



To Our Customers:

The attached Safety Data Sheet (SDS) was prepared by the vendor of the product you purchased through one of our divisions. We used the manufacturer's electronic document directly or scanned a paper copy and generated a file for our automated SDS delivery system.

All statements, technical information, and recommendations contained therein are solely that of the manufacturer of the product. We at Zep Inc. did not verify the accuracy and completeness of the statements and do not warrant or guarantee the information. We provide vendor SDSs to assist our customers in their compliance efforts. The attached document is in compliance with one of the respective country regulatory requirements noted below:

The OSHA Hazard Communication Standard (in the United States)  
The Hazardous Products Regulations (in Canada)

We made every effort to deliver all of the information prepared by the manufacturer. We cannot anticipate all conditions under which this information will be used. If you have any questions about the statements on the SDS, please contact the company shown on the document.

Zep Inc. assumes no liability or responsibility for loss or damage resulting from the improper use or handling of this product, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the manufacturer's product label and Safety Data Sheet.

Sincerely,

Product Stewardship Team  
Zep Inc.

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product name: **FUSOR 2098 CRASH DURABLE STRUCTURAL ADH PT A**  
Product Use/Class: **Adhesive, Part A**  
Reference: .

LORD Corporation  
111 LORD Drive  
Cary, NC 27511-7923 USA

Telephone: 814 868-3180  
Non-Transportation Emergency: 814 763-2345  
Chemtrec 24 Hr Transportation Emergency No.  
800 424-9300 (Outside Continental U.S. 703 527-3887)

**EFFECTIVE DATE:** 03/06/2020

**2. HAZARDS IDENTIFICATION****GHS CLASSIFICATION:**

Serious eye damage/eye irritation Category 1  
Skin sensitization Category 1  
Reproductive toxicity Category 2  
Specific target organ systemic toxicity (single exposure) Category 1 Respiratory system  
Specific target organ systemic toxicity (repeated exposure) Category 2 Kidney, Liver, Respiratory system  
Hazardous to the aquatic environment - acute hazard Category 3

**GHS LABEL ELEMENTS:****Symbol(s)****Signal Word**

DANGER

**Hazard Statements**

Causes serious eye damage.  
May cause an allergic skin reaction.  
Suspected of damaging fertility or the unborn child.  
Causes damage to organs.(Respiratory system)  
May cause damage to organs through prolonged or repeated exposure.(Kidney, Liver, Respiratory system)  
Harmful to aquatic life.

**Precautionary Statements****Prevention**

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

**Response**

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Immediately call a POISON CENTER or doctor/physician.  
Specific treatment (see supplemental first aid instructions on this label).  
IF ON SKIN: Wash with plenty of soap and water.  
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.

**Storage**

Store locked up.

**Disposal:**

Dispose of contents/container in accordance with waste/disposal laws and regulations of your country or particular locality.

**Other Hazards:**

**This product contains component(s) which have the following warnings; however based on the GHS classification criteria of your country or locale, the product mixture may be outside the respective category(s).**

**Acute:** May cause respiratory tract irritation. This product contains 1,6-Hexanediol diglycidyl ether, which is subject to a Significant New Use Rule (SNUR) under the Toxic Substances Control Act. For additional information, please refer to 40 CFR 721.5575. May cause skin irritation.

**Chronic:** Prolonged or repeated contact may result in dermatitis. Prolonged exposure to the silica-containing sanding dust of this product could cause long-term lung damage. Crystalline silica is classified by IARC and NTP as a known human carcinogen as a respirable dust. The silica in LORD products is not in a form that can be inhaled and presents no risk to the end user. No exposure is expected during normal use of this product. Sanding or abrading the cured materials is not recommended. Wear appropriate respiratory protection if exposure to dusts is possible.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Range
Epoxy resin	PROPRIETARY	45 - 50 %
1,6-Hexanediol diglycidyl ether	16096-31-4	5 - 10 %
Hexaoxa-silaheptadecane	88127-84-8	5 - 10 %
Bisphenol A	80-05-7	1 - 5 %
Crystalline silica	14808-60-7	0.1 - 0.9 %
Cashew nutshell liquid	8007-24-7	0.1 - 0.9 %

Any "PROPRIETARY" component(s) in the above table is considered trade secret, thus the specific chemical and its exact concentration is being withheld.

### 4. FIRST AID MEASURES

**FIRST AID - EYE CONTACT:** Flush eyes immediately with large amount of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

**FIRST AID - SKIN CONTACT:** Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

**FIRST AID - INHALATION:** Move person to fresh air. Restore and support continued breathing. If breathing is difficult, give oxygen. Get immediate medical attention.

**FIRST AID - INGESTION:** If swallowed, do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing.

### 5. FIRE-FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:** Carbon Dioxide, Dry Chemical, Foam, Water Fog

**UNSUITABLE EXTINGUISHING MEDIA:** Not determined for this product.

**SPECIFIC HAZARDS POSSIBLY ARISING FROM THE CHEMICAL:** Keep containers tightly closed. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

**SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:** Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

## 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:** Avoid contact. Avoid breathing vapors. Use appropriate respiratory protection for large spills or spills in confined area.

**ENVIRONMENTAL PRECAUTIONS:** Do not contaminate bodies of water, waterways, or ditches, with chemical or used container.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP:** Keep non-essential personnel a safe distance away from the spill area. Notify appropriate authorities if necessary. Avoid contact. Before attempting cleanup, refer to hazard caution information in other sections of the SDS form. Scoop spilled material into an appropriate container for proper disposal. (If necessary, use inert absorbent material to aid in containing the spill). This product contains 1,6-Hexanediol diglycidyl ether, which is subject to a Significant New Use Rule (SNUR) under the Toxic Substances Control Act. It is believed to be toxic in an aquatic environment. Releases to water streams are prohibited. All internal waste streams, residues and spills of uncured material must be collected and incinerated.

## 7. HANDLING AND STORAGE

**HANDLING:** Keep closure tight and container upright to prevent leakage. Avoid skin and eye contact. Wash thoroughly after handling. Do not handle until all safety precautions have been read and understood. Empty containers should not be re-used. Use with adequate ventilation. This product contains 1,6-Hexanediol diglycidyl ether, which is subject to a Significant New Use Rule (SNUR) under the Toxic Substances Control Act. For additional information, please refer to 40 CFR 721.5575.

**STORAGE:** Store only in well-ventilated areas. Keep container closed when not in use.

**INCOMPATIBILITY:** Amines, acids, water, hydroxyl, or active hydrogen compounds.; Strong oxidizers.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### COMPONENT EXPOSURE LIMIT

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH TLV-STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>	<u>Skin</u>
Epoxy resin	N.E.	N.E.	N.E.	N.E.	N.A.
1,6-Hexanediol diglycidyl ether	N.E.	N.E.	N.E.	N.E.	N.A.
Hexaoxa-silaheptadecane	N.E.	N.E.	N.E.	N.E.	N.A.
Bisphenol A	N.E.	N.E.	N.E.	N.E.	N.A.
Crystalline silica	0.05 mg/m3	N.E.	N.E.	N.E.	N.A.
Cashew nutshell liquid	N.E.	N.E.	N.E.	N.E.	N.A.

N.A. - Not Applicable, N.E. - Not Established, S - Skin Designation

**Engineering controls:** Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits.

### PERSONAL PROTECTION MEASURES/EQUIPMENT:

**RESPIRATORY PROTECTION:** Use a NIOSH approved air-purifying organic vapor respirator if occupational limits are exceeded. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air-supplied respirator. For respirator use observe OSHA regulations (29CFR 1910.134) or use in accordance with applicable laws and regulations of your country or particular locality. This

product contains 1,6-Hexanediol diglycidyl ether, which is subject to a Significant New Use Rule (SNUR) under the Toxic Substances Control Act. The employer must demonstrate that respiratory protection is provided this includes a NIOSH approved respirator to prevent inhalation exposure. For additional information, please refer to 40 CFR 721.5575.

**SKIN PROTECTION:** Use neoprene, nitrile, or rubber gloves to prevent skin contact. This product contains 1,6-Hexanediol diglycidyl ether, which is subject to a Significant New Use Rule (SNUR) under the Toxic Substances Control Act. The employer must demonstrate that each item of chemical protective clothing selected, including gloves, provides an impervious barrier to prevent dermal exposure. For additional information, please refer to 40 CFR 721.5575.

**EYE PROTECTION:** Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.

**OTHER PROTECTIVE EQUIPMENT:** Use disposable or impervious clothing if work clothing contamination is likely. Remove and wash contaminated clothing before reuse.

**HYGIENIC PRACTICES:** Wash hands before eating, smoking, or using toilet facility. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Typical values, not to be used for specification purposes.

<b>ODOR:</b>	Odorless	<b>VAPOR PRESSURE:</b>	N.D.
<b>APPEARANCE:</b>	Blue	<b>VAPOR DENSITY:</b>	Heavier than Air
<b>PHYSICAL STATE:</b>	Paste	<b>LOWER EXPLOSIVE LIMIT:</b>	Not Applicable
<b>FLASH POINT:</b>	≥ 201 °F, 93 °C	<b>UPPER EXPLOSIVE LIMIT:</b>	Not Applicable
	Setaflash Closed Cup		
<b>BOILING RANGE:</b>	N.A.	<b>EVAPORATION RATE:</b>	Not Applicable
<b>AUTOIGNITION TEMPERATURE:</b>	N.D.	<b>DENSITY:</b>	1.2 g/cm <sup>3</sup> - 10.00 lb/gal
<b>DECOMPOSITION TEMPERATURE:</b>	N.D.	<b>VISCOSITY, DYNAMIC:</b>	N.D.
<b>ODOR THRESHOLD:</b>	N.D.	<b>VISCOSITY, KINEMATIC:</b>	N.D.
<b>SOLUBILITY IN H<sub>2</sub>O:</b>	Insoluble	<b>VOLATILE BY WEIGHT:</b>	0.00 %
<b>pH:</b>	N.A.	<b>VOLATILE BY VOLUME:</b>	0.00 %
<b>FREEZE POINT:</b>	N.D.	<b>VOC CALCULATED:</b>	0 lb/gal, 0 g/l
<b>COEFFICIENT OF WATER/OIL DISTRIBUTION:</b>	N.D.		

**LEGEND:** N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

## 10. STABILITY AND REACTIVITY

**HAZARDOUS POLYMERIZATION:** Hazardous polymerization will not occur under normal conditions.

**STABILITY:** Product is stable under normal storage conditions.

**CONDITIONS TO AVOID:** High temperatures.

**INCOMPATIBILITY:** Amines, acids, water, hydroxyl, or active hydrogen compounds.; Strong oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, aldehydes

## 11. TOXICOLOGICAL INFORMATION

**EXPOSURE PATH:** Refer to section 2 of this SDS.

**SYMPTOMS:** Refer to section 2 of this SDS.

**TOXICITY MEASURES:**

<b>Chemical Name</b>	<b>LD50/LC50</b>
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Epoxy resin	GHS LD50: rat > 15,000 mg/kg GHS LD50: rabbit 23,000 mg/kg
1,6-Hexanediol diglycidyl ether	GHS LD50: rat 3,741 mg/kg GHS LD50: rat > 2,000 mg/kg
Hexaoxa-silaheptadecane	N.D.
Bisphenol A	Oral LD50: Rat 3,300 mg/kg Dermal LD50: Rabbit 3 mL/kg Inhalation LC50: Rat > 170 mg/m3 /6 h
Crystalline silica	N.D.
Cashew nutshell liquid	Oral LD50: Rat > 1,000 mg/kg LD50: rat > 2,000 mg/kg

**Germ cell mutagenicity:** No classification proposed

**Carcinogenicity:** No classification proposed

**Reproductive toxicity:** Category 2 - Suspected of damaging fertility or the unborn child.  
Components contributing to classification: Bisphenol A.

## 12. ECOLOGICAL INFORMATION

### ECOTOXICITY:

Chemical Name	Ecotoxicity
Epoxy resin	<u>Fish:</u> Oncorhynchus mykiss 2 mg/196 h semi-static <u>Invertebrates:</u> Daphnia magna 1.8 mg/148 h Static <u>Plants:</u> Selenastrum capricornutum 11 mg/172 h Static
1,6-Hexanediol diglycidyl ether	<u>Fish:</u> Oncorhynchus mykiss 30 mg/196 h semi-static <u>Invertebrates:</u> Daphnia magna 47 mg/124 h Static
Hexaoxa-silaheptadecane	N.D.
Bisphenol A	<u>Fish:</u> Pimephales promelas 3.6 - 5.4 mg/196 h flow-through Pimephales promelas 4.0 - 5.5 mg/196 h Static Oncorhynchus mykiss 4 mg/196 h Brachydanio rerio 9.9 mg/196 h Static <u>Invertebrates:</u> Daphnia magna 10.2 mg/148 h Daphnia magna 3.9 mg/148 h Daphnia magna 9.2 - 11.4 mg/148 h Static <u>Plants:</u> Pseudokirchneriella subcapitata 2.5 mg/196 h
Crystalline silica	N.D.
Cashew nutshell liquid	N.D.

**PERSISTENCE AND DEGRADABILITY:** Not determined for this product.

**BIOACCUMULATIVE:** Not determined for this product.

**MOBILITY IN SOIL:** Not determined for this product.

**OTHER ADVERSE EFFECTS:** Not determined for this product.

**ADDITIONAL ECOLOGICAL INFORMATION:** This material is subject to a Significant New Use Rule (SNUR) under the Toxic Substances Control Act. It is believed to be toxic in an aquatic environment. Releases to surface water are prohibited.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Disposal should be done in accordance with Federal (40CFR Part 261), state and local environmental control regulations. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

## 14. TRANSPORT INFORMATION

### US DOT Road

**Proper Shipping Name:** Environmentally hazardous substances, solid, n.o.s.

**Hazard Class:** 9  
**SECONDARY HAZARD:** None  
**UN/NA Number:** 3077  
**Packing Group:** III  
**Emergency Response Guide Number:** 171

For US DOT non-bulk road shipments this material may be classified as NOT REGULATED. For the most accurate shipping information, refer to your transportation/compliance department regarding changes in package size, mode of shipment or other regulatory descriptors.

#### **IATA Cargo**

**PROPER SHIPPING NAME:** Environmentally hazardous substance, solid, n.o.s.  
**Hazard Class:** 9  
**HAZARD CLASS:** None  
**UN NUMBER:** 3077  
**PACKING GROUP:** III  
**EMS:** 9L

#### **IMDG**

**PROPER SHIPPING NAME:** Environmentally hazardous substance, solid, n.o.s.  
**Hazard Class:** 9  
**HAZARD CLASS:** None  
**UN NUMBER:** 3077  
**PACKING GROUP:** III  
**EMS:** F-A

The listed transportation classification applies to non-bulk shipments. It does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors. For the most accurate shipping information, refer to your transportation/compliance department.

<b>15. REGULATORY INFORMATION</b>
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#### **U.S. FEDERAL REGULATIONS: AS FOLLOWS:**

##### **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.:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Weight % Less Than</u>
Bisphenol A	80-05-7	5.0 %

#### **TOXIC SUBSTANCES CONTROL ACT:**

##### **INVENTORY STATUS**

The chemical substances in this product are on the TSCA Section 8 Inventory.

##### **EXPORT NOTIFICATION**

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

<b>16. OTHER INFORMATION</b>
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Under HazCom 2012 it is optional to continue using the HMIS rating system. It is important to ensure employees have been trained to recognize the different numeric ratings associated with the HazCom 2012 and HMIS schemes.

**HMIS RATINGS - HEALTH:** 2\* **FLAMMABILITY:** 1 **PHYSICAL HAZARD:** 0

\* - Indicates a chronic hazard; see Section 2

**Revision:** Company Logo

**Effective Date:** 03/06/2020

<b>DISCLAIMER</b>
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The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.



**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product name: **FUSOR 2098 CRASH DURABLE STRUCTURAL ADH PT B**  
Product Use/Class: **Adhesive, Part B**  
Reference: .

LORD Corporation  
111 LORD Drive  
Cary, NC 27511-7923 USA

Telephone: 814 868-3180  
Non-Transportation Emergency: 814 763-2345  
Chemtrec 24 Hr Transportation Emergency No.  
800 424-9300 (Outside Continental U.S. 703 527-3887)

**EFFECTIVE DATE:** 06/14/2021

**2. HAZARDS IDENTIFICATION****GHS CLASSIFICATION:**

Acute toxicity Oral Category 4 - 19% of the mixture consists of ingredient(s) of unknown toxicity.  
Acute toxicity Dermal Category 4 - 10.3% of the mixture consists of ingredient(s) of unknown toxicity.  
Skin corrosion/irritation Category 1  
Serious eye damage/eye irritation Category 1  
Skin sensitization Category 1  
Specific target organ systemic toxicity (single exposure) Category 3  
Hazardous to the aquatic environment - acute hazard Category 3  
Hazardous to the aquatic environment - chronic hazard Category 2

**GHS LABEL ELEMENTS:****Symbol(s)****Signal Word**

DANGER

**Hazard Statements**

Harmful if swallowed.  
Harmful in contact with skin.  
Causes severe skin burns and eye damage.  
Causes serious eye damage.  
May cause an allergic skin reaction.  
May cause respiratory irritation.  
Harmful to aquatic life.  
Toxic to aquatic life with long lasting effects.

**Precautionary Statements****Prevention**

Wear protective gloves/protective clothing.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Avoid breathing dust/fume/gas/mist/vapors/spray.  
Wash 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.

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Avoid release to the environment.

#### Response

Immediately call a POISON CENTER or doctor/physician.

Specific treatment (see supplemental first aid instructions on this label).

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

IF ON SKIN (or hair): Remove/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.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Wash contaminated clothing before reuse.

Collect spillage.

#### Storage

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

#### Disposal:

Dispose of contents/container in accordance with waste/disposal laws and regulations of your country or particular locality.

#### Other Hazards:

**This product contains component(s) which have the following warnings; however based on the GHS classification criteria of your country or locale, the product mixture may be outside the respective category(s).**

**Acute:** Vapors may cause irritation of nose, throat, and upper respiratory tract. May cause respiratory tract irritation. May cause headache and nausea. Eye contact may cause severe eye damage, including vision disturbances, corneal damage, and blindness. Dermal absorption possible.

**Chronic:** May cause conjunctivitis or other adverse eye effects. May cause long-term lung damage. IARC has designated titanium dioxide (TiO<sub>2</sub>) as Group 2B – possibly carcinogenic to humans in dust form. However, a number of long term animal studies and human epidemiology studies evaluating TiO<sub>2</sub> and workplace exposure show insufficient evidence for carcinogenic effects. EPA, NTP and OSHA do not designate TiO<sub>2</sub> as a carcinogen and ACGIH designates TiO<sub>2</sub> as A4 - not classifiable as a human carcinogen. Mortality from other chronic diseases, including other respiratory diseases, was not associated with exposure to TiO<sub>2</sub> dust. TiO<sub>2</sub> is not present in this product as a dust and no airborne exposure is expected during application. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Range
Alkoxylated polyamine	39423-51-3	25 - 30 %
Polyoxypropylenediamine	9046-10-0	15 - 20 %
Amine compound	PROPRIETARY	10 - 15 %
Amine compound	PROPRIETARY	10 - 15 %
Amine compound	PROPRIETARY	1 - 5 %
Polyethyleneimine	9002-98-6	1 - 5 %
Titanium dioxide	13463-67-7	0.1 - 0.9 %
Amine compound	PROPRIETARY	0.1 - 0.9 %

Any "PROPRIETARY" component(s) in the above table is considered trade secret, thus the specific chemical and its exact concentration is being withheld.

### 4. FIRST AID MEASURES

**FIRST AID - EYE CONTACT:** Flush eyes immediately with large amount of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

**FIRST AID - SKIN CONTACT:** Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

**FIRST AID - INHALATION:** Move person to fresh air. Restore and support continued breathing. If breathing is difficult, give oxygen. Get immediate medical attention.

**FIRST AID - INGESTION:** If swallowed, do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing.

#### 5. FIRE-FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:** Carbon Dioxide, Dry Chemical, Foam, Water Fog

**UNSUITABLE EXTINGUISHING MEDIA:** Not determined for this product.

**SPECIFIC HAZARDS POSSIBLY ARISING FROM THE CHEMICAL:** Keep containers tightly closed. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

**SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:** Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

#### 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:** Avoid contact. Avoid breathing vapors. Use self-contained breathing equipment.

**ENVIRONMENTAL PRECAUTIONS:** Do not contaminate bodies of water, waterways, or ditches, with chemical or used container.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP:** Keep non-essential personnel a safe distance away from the spill area. Notify appropriate authorities if necessary. Avoid contact. Before attempting cleanup, refer to hazard caution information in other sections of the SDS form. Scoop spilled material into an appropriate container for proper disposal. (If necessary, use inert absorbent material to aid in containing the spill).

#### 7. HANDLING AND STORAGE

**HANDLING:** Keep closure tight and container upright to prevent leakage. Avoid skin and eye contact. Wash thoroughly after handling. Avoid breathing of vapor or spray mists. Do not handle until all safety precautions have been read and understood. Empty containers should not be re-used. Use with adequate ventilation.

**STORAGE:** Store only in well-ventilated areas. Keep container closed when not in use.

**INCOMPATIBILITY:** Strong acids, bases, and strong oxidizers.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

##### COMPONENT EXPOSURE LIMIT

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH TLV-STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>	<u>Skin</u>
Alkoxylated polyamine	N.E.	N.E.	N.E.	N.E.	N.A.
Polyoxypropylenediamine	N.E.	N.E.	N.E.	N.E.	N.A.
Amine compound	N.E.	N.E.	N.E.	N.E.	N.A.
Amine compound	N.E.	N.E.	N.E.	N.E.	N.A.
Amine compound	N.E.	N.E.	N.E.	N.E.	N.A.
Polyethyleneimine	N.E.	N.E.	N.E.	N.E.	N.A.
Titanium dioxide	10 mg/m3	N.E.	15 mg/m3	N.E.	N.A.
Amine compound	N.E.	N.E.	N.E.	N.E.	N.A.

N.A. - Not Applicable, N.E. - Not Established, S - Skin Designation

**Engineering controls:** Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits.

**PERSONAL PROTECTION MEASURES/EQUIPMENT:**

**RESPIRATORY PROTECTION:** Use a NIOSH approved air-purifying organic vapor respirator if occupational limits are exceeded. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air-supplied respirator. For respirator use observe OSHA regulations (29CFR 1910.134) or use in accordance with applicable laws and regulations of your country or particular locality.

**SKIN PROTECTION:** Use neoprene, nitrile, or rubber gloves to prevent skin contact.

**EYE PROTECTION:** Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.

**OTHER PROTECTIVE EQUIPMENT:** Remove and wash contaminated clothing before reuse.

**HYGIENIC PRACTICES:** Wash hands before eating, smoking, or using toilet facility. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>
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Typical values, not to be used for specification purposes.

<b>ODOR:</b>	Amine	<b>VAPOR PRESSURE:</b>	N.D.
<b>APPEARANCE:</b>	White	<b>VAPOR DENSITY:</b>	Heavier than Air
<b>PHYSICAL STATE:</b>	Paste	<b>LOWER EXPLOSIVE LIMIT:</b>	Not Applicable
<b>FLASH POINT:</b>	≥ 201 °F, 93 °C	<b>UPPER EXPLOSIVE LIMIT:</b>	Not Applicable
	Setaflash Closed Cup		
<b>BOILING RANGE:</b>	N.A.	<b>EVAPORATION RATE:</b>	Not Applicable
<b>AUTOIGNITION TEMPERATURE:</b>	N.D.	<b>DENSITY:</b>	1.12 g/cm <sup>3</sup> (9.30 lb/gal)
<b>DECOMPOSITION TEMPERATURE:</b>	N.D.	<b>VISCOSITY, DYNAMIC:</b>	≥100,000 mPa.s @ 23 °C
<b>ODOR THRESHOLD:</b>	N.D.	<b>VISCOSITY, KINEMATIC:</b>	≥89,286 mm <sup>2</sup> /s @ 23 °C
<b>SOLUBILITY IN H<sub>2</sub>O:</b>	Insoluble	<b>VOLATILE BY WEIGHT:</b>	0.00 %
<b>pH:</b>	N.A.	<b>VOLATILE BY VOLUME:</b>	0.00 %
<b>FREEZE POINT:</b>	N.D.	<b>VOC CALCULATED:</b>	0 lb/gal, 0 g/l
<b>COEFFICIENT OF WATER/OIL DISTRIBUTION:</b>	N.D.		

**LEGEND:** N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

<b>10. STABILITY AND REACTIVITY</b>
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**HAZARDOUS POLYMERIZATION:** Hazardous polymerization will not occur under normal conditions.

**STABILITY:** Product is stable under normal storage conditions.

**CONDITIONS TO AVOID:** High temperatures.

**INCOMPATIBILITY:** Strong acids, bases, and strong oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, organic or inorganic nitrogen compounds including traces of hydrogen cyanide

<b>11. TOXICOLOGICAL INFORMATION</b>
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**EXPOSURE PATH:** Refer to section 2 of this SDS.

**SYMPTOMS:** Refer to section 2 of this SDS.

#### TOXICITY MEASURES:

<u>Chemical Name</u>	<u>LD50/LC50</u>
Alkoxyated polyamine	N.D.
Polyoxypropylenediamine	Oral LD50: Rat 242 mg/kg Dermal LD50: Rabbit 360 mg/kg
Amine compound	Oral LD50: Rat 4,290 mg/kg Dermal LD50: Rabbit 2500 µL/kg
Amine compound	Oral LD50: Rat 1,200 mg/kg Dermal LD50: Rat 1,280 mg/kg
Amine compound	N.D.
Polyethyleneimine	Oral LD50: Rat 1,350 mg/kg
Titanium dioxide	Oral LD50: Rat > 10,000 mg/kg Dermal LD50: rabbit > 5,000 mg/kg GHS LC50 (vapour): Acute toxicity point estimate 55 mg/l
Amine compound	Oral LD50: Rat 2140 µL/kg Dermal LD50: Rabbit 880 µL/kg

**Germ cell mutagenicity:** No classification proposed

**Carcinogenicity:** No classification proposed

**Reproductive toxicity:** No classification proposed

## 12. ECOLOGICAL INFORMATION

#### ECOTOXICITY:

<u>Chemical Name</u>	<u>Ecotoxicity</u>
Alkoxyated polyamine	N.D.
Polyoxypropylenediamine	N.D.
Amine compound	N.D.
Amine compound	N.D.
Amine compound	N.D.
Polyethyleneimine	N.D.
Titanium dioxide	N.D.
Amine compound	<u>Fish:</u> Pimephales promelas 1,950 - 2,460 mg/196 h flow-through Poecilia reticulata > 1,000 mg/196 h semi-static Oncorhynchus mykiss >= 100 mg/196 h semi-static <u>Invertebrates:</u> Daphnia magna 32 mg/148 h <u>Plants:</u> Pseudokirchneriella subcapitata 495 mg/172 h

**PERSISTENCE AND DEGRADABILITY:** Not determined for this product.

**BIOACCUMULATIVE:** Not determined for this product.

**MOBILITY IN SOIL:** Not determined for this product.

**OTHER ADVERSE EFFECTS:** Not determined for this product.

## 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Disposal should be done in accordance with Federal (40CFR Part 261), state and local environmental control regulations. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

## 14. TRANSPORT INFORMATION

#### US DOT Road

**Proper Shipping Name:** Amines, solid, corrosive, n.o.s.  
**Hazard Class:** 8  
**SECONDARY HAZARD:** None

UN/NA Number: 3259  
Packing Group: III  
Emergency Response Guide Number: 154

**IATA Cargo**

PROPER SHIPPING NAME: AMINES, SOLID, CORROSIVE, N.O.S.  
Hazard Class: 8  
HAZARD CLASS: None  
UN NUMBER: 3259  
PACKING GROUP: III  
EMS: 8L

**IMDG**

PROPER SHIPPING NAME: AMINES, SOLID, CORROSIVE, N.O.S.  
Hazard Class: 8  
HAZARD CLASS: None  
UN NUMBER: 3259  
PACKING GROUP: III  
EMS: F-A

The listed transportation classification applies to non-bulk shipments. It does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors. For the most accurate shipping information, refer to your transportation/compliance department.

<b>15. REGULATORY INFORMATION</b>
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**U.S. FEDERAL REGULATIONS: AS FOLLOWS:**

**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.:

None

**TOXIC SUBSTANCES CONTROL ACT:**

**INVENTORY STATUS**

The chemical substances in this product are on the active TSCA Section 8 Inventory or exempt.

**EXPORT NOTIFICATION**

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

<b>16. OTHER INFORMATION</b>
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Under HazCom 2012 it is optional to continue using the HMIS rating system. It is important to ensure employees have been trained to recognize the different numeric ratings associated with the HazCom 2012 and HMIS schemes.

**HMIS RATINGS - HEALTH: 3\* FLAMMABILITY: 1 PHYSICAL HAZARD: 0**

\* - Indicates a chronic hazard; see Section 2

**Revision:** Section 2, Section 11, Section 12

**Effective Date:** 06/14/2021

<b>DISCLAIMER</b>
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The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.