial oxygen tension above 150 mm Hg may cause retrolental fibroplasia. Permanent blindness may occur several months later. One case of severe retinal damage in an adult was reported. An individual suffering from myasthenia gravis developed irreversible retinal atrophy after breathing 80% oxygen for 150 days.
Ingestion	Not an expected route of exposure.

Information on toxicological effects

Symptoms	Oxygen is not acutely toxic under normal pressure. Oxygen is more toxic when inhaled at elevated pressures. Depending upon pressure and duration of exposure, pure oxygen at elevated pressures may cause cramps, dizziness, difficulty breathing, convulsions, edema and death.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation	Not classified.
Sensitization	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens listed by OSHA, IARC or NTP.
Reproductive toxicity	Not classified.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.
Chronic toxicity	Prolonged inhalation of high oxygen concentrations (>75%) may affect coordination, attention, and cause tiredness of respiratory irritation.
Aspiration hazard	Not applicable.

Numerical measures of toxicity

Oral LD50	No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity
Will not bioconcentrate.

Persistence and degradability
Not applicable.

Bioaccumulation
Will not bioconcentrate.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes: Do not attempt to dispose of residual waste or unused quantities. Return in the shipping container PROPERLY LABELED WITH ANY VALVE OUTLET PLUGS OR CAPS SECURED AND VALVE PROTECTION CAP IN PLACE to Linde for proper disposal.

14. TRANSPORT INFORMATION

DOT

UN / ID no.	UN1072
Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Subsidiary class	5.1
Special Provisions	A14, 110
Description	UN1072, Oxygen, compressed, 2.2 (5.1)
Emergency Response Guide Number	122

TDG

UN / ID no.	UN1072
Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Subsidiary class	5.1
Description	UN1072, Oxygen, compressed, 2.2 (5.1)

IATA

UN / ID no.	UN1072
Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Subsidiary hazard class	5.1
ERG Code	2X
Description	UN1072, Oxygen, compressed, 2.2 (5.1)

IMDG

UN / ID no.	UN1072
Proper shipping name	Oxygen, compressed
Hazard Class	2.2
Subsidiary hazard class	5.1
EmS-No.	F-C, S-W
Special Provisions	355
Description	UN1072, Oxygen, compressed, 2.2 (5.1)

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL / NDSL	Complies
EINECS / ELINCS	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

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
Should this product meet EPCRA 311 / 312 reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

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.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)
This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

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).

Risk and Process Safety Management Programs
This material, as supplied, does not contain any regulated substances with specified thresholds under 40 CFR Part 68. This product does not contain any substances regulated as Highly Hazardous Chemicals pursuant to the 29 CFR Part 1910.110.

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
Oxygen 7782-44-7	X	X	X

16. OTHER INFORMATION

NFPA Health hazards 0 Flammability 0 Instability 0 Physical and Chemical Properties OX

Note: Ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2009, CGA Recommended Hazard Ratings for Compressed Gases, 3rd Edition.

Issue Date	24-Feb-2015
Revision Date	08-Apr-2020
Revision Note	SDS sections updated; 1

LIND-P097

General Disclaimer

For terms and conditions, including limitation of liability, please refer to the purchase agreement in effect between Linde LLC, Linde Merchant Production, Inc. or Linde Gas North America LLC (or any of their affiliates and subsidiaries) and the purchaser.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

End of Safety Data Sheet

Safety Data Sheet

RUST-OLEUM CORPORATION
* Trusted Quality Since 1921 *
www.rustoleum.com

1. Identification

Product Name:	PRO LSPR 6PK MARK FLUORESCENT ORANGE	**Revision Date:**	5/12/2017
Product Identifier:	2554838	**Supercedes Date:**	6/5/2015
Product Use/Class:	Marking Paint/Aerosols		
Supplier:	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA	**Manufacturer:**	Rust-Oleum Corporation 11 Hawthorn Parkway Vernon Hills, IL 60061 USA
Preparer:	Regulatory Department		
Emergency Telephone:	24 Hour Hotline: 847-367-7700		

2. Hazard Identification

Classification

Symbol(s) of Product

Signal Word
Danger

Possible Hazards
27% of the mixture consists of ingredient(s) of unknown acute toxicity.

GHS HAZARD STATEMENTS

Carcinogenicity, category 2	H351	Suspected of causing cancer.
Compressed Gas	H280	Contains gas under pressure; may explode if heated.
Flammable Aerosol, category 1	H222	Extremely flammable aerosol.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.

GHS LABEL PRECAUTIONARY STATEMENTS

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P314	Get medical advice/attention if you feel unwell.
P405	Store locked up.
P410+P403	Protect from sunlight. Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do no expose to temperatures exceeding 50°C/ 122°F.

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

3. Composition/Information On Ingredients

HAZARDOUS SUBSTANCES

Chemical Name	CAS-No.	Wt.% Range	GHS Symbols	GHS Statements
Propane	74-98-6	10-25	GHS04	H280
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	2.5-10	GHS08	H304
n-Butane	106-97-8	2.5-10	GHS04	H280
Hydrotreated Light Distillate	64742-47-8	2.5-10	GHS08	H304
Xylenes (o-, m-, p- isomers)	1330-20-7	2.5-10	GHS02-GHS07	H226-315-319-332
Barium Sulfate	7727-43-7	2.5-10	Not Available	Not Available
Ethylbenzene	100-41-4	1.0-2.5	GHS02-GHS07-GHS08	H225-304-332-351-373
Stoddard Solvent	8052-41-3	0.1-1.0	GHS08	H304-372
Pigment Orange 13	3520-72-7	0.1-1.0	Not Available	Not Available
Crystalline Silica / Quartz	14808-60-7	0.1-1.0	Not Available	Not Available

4. First-aid Measures

FIRST AID - EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention. Do NOT allow rubbing of eyes or keeping eyes closed.

FIRST AID - SKIN CONTACT: Wash skin with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists.

FIRST AID - INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Do NOT use mouth-to-mouth resuscitation. If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

FIRST AID - INGESTION: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention. If swallowed, get medical attention.

5. Fire-fighting Measures

EXTINGUISHING MEDIA: Alcohol Film Forming Foam, Carbon Dioxide, Dry Chemical, Dry Sand, Water Fog

UNUSUAL FIRE AND EXPLOSION HAZARDS: FLASH POINT IS LESS THAN 20°F. EXTREMELY FLAMMABLE LIQUID AND VAPOR!Water spray may be ineffective. Closed containers may explode when exposed to extreme heat due to buildup of steam. Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can. No unusual fire or explosion hazards noted.

SPECIAL FIREFIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion. Full protective equipment including self-contained breathing apparatus should be used. Evacuate area and fight fire from a safe distance. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers. Ventilate area, isolate spilled material, and remove with inert absorbent. Dispose of contaminated absorbent, container, and unused contents in accordance with local, state, and federal regulations.

7. Handling and Storage

HANDLING: Wash thoroughly after handling. Wash hands before eating. Remove contaminated clothing and launder before reuse. Use only in a well-ventilated area. Use only with adequate ventilation. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing fumes, vapors, or mist. Avoid contact with eyes, skin and clothing.

STORAGE: Store in a dry, well ventilated place. Keep container tightly closed when not in use. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Contents under pressure. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of flammable aerosols. Keep away from heat, sparks, flame and sources of ignition. Contents under pressure. Do not expose to heat or store above 120 ° F. Avoid excess heat. Product should be stored in tightly sealed containers and protected from heat, moisture, and foreign materials.

8. Exposure Controls/Personal Protection

Chemical Name	CAS-No.	Weight % Less Than	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING
Propane	74-98-6	20.0	N.E.	N.E.	1000 ppm	N.E.
Naphtha, Petroleum, Hydrotreated Light	64742-49-0	10.0	N.E.	N.E.	N.E.	N.E.
n-Butane	106-97-8	10.0	N.E.	1000 ppm	N.E.	N.E.
Hydrotreated Light Distillate	64742-47-8	10.0	N.E.	N.E.	N.E.	N.E.
Xylenes (o-, m-, p- isomers)	1330-20-7	5.0	100 ppm	150 ppm	100 ppm	N.E.
Barium Sulfate	7727-43-7	5.0	5 mg/m3	N.E.	15 mg/m3	N.E.
Ethylbenzene	100-41-4	5.0	20 ppm	N.E.	100 ppm	N.E.
Stoddard Solvent	8052-41-3	1.0	100 ppm	N.E.	500 ppm	N.E.
Pigment Orange 13	3520-72-7	1.0	N.E.	N.E.	N.E.	N.E.
Crystalline Silica / Quartz	14808-60-7	1.0	0.025 mg/m3	N.E.	50 µg/m3	N.E.

PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment. Provide general dilution of local exhaust ventilation in volume and pattern to keep TLV of hazardous ingredients below acceptable limits. Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation.

RESPIRATORY PROTECTION: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

SKIN PROTECTION: Use gloves to prevent prolonged skin contact. Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

EYE PROTECTION: Use safety eyewear designed to protect against splash of liquids.

OTHER PROTECTIVE EQUIPMENT: Refer to safety supervisor or industrial hygienist for further guidance regarding types of personal protective equipment and their applications. Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

HYGIENIC PRACTICES: Wash thoroughly with soap and water before eating, drinking or smoking. Remove contaminated clothing immediately and launder before reuse.

9. Physical and Chemical Properties

Appearance:	Aerosolized Mist	**Physical State:**	Liquid
Odor:	Solvent Like	**Odor Threshold:**	N.E.
Relative Density:	0.857	**pH:**	N.A.
Freeze Point, °C:	N.D.	**Viscosity:**	N.D.
Solubility in Water:	Slight	**Partition Coefficient, n-octanol/water:**	N.D.
Decompostion Temp., °C:	N.D.		
Boiling Range, °C:	-37 - 537	**Explosive Limits, vol%:**	0.9 - 12.6
Flammability:	Supports Combustion	**Flash Point, °C:**	-96
Evaporation Rate:	Faster than Ether	**Auto-ignition Temp., °C:**	N.D.
Vapor Density:	Heavier than Air	**Vapor Pressure:**	N.D.

(See "Other information" Section for abbreviation legend)

10. Stability and Reactivity

CONDITIONS TO AVOID: Avoid temperatures above 120°F (49°C). Avoid contact with strong acid and strong bases. Avoid all possible sources of ignition.

INCOMPATIBILITY: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

HAZARDOUS DECOMPOSITION: By open flame, carbon monoxide and carbon dioxide. When heated to decomposition, it emits acrid smoke and irritating fumes. Contains solvents which may form carbon monoxide, carbon dioxide, and formaldehyde.

HAZARDOUS POLYMERIZATION: Will not occur under normal conditions.

STABILITY: This product is stable under normal storage conditions.

11. Toxicological information

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes Serious Eye Irritation

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Substance may cause slight skin irritation. May cause skin irritation. Allergic reactions are possible. Prolonged or repeated contact may cause skin irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing fumes, spray, vapors, or mist. High vapor concentrations are irritating to the eyes, nose, throat and lungs. Prolonged or excessive inhalation may cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Aspiration hazard if swallowed; can enter lungs and cause damage.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. IARC lists Ethylbenzene as a possible human carcinogen (group 2B).

PRIMARY ROUTE(S) OF ENTRY: Eye Contact, Ingestion, Inhalation, Skin Absorption, Skin Contact

ACUTE TOXICITY VALUES

The acute effects of this product have not been tested. Data on individual components are tabulated below:

CAS-No.	Chemical Name	Oral LD50	Dermal LD50	Vapor LC50
74-98-6	Propane	N.I.	N.I.	658 mg/L Rat
64742-49-0	Naphtha, Petroleum, Hydrotreated Light	>5000 mg/kg Rat	>3160 mg/kg Rabbit	>4951 mg/L Rat
106-97-8	n-Butane	N.I.	N.I.	658 mg/L Rat
64742-47-8	Hydrotreated Light Distillate	>5000 mg/kg Rat	>2000 mg/kg Rabbit	>5000 mg/L Rat
1330-20-7	Xylenes (o-, m-, p- isomers)	3500 mg/kg Rat	>4350 mg/kg Rabbit	29.08 mg/L Rat
100-41-4	Ethylbenzene	3500 mg/kg Rat	15400 mg/kg Rabbit	17.4 mg/L Rat
3520-72-7	Pigment Orange 13	>5000 mg/kg Rat	N.I.	N.I.
14808-60-7	Crystalline Silica / Quartz	5500 mg/kg Rat	5500	100 mg/L

N.I. - No Information

12. Ecological Information

ECOLOGICAL INFORMATION: Product is a mixture of listed components. Product is a mixture of listed components.

13. Disposal Information

DISPOSAL INFORMATION: Dispose of material in accordance to local, state, and federal regulations and ordinances. Do not allow to enter waterways, wastewater, soil, storm drains or sewer systems.

14. Transport Information

	Domestic (USDOT)	International (IMDG)	Air (IATA)	TDG (Canada)
UN Number:	N.A.	1950	1950	N.A.
Proper Shipping Name:	Paint Products in Limited Quantities	Aerosols	Aerosols	Paint Products in Limited Quantities
Hazard Class:	N.A.	2.1	2.1	N.A.
Packing Group:	N.A.	N.A.	N.A.	N.A.
Limited Quantity:	Yes	Yes	Yes	Yes

15. Regulatory Information

U.S. Federal Regulations:

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

Fire Hazard, Pressure Hazard, Acute Health Hazard, Chronic Health Hazard

Sara Section 313:

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

Chemical Name	CAS-No.
Xylenes (o-, m-, p- isomers)	1330-20-7
Ethylbenzene	100-41-4

Toxic Substances Control Act:

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(b) if exported from the United States:

Chemical Name	CAS-No.
Castor oil, sulfated, sodium salt	68187-76-8

16. Other Information

HMIS RATINGS

Health:	2*	**Flammability:**	4	**Physical Hazard:**	0	**Personal Protection:**	X

NFPA RATINGS

Health:	2	**Flammability:**	4	**Instability**	0

VOLATILE ORGANIC COMPOUNDS, g/L: 551

SDS REVISION DATE: 5/12/2017

REASON FOR REVISION:
Product Composition Changed
Substance and/or Product Properties Changed in Section(s):
02 - Hazard Identification
05 - Fire-fighting Measures
16 - Other Information
Statement(s) Changed

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

Rust-Oleum Corporation believes, to the best of its knowledge, information and belief, the information contained herein to be accurate and reliable as of the date of this safety data sheet. However, because the conditions of handling, use, and storage of these materials are beyond our control, we assume no responsibility or liability for personal injury or property damage incurred by the use of these materials. Rust-Oleum Corporation makes no warranty, expressed or implied, regarding the accuracy or reliability of the data or results obtained from their use. All materials may present unknown hazards and should be used with caution. The information and recommendations in this material safety data sheet are offered for the users' consideration and examination. It is the responsibility of the user to determine the final suitability of this information and to comply with all applicable international, federal, state, and local laws and regulations.

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/07/2019 Reviewed on 08/07/2019

1 Identification

· **Product identifier**

· **Trade name: Acrylic Bonding Agent J40**

· **Article number:** 83-69081
· **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 Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2B H320 Causes eye irritation.
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:**
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol
1,2-benzisothiazol-3(2H)-one
· **Hazard statements**
Causes skin and eye irritation.
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.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
Dispose of contents/container in accordance with local/regional/national/international regulations.
· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 0
Reactivity = 0

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· **HMIS-ratings (scale 0 - 4)**

HEALTH 1	Health = 1
FIRE 0	Fire = 0
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: Substances**
· **CAS No. Description**
7732-18-5 water, distilled, conductivity or of similar purity
· **Identification number(s)**
· **EC number:** 231-791-2
· **Chemical characterization: Mixtures**
· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Dangerous components:**		
4719-04-4	2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	≥0.1-<0.4%

· **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.
· **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:**
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**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
4719-04-4	2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	2.3 mg/m³
1310-73-2	sodium hydroxide	0.5 mg/m³

· **PAC-2:**		
4719-04-4	2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	25 mg/m³
1310-73-2	sodium hydroxide	5 mg/m³

· **PAC-3:**		
4719-04-4	2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol	150 mg/m³
1310-73-2	sodium hydroxide	50 mg/m³

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.

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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.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
· **Breathing equipment:** Suitable respiratory protective device recommended.
· **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.
· **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:	White
· **Odor:**	Odorless
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	0 °C (32 °F)
Boiling point/Boiling range:	100 °C (212 °F)
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not selfigniting.

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· **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 (17.3 mm Hg)
· **Density at 20 °C (68 °F):**	1.03573 g/cm³ (8.64317 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not determined.
· **Evaporation rate**	Not determined.
· **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:**	
Water:	48.5 %
Solids content:	25.0 %
· **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.

11 Toxicological information

· **Information on toxicological effects**
· **Acute toxicity:**
· **Primary irritant effect:**
· **on the skin:** May cause skin irritation.
· **on the eye:**
Strong irritant with the danger of severe eye injury.
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

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· **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:**
Must not be disposed of as normal garbage. Do not allow product to reach sewage system.
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, ADN, IMDG, IATA**	Not Regulated

· **UN proper shipping name**	
· **DOT, ADR, ADN, IMDG, IATA**	Not Regulated

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· **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):**

4719-04-4	2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol
1310-73-2	sodium hydroxide
2634-33-5	1,2-benzisothiazol-3(2H)-one
7732-18-5	water, distilled, conductivity or of similar purity

· **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.

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· **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:**
2,2',2''-(hexahydro-1,3,5-triazine-1,3,5-triyl)triethanol
1,2-benzisothiazol-3(2H)-one
· **Hazard statements**
Causes skin and eye irritation.
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.
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
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** 08/07/2019 / 185
· **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)

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Safety Data Sheet
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Printing date 08/07/2019 *Reviewed on 08/07/2019*

Trade name: Acrylic Bonding Agent J40

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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 Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2B: Serious eye damage/eye irritation – Category 2B
Skin Sens. 1: Skin sensitisation – Category 1

Safety Data Sheet

Strong Bond

Version 1

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

1.1 Trade Name (as labeled):	Strong Bond
Synonyms:	N/A
1.2 Product Use:	Coatings, textiles, binders and adhesives.
1.3 Company Name:	**SpecChem**
Company Address:	1511 Baltimore Ave; Suite 600
Company Address Cont:	Kansas City, MO 64108
Business Phone:	(816) 968-5600
Website:	www.specchemllc.com
1.4 Emergency Telephone Number:	**Chemtrec: (800) 424-9300**
Date of Last Revision:	April 16, 2015
Date of Current Revision:	July 1, 2018

SECTION 2 – HAZARDS IDENTIFICATION

Hazard Classification: This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

Other hazards:
No data available.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Component	CASRN	Concentration
Acrylic polymer(s)	Not hazardous	46.0-48.0%
Residual monomers	Not available	< 0.05%
Water	7732-18-5	52.0 -54.0%

SECTION 4 – FIRST AID MEASURES

Description of first aid measures
Inhalation: Move to fresh air.

Skin contact: Wash with water and soap as a precaution. If skin irritation persists, call a physician.
Eye contact: Rinse with plenty of water. If eye irritation persists, consult a specialist.
Ingestion: Drink 1 or 2 glasses of water. Consult a physician if necessary. Never give anything by mouth to an unconscious person.
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: Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

Strong Bond

Version 1

SECTION 5 – FIRE FIGHTING MEASURES

Suitable extinguishing media: Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media: no data available
Special hazards arising from the substance or mixture Hazardous combustion products: no data available
Unusual Fire and Explosion Hazards: Material can splatter above 100C/212F. Dried product can burn.
Advice for firefighters
Fire Fighting Procedures: no data available
Special protective equipment for firefighters: Wear self-contained breathing apparatus and protective suit.

SECTION 6 – ACCIDENTAL RELEASE MEASURES (STEPS FOR SPILLS)

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Keep people away from and upwind of spill/leak. Material can create slippery conditions.
Environmental precautions: CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.
Methods and materials for containment and cleaning up: Contain spills immediately with inert materials (e.g., sand, earth). Transfer liquids and solid diking material to separate suitable containers for recovery or disposal.

SECTION 7 - HANDLING AND STORAGE

Precautions for safe handling: Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Keep container tightly closed. Do not breathe vapors, mist or gas.
Conditions for safe storage: Keep from freezing - product stability may be affected. STIR WELL BEFORE USE.
Storage stability
Storage temperature: 1 - 49 °C (34 - 120 °F)
Other data: Monomer vapors can be evolved when material is heated during processing operations. See SECTION 8, for types of ventilation required.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

Exposure controls
Engineering controls: Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec.) at the point of vapor evolution. Refer to the current edition of Industrial Ventilation: A

Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Protective measures: Facilities storing or utilizing this material should be equipped with an eyewash facility.

Individual protection measures

Eye/face protection: Safety glasses with side-shields Eye protection worn must be compatible with respiratory protection system employed.

Skin protection

Hand protection: The glove(s) listed below may provide protection against permeation. (Gloves of other chemically resistant materials may not provide adequate protection): Neoprene gloves

Respiratory protection: A respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements or equivalent must be followed whenever workplace conditions warrant a respirator's use. None required under normal operating conditions. Where vapors and/or mists may occur, wear a properly fitted NIOSH approved (or equivalent) half-mask, airpurifying respirator. Air-purifying respirators should be equipped with NIOSH approved (or equivalent) organic vapor cartridges and N95 filters. If oil mist is present, use R95 or P95 filters**.**

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Physical state: liquid
Color: Milky white
Odor: acrylic-like
Odor Threshold: no data available
pH: 9.3 - 10.2
Melting point/range: 0 °C (32 °F) Water
Freezing point: no data available
Boiling point: (760 mmHg) 100 °C (212 °F) Water
Flash point: Noncombustible
Evaporation Rate (Butyl Acetate = 1): <1 Water
Flammability (solid, gas): Not Applicable
Lower explosion limit: Not applicable
Upper explosion limit: Not applicable
Vapor Pressure: 17 mmHg at 20 °C (68 °F) Water
Relative Vapor Density (air = 1): <1 Water
Relative Density (water = 1): 1.0 - 1.2
Water solubility: Dilutable
Partition coefficient n-octanol/water: no data available
Auto-ignition temperature: Not applicable
Decomposition temperature: no data available
Dynamic Viscosity: 10 - 60 mPa.s
Kinematic Viscosity: no data available
Explosive properties: no data available
Oxidizing properties: no data available

Molecular weight: no data available
Percent volatility: 52 - 54 % Water

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10 – STABILITY AND REACTIVITY

Reactivity: no data available

Chemical stability: Stable

Possibility of hazardous reactions: None known.
Product will not undergo polymerization.

Conditions to avoid: no data available

Incompatible materials: There are no known materials which are incompatible with this product.
Hazardous decomposition products: Thermal decomposition may yield acrylic monomers.

SECTION 11 – TOXICOLOGY INFORMATION

Toxicological information on this product or its components appear in this section when such data is available.

Acute toxicity
Acute oral toxicity
LD50, Rat, > 5,000 mg/kg
Acute dermal toxicity
LD50, Rabbit, > 5,000 mg/kg
Acute inhalation toxicity
Product test data not available.
Skin corrosion/irritation
May cause transient irritation.
Serious eye damage/eye irritation
No eye irritation
Sensitization
Product test data not available.
Specific Target Organ Systemic Toxicity (Single Exposure)
Product test data not available.
Specific Target Organ Systemic Toxicity (Repeated Exposure)
Product test data not available.
Carcinogenicity
Product test data not available.
Teratogenicity
Product test data not available.
Reproductive toxicity

Product test data not available.
Mutagenicity
Product test data not available.
Aspiration Hazard
Product test data not available.
Additional information
No data are available for this material. The information shown is based on profiles of compositionally similar materials.

COMPONENTS INFLUENCING TOXICOLOGY:
Acrylic polymer(s)
Acute inhalation toxicity
The LC50 has not been determined.
Residual monomers
Acute inhalation toxicity
The LC50 has not been determined.

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicological information on this product or its components appear in this section when such data is available.

General Information
There is no data available for this product.

Toxicity
Acrylic polymer(s)
Acute toxicity to fish
No relevant data found.
Residual monomers
Acute toxicity to fish
No relevant data found.

Persistence and degradability
Acrylic polymer(s)
Biodegradability: No relevant data found.
Residual monomers
Biodegradability: No relevant data found.

Bioaccumulative potential
Acrylic polymer(s)
Bioaccumulation: No relevant data found.
Residual monomers
Bioaccumulation: No relevant data found.

Mobility in soil
Residual monomers
No relevant data found.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal methods: Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush to a chemical sewer. For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations.

SECTION 14 - TRANSPORTATION INFORMATION

DOT
Not regulated for transport

Classification for SEA transport (IMO-IMDG):
Not regulated for transport
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):
Not regulated for transport

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.

SECTION 15 – REGULATORY INFORMATION

OSHA Hazard Communication Standard
This product is considered non-hazardous under the OSHA Hazard Communication Standard (29CFR1910.1200).
Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
This product is not a hazardous chemical under 29CFR 1910.1200, and therefore is not covered by Title III of SARA.

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.
Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
Releases of this material to air, land, or water are not reportable to the National Response Center under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) or to

state and local emergency planning committees under the Superfund Amendments and Reauthorization Act (SARA) Title III Section 304.

Pennsylvania

Any material listed as "Not Hazardous" in the CAS REG NO. column of SECTION 2, Composition/Information On Ingredients, of this MSDS is a trade secret under the provisions of the Pennsylvania Worker and Community Right-to-Know Act.

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.

SECTION 16 – OTHER INFORMATION

Hazard Rating System

HMIS

Health - 1
Flammability - 0
Physical Hazard – 0

Revision

Identification Number: 101152722 / 1001 / Issue Date: 04/16/2015 / Version: 2.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Date of Printing: July 1, 2018

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 information contained herein is believed to be accurate but is not warranted to be so. Data and calculations are based on information furnished by the manufacturer of the product and manufacturers of the components of the product. Users are advised to confirm in advance of the need that information is current, applicable and suited to the circumstances of use. This safety sheet cannot cover all possible situations which the user may experience during processing. Each aspect of your operation should be examined to determine if, or where, additional precautions may be necessary. All health and safety information contained in this bulletin should be provided to your employees or customers. SpecChem assumes no responsibility for injury to vendee or third party person proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Furthermore, SpecChem assumes no responsibility for injury caused by abnormal use of this material even if reasonable safety procedures are followed. Compliance with all applicable federal, state, and local laws and local regulations remains the responsibility of the user.

END OF SDS SHEET

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/20/2019 Reviewed on 08/20/2019

1 Identification

· **Product identifier**

· **Trade name: HD 50™**

· **Article number:** 83-67460
· **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 Corr. 1C	H314	Causes severe skin burns and eye damage.
Eye Dam. 1	H318	Causes serious eye damage.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Carc. 1A	H350	May cause cancer.
STOT SE 3	H335	May cause respiratory irritation.

· **Label elements**
· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms**

GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Quartz (SiO2)
Cement, portland, chemicals
· **Hazard statements**
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause cancer.
May cause respiratory irritation.
· **Precautionary statements**
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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).
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

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Trade name: HD 50™

(Contd. of page 1)

· **Classification system:**
· **NFPA ratings (scale 0 - 4)**

Health = 1
Fire = 0
Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**

HEALTH	1
FIRE	0
PHYSICAL HAZARD	0

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:**		
14808-60-7	Quartz (SiO2)	≥10-<60%
26499-65-0	Calcium sulfate	≥0.1-<6%
65997-15-1	Cement, portland, chemicals	≥3-<4.25%

· **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.
· **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.

(Contd. on page 3)

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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.
· **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.
No special measures required.
· **Methods and material for containment and cleaning up:**
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
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.
· **Protective Action Criteria for Chemicals**

· **PAC-1:**		
14808-60-7	Quartz (SiO2)	0.075 mg/m³
554-13-2	lithium carbonate	3.1 mg/m³
7631-86-9	silicon dioxide, chemically prepared	18 mg/m³

· **PAC-2:**		
14808-60-7	Quartz (SiO2)	33 mg/m³
554-13-2	lithium carbonate	34 mg/m³
7631-86-9	silicon dioxide, chemically prepared	740 mg/m³

· **PAC-3:**		
14808-60-7	Quartz (SiO2)	200 mg/m³
554-13-2	lithium carbonate	210 mg/m³
7631-86-9	silicon dioxide, chemically prepared	4,500 mg/m³

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:** Keep respiratory protective device available.

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Trade name: HD 50™

(Contd. of page 3)

· **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:**	
14808-60-7 Quartz (SiO2)	
PEL	Long-term value: 0.05* mg/m³ *resp. dust; 30mg/m3/%SiO2+2
REL	Long-term value: 0.05* mg/m³ *respirable dust; See Pocket Guide App. A
TLV	Long-term value: 0.025* mg/m³ *as respirable fraction
26499-65-0 Calcium sulfate	
PEL	Long-term value: 15* 5** mg/m³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
65997-15-1 Cement, portland, chemicals	
PEL	Long-term value: 50 mppcf or 15* 5** mg/m³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m³ *total dust **respirable fraction
TLV	Long-term value: 1* mg/m³ E; *as respirable fraction

· **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.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
· **Breathing equipment:** Suitable respiratory protective device recommended.
· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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· **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:	Solid
Color:	According to product specification
· **Odor:**	Characteristic
· **Odor threshold:**	Not determined.
· **pH-value:**	Not applicable.
· **Change in condition**	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	>999 °C (>1,830.2 °F)
· **Flash point:**	Not applicable.
· **Flammability (solid, gaseous):**	Not determined.
· **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:**	Not applicable.
· **Density at 20 °C (68 °F):**	2.7825 g/cm³ (23.21996 lbs/gal)
· **Relative density**	Not determined.
· **Vapor density**	Not applicable.
· **Evaporation rate**	Not applicable.
· **Solubility in / Miscibility with**	
Water:	Soluble.
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
· **Solvent content:**	
Solids content:	100.0 %
· **Other information**	No further relevant information available.

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Trade name: HD 50™

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· **Volatile Organic Compounds:** Not determined

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.
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:
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.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**		
14808-60-7	Quartz (SiO2)	1
7631-86-9	silicon dioxide, chemically prepared	3

· **NTP (National Toxicology Program)**		
14808-60-7	Quartz (SiO2)	K

· **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.

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Trade name: HD 50™

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· **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:**
Must not be disposed of as normal garbage. Do not allow product to reach sewage system.
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.
· **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: HD 50™

(Contd. of page 7)

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.

554-13-2	lithium carbonate	≤0.1%

· **TSCA (Toxic Substances Control Act):**

14808-60-7	Quartz (SiO2)
65997-16-2	Cement, alumina, chemicals
65996-69-2	Slags, ferrous metal, blast furnace
65997-15-1	Cement, portland, chemicals
7778-18-9	calcium sulphate, natural
554-13-2	lithium carbonate
7631-86-9	silicon dioxide, chemically prepared

· **TSCA new (21st Century Act) (Substances not listed)**

26499-65-0	Calcium sulfate

· **Proposition 65**

· **Chemicals known to the State of California (Prop. 65) to cause cancer:**

14808-60-7	Quartz (SiO2)

· **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:**

554-13-2	lithium carbonate

· **Cancerogenity categories**

· **EPA (Environmental Protection Agency)**
None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

14808-60-7	Quartz (SiO2)	A2

· **MAK (German Maximum Workplace Concentration)**

14808-60-7	Quartz (SiO2)	1

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

14808-60-7	Quartz (SiO2)

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 9)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/20/2019 *Reviewed on 08/20/2019*

Trade name: HD 50™

(Contd. of page 8)

· **Hazard pictograms**

GHS05 GHS07 GHS08

· **Signal word** Danger

· **Hazard-determining components of labeling:**
Quartz (SiO2)
Cement, portland, chemicals
· **Hazard statements**
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
May cause cancer.
May cause respiratory irritation.
· **Precautionary statements**
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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).
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **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

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** 08/20/2019 / 30
· **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

(Contd. on page 10)

Safety Data Sheet
acc. to OSHA HCS

Printing date 08/20/2019 *Reviewed on 08/20/2019*

Trade name: HD 50™

(Contd. of page 9)

OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Skin Corr. 1C: Skin corrosion/irritation – Category 1C
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 1A: Carcinogenicity – Category 1A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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 TWP™**
Product ID No.	:	70012281
Trade Name/Synonyms	:	TWP
Material Use	:	Tilt Wall Patch and Finishing Compound for Vertical Concrete Walls
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 28% 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	10 – 30
Calcium aluminate cement	65997-16-2	10 – 30
Calcium sulfate	7778-18-9	10 – 30
Vinyl acetate copolymer	24937-78-8	10 – 30
Portland cement	65997-15-1	1 - 5
Cellulose	9004-34-6	1 - 5
Crystalline silica, quartz**	14808-60-7	0.1 – 1.0

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).

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
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 : 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
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 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 Information	**None**

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
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
Vinyl acetate copolymer	24937-78-8	No	No	No	No	No	No	No
Portland cement	65997-15-1	No	Yes	No	Yes	No	Yes	Yes
Cellulose	9004-34-6	No	Yes	No	Yes	No	Yes	Yes
Crystalline silica, quartz	14808-60-7	No	Yes	Yes	Yes	No	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: 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: **:** 09-Sep-2016

End of Document

GluDown® Construction Spray Adhesive
Low VOC/CARB Compliant

SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Name: GluDown® Construction Adhesive – Low VOC/CARB Compliant
Revision Date: August 24, 2017
Version: 3.0
Part Numbers: GD1111, GD1121
Manufactured For:

GluDown, Inc.
P.O. Box 12251
Dallas, TX 75225
United States of America

Information Phone: 214-504-2503
Emergency Phone: Chemtrec 800-424-9300 / INTERNATIONAL 1-703-527-3887
Product/Recommended Uses: Contact Adhesive
Restriction on Use: For commercial use only – not packaged or labeled for home use.

SECTION 2: HAZARDS IDENTIFICATION

Classification:

Specific Target Organ Toxicity -Single Exposure (Narcotic Effects) - Category 3
Skin Irritation - Category 2
Eye Irritation - Category 2A
Aerosols Category 1
Acute toxicity, Dermal - Category 5
Acute toxicity, Oral - Category 5

Pictograms:

Signal Word:

Danger

Hazardous Statements - Physical:

H222 - Extremely flammable aerosol

H229 - Pressurized container: May burst if heated

Hazardous Statements - Health:

H313 - May be harmful in contact with skin

H303 - May be harmful if swallowed

H319 - Causes serious eye irritation

H315 - Causes skin irritation

H336 - May cause drowsiness or dizziness

Precautionary Statements - General:

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.

Precautionary Statements - Prevention:

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 - Do not spray on an open flame or other ignition
source. P251 - Do not pierce or burn, even after use.

P264 - Wash thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.

P271 - Use only outdoors or in a well-ventilated area.

P233 - Keep container tightly closed.

Precautionary Statements - Response:

P312 - 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/attention.

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

P321 - For specific treatment see section 4.

P332 + P313 - If skin irritation occurs: Get medical advice/attention.

P362 + P364 - Take off contaminated clothing. And wash it before reuse.

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

Precautionary Statements - Storage:

P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

P403 + P405 - Store in a well-ventilated place. Store locked up.

Precautionary Statements - Disposal:

P501 - Dispose of contents/container to disposal recycling center. Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENT

CAS	Chemical Name	% by Weight
0000079-20-9	METHYL ACETATE	31%-51%
0068476-86-8	Petroleum gases, liquefied, sweetened	21%-35%
0025038-32-8	Benzene, ethenyl-, polymer with 2-methyl-1,3-butadiene	5%-11%
NJTSRN-6403	Terpene Resin	3%-7%
NA_GluDown	Rosin ester	3%-7%
NA-ERAEnviro	Non Hazardous Solid	2%-4%

SECTION 4: FIRST-AID MEASURES

Inhalation:

Remove source of exposure or move person to fresh air and keep comfortable for breathing.

If exposed/feel unwell/concerned: Call a POISON CENTER/doctor.

Eliminate all ignition sources if safe to do so.

Skin Contact:

Take off contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Wash with plenty of lukewarm, gently flowing water for a duration of 15-20 minutes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before re-use.

IF exposed or concerned: Get medical advice/attention.

Eye Contact:

Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for a duration of 15-20 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. If eye irritation persists: Get medical advice/attention.

Ingestion:

Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position. Do not give anything.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media:

Dry chemical, foam, carbon dioxide is recommended. Water spray is recommended to cool or protect exposed materials or structures. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam. Sand or earth may be used for small fires only.

Do not direct a solid stream of water or foam into hot, burning pools this may results in frothing and increase fire intensity.

Unsuitable Extinguishing Media:

Not available.

Specific Hazards in Case of Fire:

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. Product is highly flammable and forms explosive mixtures with air, oxygen, and all oxidizing agents. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back.

During a fire, irritating and highly toxic gases may be generated during combustion or decomposition. High temperatures can cause sealed containers to rupture due to a build up of internal pressures. Cool with water.

DO NOT cut, drill, grind, or weld near full, partially full, or empty product containers.

Container could potentially burst or be punctured upon mechanical impact, releasing flammable vapors.

Fire-Fighting Procedures:

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. Move undamaged containers from immediate hazard area if it can be done safely. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Water may be ineffective but can be used to cool containers exposed to heat or flame. Caution should be exercised when using water or foam as frothing may occur, especially if sprayed into containers of hot, burning liquid.

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

Special Protective Actions:

Wear protective pressure self-contained breathing apparatus (SCBA) and full turnout gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedure:

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Do not touch or walk through spilled material.

Isolate hazard area and keep unnecessary people away. Remove all possible sources of ignition in the surrounding area. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur.

If spilled material is cleaned up using a regulated solvent, the resulting waste mixture may be regulated.

Recommended Equipment:

Positive pressure, full-facepiece self-contained breathing apparatus (SCBA), or positive pressure supplied air respirator with escape SCBA (NIOSH approved).

Personal Precautions:

Avoid breathing vapor. Avoid contact with skin, eye or clothing. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Do not touch damaged containers or spilled materials unless wearing appropriate protective clothing.

Environmental Precautions:

Stop spill/release if it can be done safely. Prevent spilled material from entering sewers, storm drains, other unauthorized drainage systems and natural waterways by using sand, earth, or other appropriate barriers.

Methods and Materials for Containment and Cleaning Up:

Cover spills with inert absorbent and place in closed chemical waste containers.

SECTION 7: HANDLING AND STORAGE

General:

Wash hands after use.

Do not get in eyes, on skin or on clothing.

Do not breathe vapors or mists.
Use good personal hygiene practices.
Eating, drinking and smoking in work areas is prohibited.
Remove contaminated clothing and protective equipment before entering eating areas.
Eyewash stations and showers should be available in areas where this material is used and stored.

Ventilation Requirements:

Use only with adequate ventilation to control air contaminants to their exposure limits. The use of local ventilation is recommended to control emissions near the source.

Storage Room Requirements:

Keep container(s) tightly closed and properly labeled. Store in cool, dry, well-ventilated areas away from heat, direct sunlight, strong oxidizers and any incompatibilities. Store in approved containers and protect against physical damage. Keep containers securely sealed when not in use. Indoor storage should meet OSHA standards and appropriate fire codes. Containers that have been opened must be carefully resealed to prevent leakage. Empty containers retain residue and may be dangerous.
Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is used and stored.
Do not cut, drill, grind, weld or perform similar operations on or near containers. Do not pressurize containers to empty them.
Store at temperatures below 120°F.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection:

Wear eye protection with side shields or goggles. Wear indirect-vent, impact and splash resistant goggles when working with liquids. If additional protection is needed for entire face, use in combination with a face shield.

Skin Protection:

Use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: PVC, neoprene or nitrile rubber gloves. Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Use of an apron and over- boots of chemically impervious materials such as neoprene or nitrile rubber is recommended to avoid skin sensitization. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Launder soiled clothes or properly disposed of contaminated material, which cannot be decontaminated.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker, a respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed. Check with respiratory protective equipment suppliers.

Appropriate Engineering Controls:

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Chemical Name	OSHA TWA (ppm)	OSHA TWA (mg/m3)	OSHA STEL (ppm)	OSHA STEL (mg/m3)	OSHA-Tables-Z1,2,3	OSHA Carcinogen	OSHA Skin designation	NIOSH TWA (ppm)	NIOSH TWA (mg/m3)	NIOSH STEL (ppm)	NIOSH STEL (mg/m3)	NIOSH Carcinogen
METHYL ACETATE	200	610			1			200	610	250	760	

Petroleum gases, liquefied, sweetened	500	2000			1							

Chemical Name	ACGIH TWA (ppm)	ACGIH TWA (mg/m3)	ACGIH STEL (ppm)	ACGIH STEL (mg/m3)
METHYL ACETATE	200	606	250	757
Petroleum gases, liquefied, sweetened				

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties

Density	6.51460 lb/gal
Density VOC	1.96377 lb/gal
% VOC	30.14418%
VOC Actual	1.96377 lb/gal
VOC Actual	235.31898 g/l
Appearance	Amber/Yellow Liquid
Odor Threshold	N.A.
Odor Description	N.A.
pH	N.A.
Flammability	N.A.
Water Solubility	N.A.
Flash Point Symbol	N.A.
Flash Point	N.A.
Viscosity	N.A.
Lower Explosion Level	N.A.
Upper Explosion Level	N.A.
Vapor Pressure	N.A.
Vapor Density	N.A.
Freezing Point	N.A.
Melting Point	N.A.
Low Boiling Point	N.A.
High Boiling Point	N.A.
Auto Ignition Temp	N.A.
Evaporation Rate	N.A.
VOC Composite Partial Pressure	N.A.

SECTION 10: STABILITY AND REACTIVITY

Stability:

Material is stable at standard temperature and pressure.

Conditions to Avoid:

Keep away from direct sunlight and other sources of ignition. Dropping containers may cause bursting.

Hazardous Reactions/Polymerization:

Will not occur

Incompatible Materials:

Avoid strong oxidizers, reducers, acids, and alkalis.

Hazardous Decomposition Products:

No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

Skin Corrosion/Irritation:

Prolonged or repeated contact with this product may dry and/or defat the skin. This product may be harmful if it is absorbed through the skin.

Causes skin irritation

Serious Eye Damage/Irritation:

Eye contact may lead to permanent damage if not treated promptly.

Liquid or vapors may irritate the eyes.

Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Eye contact may lead to permanent damage if not treated promptly.

Causes serious eye irritation

Respiratory/Skin Sensitization:

No Data Available

Germ Cell Mutagenicity:

No Data Available

Carcinogenicity:

No Data Available

Reproductive Toxicity:

No Data Available

Specific Target Organ Toxicity - Single Exposure:

May cause drowsiness or dizziness

Specific Target Organ Toxicity - Repeated Exposure:

Prolonged exposure may cause damage to her central nervous system, lungs, skin and eyes.

Aspiration Hazard:

No Data Available

Acute Toxicity:

If inhaled, may cause dizziness, nausea, upper respiratory irritation, drowsiness, mental depression or narcosis, difficulty in breathing, irregular heart beats.

0000079-20-9 METHYL ACETATE

LC50 (rat): 16000-32000 ppm (4-hour exposure) (9)

LD50 (oral, rat): greater than 5000 mg/kg (4)
LD50 (oral, rabbit): 3700 mg/kg (cited as 50 millimols/kg) (10)
LD50 (skin, rabbit): greater than 5000 mg/kg (4)

SECTION 12: ECOLOGICAL INFORMATION

Toxicity:

No Data Available

Persistence and Degradability:

No data available.

Bio-accumulative Potential:

No data available.

Mobility in Soil:

No data available.

Other Adverse Effects:

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:

Under RCRA it is the responsibility of the user of the product to determine at the time of disposal whether the product meets RCRA criteria for hazardous waste. Waste management should be in full compliance with federal, state and local laws.

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.

SECTION 14: TRANSPORT INFORMATION

U.S. DOT Information:

Ground Transportation: (Continental United States, Canada & Mexico): Limited Quantity

IMDG Information:

Shipping Name: Aerosols, flammable
UN/NA #: 1950
Hazard Class: 2.1
Required Placard: Limited Quantity
Marine Pollutant: No data available

IATA Information:

We do NOT recommend this product to be shipped via air. It would need to be repacked by an authorized packing company and the DG would have to be completed by a licensed hazardous material shipping company.

SECTION 15: REGULATORY INFORMATION

CAS	Chemical Name	% By Weight	Regulation List
0000079-20-9	METHYL ACETATE	31% - 51%	SARA312,VOC_exempt,TSCA
0068476-86-8	Petroleum gases, liquefied, sweetened	21% - 35%	SARA312,VOC,TSCA
0025038-32-8	Benzene, ethenyl-, polymer with 2-methyl-1,3-butadiene	5%-11%	SARA312,TSCA
NA-ERAEnviro	Non Hazardous Solid	2%-4%	SARA312

SECTION 16: OTHER INFORMATION

GLOSSARY:

ACGIH- American Conference of Governmental Industrial Hygienists; ANSI- American National Standards Institute; Canadian TDG- Canadian Transportation of Dangerous Goods; CAS- Chemical Abstract Service; Chemtrec- Chemical Transportation Emergency Center (US); CHIP- Chemical Hazard Information and Packaging; DSL- Domestic Substances List; EC- Equivalent Concentration; EH40 (UK)- HSE Guidance Note EH40 Occupational Exposure Limits; EPCRA- Emergency Planning and Community Right-To-Know Act; ESL- Effects screening levels; HMIS- Hazardous Material Information Service; LC- Lethal Concentration; LD- Lethal Dose; NFPA- National Fire Protection Association; OEL- Occupational Exposure Limits; OSHA- Occupational Safety and Health Administration, US Department of Labor; PEL- Permissible Exposure Limit; SARA (Title III)- Superfund Amendments and Reauthorization Act; SARA 313- Superfund Amendments and Reauthorization Act, Section 313; SCBA- Self-Contained Breathing Apparatus; STEL- Short Term Exposure Limit; TCEQ - Texas Commission on Environmental Quality; TLV- Threshold Limit Value; TSCA- Toxic Substances Control Act Public Law 94-469; TWA - Time Weighted Value; US DOT- US Department of Transportation; WHMIS- Workplace Hazardous Materials Information System.

DISCLAIMER

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. The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.

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

1. Identification

Product identifier	**UNLEADED GASOLINE**
Other means of identification	
SDS number	002-GHS
Synonyms	Regular/Premium/Midgrade - Unleaded Gasoline, RFG - Reformulated Unleaded Gasoline, Conventional Unleaded Gasoline, Oxygenated Unleaded Gasoline, Non-Oxygenated Unleaded Gasoline, CARB (California Air Resource Board) Unleaded Gasoline, RBOB - Reformulated Blendstock for Oxygenate Blending, CBOB - Conventional Blendstock for Oxygenate Blending, Petrol, Motor Fuel. See section 16 for complete information.
Recommended use	Motor Fuel Motor fuels.
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer/Supplier	Valero Marketing & Supply Company and Affiliates One Valero Way San Antonio, TX 78269-6000
General Assistance	210-345-4593
E-Mail	CorpHSE@valero.com
Contact Person	Industrial Hygienist
Emergency Telephone	24 Hour Emergency 866-565-5220 1-800-424-9300 (CHEMTREC USA)

2. Hazard(s) identification

Physical hazards	Flammable liquids	Category 1
Health hazards	Skin corrosion/irritation	Category 2
	Germ cell mutagenicity	Category 1B
	Carcinogenicity	Category 1B
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Extremely flammable liquid and vapor. Causes skin irritation. May cause genetic defects. May cause cancer. Suspected of damaging fertility or the unborn child. May cause drowsiness or dizziness. May cause damage to organs (blood, liver, kidney) through prolonged or repeated exposure. May be fatal if swallowed and enters airways. Toxic to aquatic life with long lasting effects.

Precautionary statement

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/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. Do not breathe gas/mist/vapors/spray. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Avoid release to the environment.
Response	If exposed or concerned: Get medical advice/attention. If inhaled: Remove person to fresh air and keep comfortable for breathing. If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. In case of fire: Use alcohol-resistant foam, carbon dioxide, dry powder or water fog for extinction. Collect spillage.
Storage	Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Gasoline	86290-81-5	80-100
Toluene	108-88-3	0-30
Hexane (Other Isomers)	96-14-0	5-25
Xylene (o, m, p isomers)	1330-20-7	0-25
Octane (All isomers)	111-65-9	0-18.5
Ethanol	64-17-5	0-10
1,2,4, Trimethylbenzene	95-63-6	0-6
n-Heptane	142-82-5	1-5
Pentane	109-66-0	1-5
Cumene	98-82-8	0-5
Ethylbenzene	100-41-4	0-5
Benzene	71-43-2	0-4.9
n-Hexane	110-54-3	0-3
Cyclohexane	110-82-7	0-3

4. First-aid measures

Inhalation	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
Skin contact	Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops or persists. Wash clothing separately before reuse. Destroy or thoroughly clean contaminated shoes. If high pressure injection under the skin occurs, always seek medical attention.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention.
Ingestion	Rinse mouth thoroughly. Do not induce vomiting without advice from poison control center. Do not give mouth-to-mouth resuscitation. If vomiting occurs, keep head low so that stomach content does not get into the lungs. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical attention immediately.
Most important symptoms/effects, acute and delayed	Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.

Indication of immediate medical attention and special treatment needed	In case of shortness of breath, give oxygen. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	If exposed or concerned: get medical attention/advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before re-use.

5. Fire-fighting measures

Suitable extinguishing media	Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use a solid water stream as it may scatter and spread fire.
Specific hazards arising from the chemical	Vapor may cause flash fire. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.
Special protective equipment and precautions for firefighters	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.
Fire-fighting equipment/instructions	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Move containers from fire area if you can do it without risk. In the event of fire, cool tanks with water spray. Cool containers exposed to flames with water until well after the fire is out. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Vapors may form explosive air mixtures even at room temperature. Prevent buildup of vapors or gases to explosive concentrations. Some of these materials, if spilled, may evaporate leaving a flammable residue. Water runoff can cause environmental damage. Use compatible foam to minimize vapor generation as needed.
Specific methods	Use water spray to cool unopened containers.
General fire hazards	Extremely flammable liquid and vapor. Containers may explode when heated.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Local authorities should be advised if significant spills cannot be contained. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. See Section 8 of the SDS for Personal Protective Equipment.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if you can do so without risk. This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas. Use non-sparking tools and explosion-proof equipment. Small Spills: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste. Clean surface thoroughly to remove residual contamination. This material and its container must be disposed of as hazardous waste. Large Spills: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Prevent product from entering drains. Do not allow material to contaminate ground water system. Should not be released into the environment.
Environmental precautions	Gasoline may contain oxygenated blend products (Ethanol, etc.) that are soluble in water and therefore precautions should be taken to protect surface and groundwater sources from contamination. If facility or operation has an "oil or hazardous substance contingency plan", activate its procedures. Stay upwind and away from spill. Wear appropriate protective equipment including respiratory protection as conditions warrant. Do not enter or stay in area unless monitoring indicates that it is safe to do so. Isolate hazard area and restrict entry to emergency crew. Extremely flammable. Review Firefighting Measures, Section 5, before proceeding with clean up. Keep all sources of ignition (flames, smoking, flares, etc.) and hot surfaces away from release. Contain spill in smallest possible area. Recover as much product as possible (e.g. by vacuuming). Stop leak if it can be done without risk. Use water spray to disperse vapors. Use compatible foam to minimize vapor generation as needed. Spilled material may be absorbed by an appropriate absorbent, and then handled in accordance with environmental regulations. Prevent spilled material from entering sewers, storm drains, other unauthorized treatment or drainage systems and natural waterways. Contact fire authorities and appropriate federal, state and local agencies. If spill of any amount is made into or upon navigable waters, the contiguous zone, or adjoining shorelines, contact the National Response Center at 1-800-424-8802.

7. Handling and storage

Precautions for safe handling

Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity.
Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Avoid prolonged exposure. Use only with adequate ventilation. Wash thoroughly after handling. The product is extremely flammable, and explosive vapor/air mixtures may be formed even at normal room temperatures. DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. When using, do not eat, drink or smoke. Avoid release to the environment.

Conditions for safe storage, including any incompatibilities

Flammable liquid storage. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. The pressure in sealed containers can increase under the influence of heat. Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feedingstuffs. Keep out of the reach of children.

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value
Benzene (CAS 71-43-2)	STEL	5 ppm
	TWA	1 ppm

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Cumene (CAS 98-82-8)	PEL	245 mg/m3
		50 ppm
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m3
		300 ppm
Ethanol (CAS 64-17-5)	PEL	1900 mg/m3
		1000 ppm
Ethylbenzene (CAS 100-41-4)	PEL	435 mg/m3
		100 ppm
n-Heptane (CAS 142-82-5)	PEL	2000 mg/m3
		500 ppm
n-Hexane (CAS 110-54-3)	PEL	1800 mg/m3
		500 ppm
Octane (All isomers) (CAS 111-65-9)	PEL	2350 mg/m3
		500 ppm
Pentane (CAS 109-66-0)	PEL	2950 mg/m3
		1000 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	PEL	435 mg/m3
		100 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Benzene (CAS 71-43-2)	Ceiling	25 ppm
	TWA	10 ppm
Toluene (CAS 108-88-3)	Ceiling	300 ppm
	TWA	200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	25 ppm
Benzene (CAS 71-43-2)	STEL	2.5 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
	TWA	0.5 ppm
Cumene (CAS 98-82-8)	TWA	50 ppm
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Ethanol (CAS 64-17-5)	STEL	1000 ppm
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm
Gasoline (CAS 86290-81-5)	STEL	500 ppm
	TWA	300 ppm
Hexane (Other Isomers) (CAS 96-14-0)	STEL	1000 ppm
	TWA	500 ppm
n-Heptane (CAS 142-82-5)	STEL	500 ppm
	TWA	400 ppm
n-Hexane (CAS 110-54-3)	TWA	50 ppm
Octane (All isomers) (CAS 111-65-9)	TWA	300 ppm
Pentane (CAS 109-66-0)	TWA	600 ppm
Toluene (CAS 108-88-3)	TWA	20 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
1,2,4, Trimethylbenzene (CAS 95-63-6)	TWA	125 mg/m3
		25 ppm
Benzene (CAS 71-43-2)	STEL	1 ppm
	TWA	0.1 ppm
Cumene (CAS 98-82-8)	TWA	245 mg/m3
		50 ppm
Cyclohexane (CAS 110-82-7)	TWA	1050 mg/m3
		300 ppm
Ethanol (CAS 64-17-5)	TWA	1900 mg/m3
		1000 ppm
Ethylbenzene (CAS 100-41-4)	STEL	545 mg/m3
		125 ppm
	TWA	435 mg/m3
		100 ppm
Hexane (Other Isomers) (CAS 96-14-0)	Ceiling	1800 mg/m3
		510 ppm
	TWA	350 mg/m3
		100 ppm
n-Heptane (CAS 142-82-5)	Ceiling	1800 mg/m3
		440 ppm
	TWA	350 mg/m3
		85 ppm
n-Hexane (CAS 110-54-3)	TWA	180 mg/m3
		50 ppm
Octane (All isomers) (CAS 111-65-9)	Ceiling	1800 mg/m3
		385 ppm
	TWA	350 mg/m3
		75 ppm
Pentane (CAS 109-66-0)	Ceiling	1800 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
		610 ppm
	TWA	350 mg/m3
		120 ppm
Toluene (CAS 108-88-3)	STEL	560 mg/m3
		150 ppm
	TWA	375 mg/m3
		100 ppm
Xylene (o, m, p isomers) (CAS 1330-20-7)	STEL	655 mg/m3
		150 ppm
	TWA	435 mg/m3
		100 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Benzene (CAS 71-43-2)	25 µg/g	S-Phenylmercapturic acid	Creatinine in urine	*
Ethylbenzene (CAS 100-41-4)	0.7 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
n-Hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedi - on, without hydrolysis		*
	0.4 mg/l	2,5-Hexanedion, without hydrolysis	Urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*
Xylene (o, m, p isomers) (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
Cumene (CAS 98-82-8)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.
Toluene (CAS 108-88-3)	Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Cumene (CAS 98-82-8)	Skin designation applies.
Toluene (CAS 108-88-3)	Skin designation applies.

US - Tennesse OELs: Skin designation

Cumene (CAS 98-82-8)	Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

Benzene (CAS 71-43-2)	Can be absorbed through the skin.
n-Hexane (CAS 110-54-3)	Can be absorbed through the skin.

US. NIOSH: Pocket Guide to Chemical Hazards

Cumene (CAS 98-82-8)	Can be absorbed through the skin.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Cumene (CAS 98-82-8)	Can be absorbed through the skin.

Appropriate engineering controls

Provide adequate general and local exhaust ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof equipment.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses. If splash potential exists, wear full face shield or chemical goggles.
Skin protection	
Hand protection	Avoid exposure - obtain special instructions before use. Wear protective gloves. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Suitable gloves can be recommended by the glove supplier.
Other	Wear chemical-resistant, impervious gloves. Full body suit and boots are recommended when handling large volumes or in emergency situations. Flame retardant protective clothing is recommended.
Respiratory protection	Use a properly fitted, air-purifying or air-fed 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. If workplace exposure limits for product or components are exceeded, NIOSH approved equipment should be worn. Proper respirator selection should be determined by adequately trained personnel, based on the contaminants, the degree of potential exposure and published respiratory protection factors. This equipment should be available for nonroutine and emergency use.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Consult supervisor for special handling instructions. Avoid contact with eyes. Avoid contact with skin. Keep away from food and drink. Wash hands before breaks and immediately after handling the product. Provide eyewash station and safety shower. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance	Light straw to red clear liquid with characteristic strong odor of gasoline.
Physical state	Liquid.
Form	Liquid.
Color	Light straw to red clear.
Odor	Characteristic Gasoline Odor (Strong).
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	44.01 °F (6.67 °C) May start to solidify at this temperature. This is based on data for the following ingredient: Cyclohexane. Weighted average: -91.9 deg C (-133.4 deg F)
Initial boiling point and boiling range	80.06 - 440.06 °F (26.7 - 226.7 °C)
Flash point	-40.0 °F (-40.0 °C) (closed cup)
Evaporation rate	10 - 11 BuAc
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.3 %
Flammability limit - upper (%)	7.1 %
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	60.8 - 101.3 kPa (20°C)
Vapor density	3 - 4 (Air=1)
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Very slightly soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	> 500 °F (> 260 °C)
Decomposition temperature	Not available.
Viscosity	Not available.

Other information

Flash point class	Flammable IA
VOC (Weight %)	100 %

10. Stability and reactivity

Reactivity	None known.
Chemical stability	Stable under normal temperature conditions and recommended use.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Heat, flames and sparks. Ignition sources. Contact with incompatible materials. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, flame, sparks, static electricity, or other sources of ignition; they may explode and cause injury or death.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Swallowing or vomiting of the liquid may result in aspiration into the lungs.
Inhalation	In high concentrations, mists/vapors may irritate throat and respiratory system and cause coughing. May cause drowsiness or dizziness.
Skin contact	Causes skin irritation. Prolonged contact may cause dryness of the skin.
Eye contact	May cause eye irritation.
Symptoms related to the physical, chemical and toxicological characteristics	Irritation of nose and throat. Irritation of eyes and mucous membranes. Skin irritation. Unconsciousness. Corneal damage. Narcosis. Cyanosis (blue tissue condition, nails, lips, and/or skin). Decrease in motor functions. Behavioral changes. Edema. Liver enlargement. Jaundice. Conjunctivitis. Proteinuria. Defatting of the skin. Rash.

Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met.

Components	Species	Test Results
1,2,4, Trimethylbenzene (CAS 95-63-6)		
Acute		
Dermal		
LD50	Rabbit	> 3160 mg/kg
Inhalation		
LC50	Rat	> 2000 mg/l, 48 Hours
Oral		
LD50	Rat	6 g/kg
Benzene (CAS 71-43-2)		
Acute		
Oral		
LD50	Rat	3306 mg/kg
Cumene (CAS 98-82-8)		
Acute		
Inhalation		
LC50	Mouse	2000 mg/l, 7 Hours
	Rat	8000 mg/l, 4 Hours
Oral		
LD50	Rat	1400 mg/kg
Cyclohexane (CAS 110-82-7)		
Acute		
Oral		
LD50	Rat	12705 mg/kg

Components	Species	Test Results
Ethanol (CAS 64-17-5)		
Acute		
Inhalation		
LC50	Rat	30000 mg/m3
Ethylbenzene (CAS 100-41-4)		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg
Oral		
LD50	Rat	5.46 g/kg
n-Heptane (CAS 142-82-5)		
Acute		
Inhalation		
LC50	Rat	103 mg/l, 4 Hours
n-Hexane (CAS 110-54-3)		
Acute		
Oral		
LD50	Rat	28710 mg/kg
Octane (All isomers) (CAS 111-65-9)		
Acute		
Inhalation		
LC50	Rat	118 mg/l, 4 Hours
Pentane (CAS 109-66-0)		
Acute		
Inhalation		
LC50	Rat	364 mg/l, 4 Hours
Toluene (CAS 108-88-3)		
Acute		
Dermal		
LD50	Rabbit	14.1 ml/kg
Inhalation		
LC50	Rat	8000 mg/l, 4 Hours
Oral		
LD50	Rat	2.6 g/kg
Xylene (o, m, p isomers) (CAS 1330-20-7)		
Acute		
Oral		
LD50	Rat	4300 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Based on available data, the classification criteria are not met.

Respiratory or skin sensitization

Respiratory sensitization Based on available data, the classification criteria are not met.

Skin sensitization Based on available data, the classification criteria are not met.
This substance may have a potential for sensitization which may provoke an allergic reaction among sensitive individuals.

Germ cell mutagenicity May cause genetic defects.
In in-vitro experiments, neither benzene, toluene nor xylene changed the number of sister-chromatid exchanges (SCEs) or the number of chromosomal aberrations in human lymphocytes. However, toluene and xylene caused a significant cell growth inhibition which was not observed with benzene in the same concentrations. In in-vivo experiments, toluene changed the number of sister-chromatid exchanges (SCEs) in human lymphocytes. Toluene may cause heritable genetic damage.

Carcinogenicity May cause cancer.

IARC Monographs. Overall Evaluation of Carcinogenicity

Benzene (CAS 71-43-2)	1 Carcinogenic to humans.
Cumene (CAS 98-82-8)	2B Possibly carcinogenic to humans.
Ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.
Gasoline (CAS 86290-81-5)	2B Possibly carcinogenic to humans.
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.
Xylene (o, m, p isomers) (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.

NTP Report on Carcinogens

Benzene (CAS 71-43-2)	Known To Be Human Carcinogen.

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

Benzene (CAS 71-43-2)	Cancer

Reproductive toxicity Suspected of damaging fertility or the unborn child.
Benzene, xylene and toluene have demonstrated animal effects of reproductive toxicity. Animal studies of benzene have shown testicular effects, alterations in reproductive cycles, chromosomal aberrations and embryo/fetotoxicity. Ethanol has demonstrated human effects of reproductive toxicity. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Avoid exposure to women during early pregnancy. Avoid contact during pregnancy/while nursing.

Specific target organ toxicity - single exposure May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure May cause damage to the following organs through prolonged or repeated exposure: Blood. Kidneys. Liver.

Aspiration hazard May be fatal if swallowed and enters airways.

Chronic effects Repeated exposure of laboratory animals to high concentrations of gasoline vapors has caused kidney damage and cancer in rats and cancer in mice. Gasoline was evaluated for genetic activity in assays using microbial cells, cultured mammalian cells and rat bone marrow cells. The results were all negative so gasoline was considered nonmutagenic under these conditions. Overexposure to this product or its components has been suggested as a cause of liver abnormalities in laboratory animals and humans. Lifetime studies by the American Petroleum Institute have shown that kidney damage and kidney cancer can occur in male rats after prolonged inhalation exposures at elevated concentrations of total gasoline. Kidneys of mice and female rats were unaffected. The U.S. EPA Risk Assessment Forum has concluded that the male rat kidney tumor results are not relevant for humans. Total gasoline exposure also produced liver tumors in female mice only. The implication of these data for humans has not been determined.

Further information Symptoms may be delayed.

12. Ecological information

Ecotoxicity Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Components		Species	Test Results
1,2,4, Trimethylbenzene (CAS 95-63-6)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	7.19 - 8.28 mg/l, 96 hours
Benzene (CAS 71-43-2)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	8.76 - 15.6 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	7.2 - 11.7 mg/l, 96 hours
Cumene (CAS 98-82-8)			
Aquatic			
Crustacea	EC50	Brine shrimp (Artemia sp.)	3.55 - 11.29 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	2.7 mg/l, 96 hours
Cyclohexane (CAS 110-82-7)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	3.961 - 5.181 mg/l, 96 hours
		Striped bass (Morone saxatilis)	8.3 mg/l, 96 hours

Components		Species	Test Results
Ethanol (CAS 64-17-5)			
Aquatic			
Algae	EC50	Freshwater algae	275 mg/l, 72 Hours
		Marine water algae	1970 mg/l
Fish	LC50	Fathead minnow (Pimephales promelas)	> 100 mg/l, 96 hours
		Freshwater fish	11200 mg/l, 96 Hours
Invertebrate	EC50	Freshwater invertebrate	5012 mg/l, 48 Hours
		Marine water invertebrate	857 mg/l, 48 Hours
Ethylbenzene (CAS 100-41-4)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1 - 4 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4 mg/l, 96 hours
n-Heptane (CAS 142-82-5)			
Aquatic			
Fish	LC50	Western mosquitofish (Gambusia affinis)	4924 mg/l, 96 hours
n-Hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours
Toluene (CAS 108-88-3)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Pink salmon (Oncorhynchus gorbuscha)	6.86 - 8.48 mg/l, 96 hours
Xylene (o, m, p isomers) (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	8 mg/l, 96 Hours

Persistence and degradability Not available.

Bioaccumulative potential Not available.

Partition coefficient n-octanol / water (log Kow)

Benzene (CAS 71-43-2)	2.13
Cumene (CAS 98-82-8)	3.66
Cyclohexane (CAS 110-82-7)	3.44
Ethanol (CAS 64-17-5)	-0.31
Ethylbenzene (CAS 100-41-4)	3.15
Hexane (Other Isomers) (CAS 96-14-0)	3.6
Octane (All isomers) (CAS 111-65-9)	5.18
Pentane (CAS 109-66-0)	3.39
Toluene (CAS 108-88-3)	2.73
Xylene (o, m, p isomers) (CAS 1330-20-7)	3.2
n-Heptane (CAS 142-82-5)	4.66
n-Hexane (CAS 110-54-3)	3.9

Mobility in soil Not available.

Other adverse effects Not available.

13. Disposal considerations

Disposal instructions Dispose in accordance with all applicable regulations. This material and its container must be disposed of as hazardous waste. Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container.

Hazardous waste code D001: Waste Flammable material with a flash point <140 °F
D018: Waste Benzene

US RCRA Hazardous Waste U List: Reference

Benzene (CAS 71-43-2)	U019
Cumene (CAS 98-82-8)	U055
Cyclohexane (CAS 110-82-7)	U056
Toluene (CAS 108-88-3)	U220
Xylene (o, m, p isomers) (CAS 1330-20-7)	U239

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Offer rinsed packaging material to local recycling facilities.

14. Transport information

DOT

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Packing group	II
Environmental hazards	
Marine pollutant	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	139, B33, B101, T8
Packaging exceptions	150
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Environmental hazards	Yes
ERG Code	3H
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN1203
UN proper shipping name	Gasoline
Transport hazard class(es)	
Class	3
Subsidiary risk	-
Label(s)	3
Packing group	II
Environmental hazards	
Marine pollutant	Yes
EmS	F-E, S-E
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable. However, this product is a liquid and if transported in bulk covered under MARPOL 73/78, Annex I.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

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

Benzene (CAS 71-43-2)	Cancer

Central nervous system
Blood
Aspiration
Skin
Eye
Respiratory tract irritation
Flammability

CERCLA Hazardous Substance List (40 CFR 302.4)

Benzene (CAS 71-43-2)	LISTED
Cumene (CAS 98-82-8)	LISTED
Cyclohexane (CAS 110-82-7)	LISTED
Ethanol (CAS 64-17-5)	LISTED
Ethylbenzene (CAS 100-41-4)	LISTED
Gasoline (CAS 86290-81-5)	LISTED
Hexane (Other Isomers) (CAS 96-14-0)	LISTED
n-Heptane (CAS 142-82-5)	LISTED
n-Hexane (CAS 110-54-3)	LISTED
Octane (All isomers) (CAS 111-65-9)	LISTED
Pentane (CAS 109-66-0)	LISTED
Toluene (CAS 108-88-3)	LISTED
Xylene (o, m, p isomers) (CAS 1330-20-7)	LISTED

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Toluene	108-88-3	0-30
Xylene (o, m, p isomers)	1330-20-7	0-25
1,2,4, Trimethylbenzene	95-63-6	0-6
Cumene	98-82-8	0-5
Ethylbenzene	100-41-4	0-5
Benzene	71-43-2	0-4.9
n-Hexane	110-54-3	0-3
Cyclohexane	110-82-7	0-3

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
n-Hexane (CAS 110-54-3)
Toluene (CAS 108-88-3)
Xylene (o, m, p isomers) (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Pentane (CAS 109-66-0)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Toluene (CAS 108-88-3) 6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Toluene (CAS 108-88-3) 35 % weight/volumn

DEA Exempt Chemical Mixtures Code Number

Toluene (CAS 108-88-3) 594

US state regulations

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

US. Massachusetts RTK - Substance List

1,2,4, Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethanol (CAS 64-17-5)
Ethylbenzene (CAS 100-41-4)
Hexane (Other Isomers) (CAS 96-14-0)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
Octane (All isomers) (CAS 111-65-9)
Pentane (CAS 109-66-0)
Toluene (CAS 108-88-3)
Xylene (o, m, p isomers) (CAS 1330-20-7)

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

1,2,4, Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethanol (CAS 64-17-5)
Ethylbenzene (CAS 100-41-4)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
Octane (All isomers) (CAS 111-65-9)
Pentane (CAS 109-66-0)
Toluene (CAS 108-88-3)
Xylene (o, m, p isomers) (CAS 1330-20-7)

US. Pennsylvania Worker and Community Right-to-Know Law

1,2,4, Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethanol (CAS 64-17-5)
Ethylbenzene (CAS 100-41-4)
Gasoline (CAS 86290-81-5)
Hexane (Other Isomers) (CAS 96-14-0)
n-Heptane (CAS 142-82-5)
n-Hexane (CAS 110-54-3)
Octane (All isomers) (CAS 111-65-9)
Pentane (CAS 109-66-0)
Toluene (CAS 108-88-3)
Xylene (o, m, p isomers) (CAS 1330-20-7)

US. Rhode Island RTK

1,2,4, Trimethylbenzene (CAS 95-63-6)
Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Cyclohexane (CAS 110-82-7)
Ethylbenzene (CAS 100-41-4)
n-Hexane (CAS 110-54-3)
Pentane (CAS 109-66-0)
Toluene (CAS 108-88-3)
Xylene (o, m, p isomers) (CAS 1330-20-7)

US. California Proposition 65

US - California Proposition 65 - Carcinogens & Reproductive Toxicity (CRT): Listed substance

Benzene (CAS 71-43-2)
Cumene (CAS 98-82-8)
Ethylbenzene (CAS 100-41-4)
Toluene (CAS 108-88-3)

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
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
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 this product complies 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

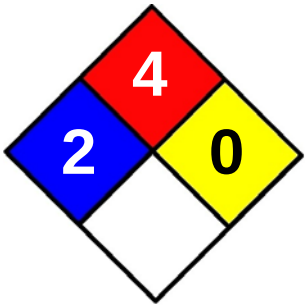
Issue date 13-May-2013

Revision date 23-May-2014

Version # 03

Further information HMIS® is a registered trade and service mark of the NPCA.

NFPA Ratings



References

ACGIH
EPA: AQUIRE database
NLM: Hazardous Substances Data Base
US. IARC Monographs on Occupational Exposures to Chemical Agents
HSDB® - Hazardous Substances Data Bank
IARC Monographs. Overall Evaluation of Carcinogenicity
National Toxicology Program (NTP) Report on Carcinogens
ACGIH Documentation of the Threshold Limit Values and Biological Exposure Indices

Disclaimer

This material Safety Data Sheet (SDS) was prepared in accordance with 29 CFR 1910.1200 by Valero Marketing & Supply Co., ("VALERO"). VALERO does not assume any liability arising out of product use by others. The information, recommendations, and suggestions presented in this SDS are based upon test results and data believed to be reliable. The end user of the product has the responsibility for evaluating the adequacy of the data under the conditions of use, determining the safety, toxicity and suitability of the product under these conditions, and obtaining additional or clarifying information where uncertainty exists. No guarantee expressed or implied is made as to the effects of such use , the results to be obtained, or the safety and toxicity of the product in any specific application. Furthermore, the information herein is not represented as absolutely complete, since it is not practicable to provide all the scientific and study information in the format of this document, plus additional information may be necessary under exceptional conditions of use, or because of applicable laws or government regulations.

1. Identification

Product name	:	Swellstop
Supplier	:	Sika Corporation
Address	:	201 Polito Avenue Lyndhurst, NJ 07071 USA www.sikausa.com
Telephone	:	(201) 933-8800
Telefax	:	(201) 804-1076
Emergency telephone	:	CHEMTREC: 800-424-9300 INTERNATIONAL: 703-527-3887 ehs@sika-corp.com
Recommended use of the chemical and restrictions on use	:	For further information, refer to the product technical data sheet.

2. Hazards identification

GHS Classification

Not a hazardous substance or mixture.

GHS Label element

Not a hazardous substance or mixture.

See Section 11 for more detailed information on health effects and symptoms.

3. Composition/information on ingredients

Hazardous ingredients

There are no 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.
In case of skin contact	:	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

In case of eye contact	:	Flush eyes with water as a precaution. Remove contact lenses. Keep eye wide open while rinsing.
If swallowed	:	Clean mouth with water and drink afterwards plenty of water. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person.
Most important symptoms and effects, both acute and delayed	:	No known significant effects or hazards. See Section 11 for more detailed information on health effects and symptoms.
Protection of first-aiders	:	No hazards which require special first aid measures.
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

Environmental precautions	:	Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Keep in suitable, closed containers for disposal.

7. Handling and storage

Advice on safe handling	:	For personal protection see section 8. No special handling advice required. Follow standard hygiene measures when handling chemical products.
Conditions for safe storage	:	Keep container tightly closed in a dry and well-ventilated place. 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
Limestone	1317-65-3	OSHA Z-1	TWA	15 mg/m3 total dust
		OSHA Z-1	TWA	5 mg/m3 respirable fraction
		OSHA P0	TWA	15 mg/m3 Total
		OSHA P0	TWA	5 mg/m3 Respirable fraction
Cellulose	9004-34-6	ACGIH	TWA	10 mg/m3
		OSHA Z-1	TWA	15 mg/m3 total dust
		OSHA Z-1	TWA	5 mg/m3 respirable fraction
		OSHA P0	TWA	15 mg/m3 Total
		OSHA P0	TWA	5 mg/m3 Respirable fraction

*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 : Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.
Avoid breathing dust.

9. Physical and chemical properties

Appearance	:	solid
Color	:	black
Odor	:	mild
Odor Threshold	:	no data available
Flash point	:	610 °F (321 °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
Autoignition temperature	:	no data available
pH	:	Note: not applicable
Melting point/range / Freezing point	:	no data available
Boiling point/boiling range	:	no data available

Vapor pressure	:	no data available
Density	:	1.6 g/cm3
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	:	0 g/l

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

Product

Acute oral toxicity	:	no data available
Acute inhalation toxicity	:	no data available
Acute dermal toxicity	:	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

Germ cell mutagenicity

Product

Mutagenicity : no data available

Carcinogenicity

Product

Carcinogenicity : no data available

IARC not applicable

NTP not applicable

Reproductive Toxicity/Fertility

Product

Reproductive toxicity : no data available

Reproductive Toxicity/Development/Teratogenicity

Product

Teratogenicity : no data available

STOT-single exposure

Product

Assessment: no data available

STOT-repeated exposure

Product

Assessment: no data available

Aspiration toxicity

Product

no data available

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 : No SARA Hazards

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : 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 12 (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, or any other reproductive defects.

16. Other information

HMIS Classification

Health		1
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 01/09/2014

Material number: 419275

Swellstop Primer Adhesive

1. Identification

Product name	:	Swellstop Primer Adhesive
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

Flammable liquids, Category 3	H226: Flammable liquid and vapor.
Skin irritation, Category 2	H315: Causes skin irritation.
Eye irritation, Category 2A	H319: Causes serious eye irritation.
Carcinogenicity, Category 2 (Inhalation)	H351: Suspected of causing cancer if inhaled.
Reproductive toxicity, Category 2	H361: Suspected of damaging fertility or the unborn child.
Specific target organ systemic toxicity - single exposure, Category 3, Respiratory system	H335: May cause respiratory irritation.
Specific target organ systemic toxicity - repeated exposure, Category 2, hearing organs (Inhalation)	H373: May cause damage to organs through prolonged or repeated exposure if inhaled.
Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements : H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H351 Suspected of causing cancer if inhaled.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.

Precautionary Statements : **Prevention:**
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233 Keep container tightly closed.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
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:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
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.
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.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P362 Take off contaminated clothing and wash before reuse.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P403 + P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Warning : Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent

brain,liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

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 (%)
xylene	1330-20-7	>= 35 - < 45 %
ethylbenzene	100-41-4	>= 5 - < 15 %
Toluene	108-88-3	>= 0.1 - < 1 %

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 : Immediately flush eye(s) with plenty of water.
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.
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : Risk of serious damage to the lungs (by aspiration).
irritant effects

Aspiration may cause pulmonary edema and pneumonitis.
Cough
Respiratory disorder
Excessive lachrymation
Erythema
Dermatitis
See Section 11 for more detailed information on health effects

and symptoms.

May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
Suspected of causing cancer if inhaled.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure if inhaled.

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 : Alcohol-resistant foam
Carbon dioxide (CO2)
Dry chemical

Unsuitable extinguishing media : Water

Specific extinguishing methods : Use water spray to cool unopened containers.
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.
Remove all sources of ignition.
Deny access to unprotected persons.
Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

Environmental precautions : Prevent product from entering drains.
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 : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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.
Smoking, eating and drinking should be prohibited in the application area.
Take precautionary measures against static discharge.
Open drum carefully as content may be under pressure.
Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).
Follow standard hygiene measures when handling chemical products.

Conditions for safe storage : Store in original container.
Keep in a 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

Component	CAS-No.	Basis **	Value	Exposure limit(s)* / Form of exposure
xylene	1330-20-7	OSHA Z-1	TWA	100 ppm 435 mg/m3
		OSHA P0	STEL	150 ppm 655 mg/m3
		OSHA P0	TWA	100 ppm 435 mg/m3
		ACGIH	TWA	100 ppm
		ACGIH	STEL	150 ppm
ethylbenzene	100-41-4	ACGIH	TWA	20 ppm
		ACGIH	STEL	125 ppm
		OSHA Z-1	TWA	100 ppm 435 mg/m3
		OSHA P0	TWA	100 ppm

				435 mg/m3
		OSHA P0	STEL	125 ppm 545 mg/m3
Toluene	108-88-3	ACGIH	TWA	20 ppm
		OSHA Z-2	TWA	200 ppm
		OSHA Z-2	CEIL	300 ppm
		OSHA Z-2	Peak	500 ppm
		OSHA P0	TWA	100 ppm 375 mg/m3
		OSHA P0	STEL	150 ppm 560 mg/m3

*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.
The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive 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 respiratory and skin/eye protection only after vapors have been cleared from the area. Remove contaminated clothing and protective equipment before entering eating areas. Wash thoroughly after handling.

9. Physical and chemical properties

Appearance	:	viscous, tacky liquid
Color	:	dark brown to black
Odor	:	aromatic
Odor Threshold	:	No data available
Flash point	:	80.4 - 89.4 °F (26.9 - 31.9 °C)
Autoignition temperature	:	865.9 - 984.0 °F (463.3 - 528.9 °C)
Decomposition temperature	:	No data available
Lower explosion limit (Vol%)	:	1 %(V)
Upper explosion limit (Vol%)	:	7 %(V)
Flammability (solid, gas)	:	No data available
Oxidizing properties	:	No data available
pH	:	Note: not determined
Melting point/range / Freezing point	:	No data available
Boiling point/boiling range	:	No data available
Vapor pressure	:	6.000 mmHg (7.9993 hpa)

Density	:	0.88 g/cm3
Water solubility	:	Note: No data available
Partition coefficient: n-octanol/water	:	No data available
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	>20.5 mm2/s
Relative vapor density	:	No data available
Evaporation rate	:	No data available
Burning rate	:	No data available
Volatile organic compounds (VOC) content	:	568 g/l

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. Vapors may form explosive mixture with air.
Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	No data available

11. Toxicological information

Acute toxicity

Not classified based on available information.

Ingredients:

xylene:

Acute oral toxicity	:	LD50 Oral (Rat): 3,523 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): 1,700 mg/kg

ethylbenzene:

Acute oral toxicity	:	LD50 Oral (Rat): 3,500 mg/kg
Acute dermal toxicity	:	LD50 Dermal (Rabbit): 5,510 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/eye irritation

Causes serious eye irritation.

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

Suspected of damaging fertility or the unborn child.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

May cause damage to organs (hearing organs) through prolonged or repeated exposure if inhaled.
Reports have associated repeated and prolonged exposure to some of the chemicals in this product with permanent brain,liver, kidney and nervous system damage. Intentional misuse by deliberate concentration and inhalation of vapors may be harmful or fatal.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Carcinogenicity

Suspected of causing cancer if inhaled.

IARC	Group 2B: Possibly carcinogenic to humans	
	ethylbenzene	100-41-4
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:

xylene	1330-20-7	Toxicity to fish:
		Species: Oncorhynchus mykiss (rainbow trout) Dose: 3.3 mg/l Exposure time: 96 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

UN number	1133
Description of the goods	Adhesives
Class	3
Packing group	III
Labels	3
Emergency Response Guidebook Number	128

IATA

UN number	1133
Description of the goods	Adhesives
Class	3
Packing group	III
Labels	3
Packing instruction (cargo aircraft)	366
Packing instruction (passenger aircraft)	355
Packing instruction (passenger aircraft)	Y344

IMDG

UN number	1133
Description of the goods	ADHESIVES
Class	3
Packing group	III
Labels	3
EmS Number 1	F-E
EmS Number 2	S-D

Marine pollutant no

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 : Fire Hazard
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:

xylene	1330-20-7	35 - 45 %
ethylbenzene	100-41-4	5 - 15 %

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).

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

xylene	1330-20-7	35 - 45 %
ethylbenzene	100-41-4	5 - 15 %

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		3
Physical Hazard		0
Personal Protection		X

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