1. Identification of the Substance / Preparation

<table>
<thead>
<tr>
<th>Product identifier</th>
<th>Submerseal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other identifier or names</td>
<td>Submerseal System</td>
</tr>
<tr>
<td>UN ID number</td>
<td>None</td>
</tr>
<tr>
<td>Manufacturer Address</td>
<td>EMSEAL LLC 111 Royal Group Crescent Woodbury, Ontario L4H 1X9 Canada</td>
</tr>
<tr>
<td>Company Phone</td>
<td>(508) 836-0280 M-F 9am - 5pm</td>
</tr>
<tr>
<td>Emergency Phone</td>
<td>CHEMTREC (800) 424-9300 (24 Hours)</td>
</tr>
</tbody>
</table>

2. Hazardous Indentification

| Hazardous Classification | This product is not classified as hazardous when used as intended. |
| Signal Word | None |
| Pictograms | None |
| Emergency Overview: | No emergency requirements. |

3. Composition / Information on Ingredients

EMSEAL Submerseal is composed of polyurethane foam impregnated with a proprietary solid acrylic polymer bonded to a fully cured silicone sealant. It is classified as Non-Hazardous.

**NOTE:** Silicone facing is fully cured. The composition of the silicone in its liquid state is comprised of the following:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS #</th>
<th>% by Weight</th>
<th>GHS Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyltrimethoxysilane</td>
<td>1185-55-3</td>
<td>3.0 - 7.0</td>
<td>SELF CLASSIFICATION Classification: Not Applicable</td>
</tr>
</tbody>
</table>

Water and other components. Each of the other components are proprietary.
4. First Aid Measures

4.1 EYES: Flush with water for at least 15 minutes, and call physician if problems persist.

4.2 SKIN: Product may leave a sticky residue, and mild irritation if prolonged exposure.
Scrub with soapy water until adhesive is removed.

4.3 INGESTION: Do not eat – call physician if ingested.

5. Fire-fighting Measures

5.2 FLAMMABILITY: Slight. Material can support an open flame or smoldering ignition. The foam can melt while burning which can contribute fire to spread.

5.2 FLASH POINT: Unknown.

5.3 AUTO-IGNITION TEMPERATURE: Unknown.

5.4 EXTINGUISHING MEDIA: Large volumes of water, or ABC chemical may be appropriate for initial control or small volumes of impregnated foam.

5.5 HAZARDOUS DECOMPOSITION PRODUCTS: Carbon di/mon oxides will be formed as well as other noxious and toxic fumes upon combustion – do not breath combustion products.

6. Accidental Release Measures

If material is unusable pick up pieces and dispose of in accordance with local regulations; material and all components are non-toxic and normal landfill will most often be acceptable.

7. Handling and Storage

Store in original packaging below 35°C. There are no special handling instructions.

8. Exposure Controls / Personal Protection

8.1 RESPIRATORY PROTECTION: Not required
8.2 EYE PROTECTION: Not required
8.3 SKIN PROTECTION: Gloves of any material are suitable if desired, but not required. No other protection is required.

9. Physical and Chemical Properties

9.1 APPEARANCE: Dark grey / charcoal colored foam and white silicone with product identifying packaging.
9.2 ODOR: Slight characteristic odor.
9.3 PERCENT SOLIDS BY WEIGHT: 100%
9.4 PHYSICAL STATE: Solid
9.5 PERCENT VOLATILE: <1% wt/wt
9.6 DENSITY: 0.4g/cm³
9.7 DECOMPOSITION: > 300°C
9.8 SOLUBILITY IN WATER: None
10. Stability and Reactivity
Stable under normal conditions – avoid temperatures in excess of 300°C, strong acids and bases, and open flame.

11. Toxicological Information
Unknown.

12. Ecological Information
Unknown

13. Disposal Considerations
No known hazard. Dispose of in accordance with local regulations; material and all components are non-toxic and disposal in normal landfill will most often be acceptable.

14. Transportation Information
Not hazardous – safe for non-hazardous shipping.

15. Regulatory Information
Unknown.

16. Other Information
No other information provided.
SAFETY DATA SHEET
THE DOW CHEMICAL COMPANY

Product name: DOWSIL™ 748 Non-Corrosive Sealant

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: DOWSIL™ 748 Non-Corrosive Sealant

Recommended use of the chemical and restrictions on use
Identified uses: Adhesive, binding agents

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.
Skin sensitisation - Category 1

Label elements
Hazard pictograms

Signal word: WARNING!
Hazard
May cause an allergic skin reaction.

Precautionary statements
Prevention
Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves.

Response
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.

Disposal
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Sealant
This product is a mixture.

<table>
<thead>
<tr>
<th>Component</th>
<th>CASRN</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyltrimethoxysilane</td>
<td>1185-55-3</td>
<td>&gt;= 0.8 - &lt;= 1.4 %</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>&gt;= 0.2 - &lt;= 0.35 %</td>
</tr>
</tbody>
</table>

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 effects occur, consult a physician.

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. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands.

**Eye contact**: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

**Ingestion**: No emergency medical treatment necessary.

**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**: No specific antidote. 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 spray  Alcohol-resistant foam  Carbon dioxide (CO2)  Dry chemical

**Unsuitable extinguishing media**: None known.

**Special hazards arising from the substance or mixture**

**Hazardous combustion products**: Silicon oxides  Formaldehyde  Carbon oxides  Metal oxides

**Unusual Fire and Explosion Hazards**: Exposure to combustion products may be a hazard to health.

**Advice for firefighters**

**Fire Fighting Procedures**: Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

- Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

**Special protective equipment for firefighters**: In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**: Use personal protective equipment. Follow safe handling advice and personal protective equipment recommendations.
Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Wipe up or scrape up and contain for salvage or disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not get on skin or clothing. Do not swallow. Avoid contact with eyes. Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice.
Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Conditions for safe storage: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

<table>
<thead>
<tr>
<th>Component</th>
<th>Regulation</th>
<th>Type of listing</th>
<th>Value/Notation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyltrimethoxysilane</td>
<td>Dow IHG</td>
<td>TWA</td>
<td>7.5 ppm</td>
</tr>
<tr>
<td></td>
<td>Dow IHG</td>
<td>TWA</td>
<td>Skin Sensitizer</td>
</tr>
<tr>
<td>Methanol</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200 ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>STEL</td>
<td>250 ppm SKIN</td>
</tr>
<tr>
<td></td>
<td>OSHA Z-1</td>
<td>TWA</td>
<td>260 mg/m3 200 ppm</td>
</tr>
<tr>
<td></td>
<td>ACGIH</td>
<td>STEL</td>
<td>SKIN</td>
</tr>
</tbody>
</table>

Although some of the components of this product may have exposure guidelines, no exposure would be expected under normal handling conditions due to the physical state of the material. The following substance(s), which have Occupational Exposure Limit(s) (OEL), may be formed during handling or processing: Methanol.

Biological occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Control parameters</th>
<th>Biological specimen</th>
<th>Sampling time</th>
<th>Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
</table>
Methanol 67-56-1  Methanol  Urine  End of shift (As soon as possible after exposure ceases)  15 mg/l  ACGIH BEI

Exposure controls
Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

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. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). 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: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. When respiratory protection is required, use an approved positive-pressure self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>paste</td>
</tr>
<tr>
<td>Color</td>
<td>white</td>
</tr>
<tr>
<td>Odor</td>
<td>alcohol-like</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point (760 mmHg)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Property</td>
<td>Value</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------------------------------------------</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Evaporation Rate (Butyl Acetate = 1)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not classified as a flammability hazard</td>
</tr>
<tr>
<td>Lower explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosion limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Relative Vapor Density (air = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative Density (water = 1)</td>
<td>1.34</td>
</tr>
<tr>
<td>Water solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Dynamic Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Kinematic Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>The substance or mixture is not classified as oxidizing.</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No data available</td>
</tr>
<tr>
<td>Particle size</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**NOTE:** The physical data presented above are typical values and should not be construed as a specification.

### 10. STABILITY AND REACTIVITY

**Reactivity:** Not classified as a reactivity hazard.

**Chemical stability:** Stable under normal conditions.

**Possibility of hazardous reactions:** Can react with strong oxidizing agents.

**Conditions to avoid:** None known.

**Incompatible materials:** Oxidizing agents

**Hazardous decomposition products:** Formaldehyde. Methanol.

### 11. TOXICOLOGICAL INFORMATION

*Toxicological information appears in this section when such data is available.*

**Acute toxicity**

**Acute oral toxicity**

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.
As product: Single dose oral LD50 has not been determined.

Based on information for component(s):
LD50, > 5,000 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.

**Acute inhalation toxicity**
Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.
As product: The LC50 has not been determined.

**Skin corrosion/irritation**
Brief contact is essentially nonirritating to skin.

**Serious eye damage/eye irritation**
May cause slight temporary eye irritation.

**Sensitization**
Contains component(s) which have caused allergic skin sensitization in guinea pigs.

For respiratory sensitization:
No relevant information found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**
Evaluation of available data suggests that this material is not an STOT-SE toxicant.

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**
Based on available data for the component(s), repeated exposures are not anticipated to cause significant adverse effects.

**Carcinogenicity**
For the minor component(s): Lung fibrosis and tumors have been observed in rats exposed to titanium dioxide in two lifetime inhalation studies. Effects are believed to be due to overloading of the normal respiratory clearance mechanisms caused by the extreme study conditions. Workers exposed to titanium dioxide in the workplace have not shown an unusual incidence of chronic respiratory disease or lung cancer. Titanium dioxide was not carcinogenic in laboratory animals in lifetime feeding studies.

**Teratogenicity**
Methanol has caused birth defects in mice at doses nontoxic to the mother as well as slight behavioral effects in offspring of rats.

**Reproductive toxicity**
No specific, relevant data available for assessment.

**Mutagenicity**
Genetic toxicity studies on tested components were predominantly negative.
Aspiration Hazard
Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

**Methyltrimethoxysilane**

- **Acute dermal toxicity**
  LD50, Rabbit, male and female, > 9,500 mg/kg

- **Acute inhalation toxicity**
  LC50, Rabbit, male and female, 4 Hour, vapour, 51.6 mg/l

**Methanol**

- **Acute dermal toxicity**
  Effects of methanol are the same as observed via oral and inhalation exposure and include central nervous system (CNS) depression, visual impairment up to blindness, metabolic acidosis, with effects on organ systems such as liver, kidneys and heart, even death. LD50, Rabbit, 15,800 mg/kg

- **Acute inhalation toxicity**
  Easily attainable vapor concentrations may cause serious adverse effects, even death. At lower concentrations: May cause respiratory irritation and central nervous system depression. Symptoms may include headache, dizziness and drowsiness, progressing to incoordination and unconsciousness. Inhalation of methanol may cause effects ranging from headache, narcosis and visual impairment to metabolic acidosis, blindness, and even death. Effects may be delayed.
  LC50, Rat, 4 Hour, vapour, 3 mg/l

12. ECOLOGICAL INFORMATION

*Ecotoxicological information appears in this section when such data is available.*

**Toxicity**

**Methyltrimethoxysilane**

- **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, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 110 mg/l, OECD Test Guideline 203 or Equivalent

- **Acute toxicity to aquatic invertebrates**
  EC50, Daphnia magna (Water flea), flow-through test, 48 Hour, > 122 mg/l, OECD Test Guideline 202

- **Acute toxicity to algae/aquatic plants**
  ErC50, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, > 120 mg/l, OECD Test Guideline 201
NOEC, Pseudokirchneriella subcapitata (green algae), 72 Hour, Growth rate inhibition, 120 mg/l, OECD Test Guideline 201

Methanol

**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, Bluegill sunfish (Lepomis macrochirus), flow-through test, 96 Hour, 15,400 mg/l

**Acute toxicity to aquatic invertebrates**
LC50, Daphnia magna (Water flea), 48 Hour, > 10,000 mg/l

**Acute toxicity to algae/aquatic plants**
ErC50, Pseudokirchneriella subcapitata (green algae), 96 Hour, Growth rate, 22,000 mg/l, OECD Test Guideline 201 or Equivalent

**Toxicity to bacteria**
IC50, activated sludge, 3 Hour, Respiration rates., > 1,000 mg/l, OECD Test Guideline 209

**Chronic toxicity to fish**
NOEC, Oryzias latipes (Orange-red killifish), 200 Hour, 15,800 mg/l

**Persistence and degradability**

**Methyltrimethoxysilane**

**Biodegradability:** No relevant data found.

**Methanol**

**Biodegradability:** Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

**Theoretical Oxygen Demand:** 1.50 mg/mg

**Chemical Oxygen Demand:** 1.49 mg/mg Dichromate

**Biological oxygen demand (BOD)**

<table>
<thead>
<tr>
<th>Incubation Time</th>
<th>BOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 d</td>
<td>72 %</td>
</tr>
<tr>
<td>20 d</td>
<td>79 %</td>
</tr>
</tbody>
</table>

**Photodegradation**

**Test Type:** Half-life (indirect photolysis)

**Sensitization:** OH radicals

**Atmospheric half-life:** 8 - 18 d

**Method:** Estimated.

**Bioaccumulative potential**

**Methyltrimethoxysilane**
**Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
**Partition coefficient:** n-octanol/water (log Pow): -2.36

**Methanol**
- **Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
- **Partition coefficient:** n-octanol/water (log Pow): -0.77 Measured
- **Bioconcentration factor (BCF):** < 10 Leuciscus idus (Golden orfe)  Measured

**Mobility in soil**

**Methyltrimethoxysilane**
- No relevant data found.

**Methanol**
- Potential for mobility in soil is very high (Koc between 0 and 50).
- **Partition coefficient (Koc):** 0.44 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: Recycler. Reclaimer. Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section10 Regulatory Information, MSDS Section 15

**Treatment and disposal methods of used packaging:** Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

### 14. TRANSPORT INFORMATION

**DOT**
- Not regulated for transport

**Classification for SEA transport (IMO-IMDG):**
- **Transport in bulk according to Annex I or II of MARPOL 73/78 and the**
  - Not regulated for transport
  - Consult IMO regulations before transporting ocean bulk
15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
Respiratory or skin sensitisation

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 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.

Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA) Section 103
Calculated RQ exceeds reasonably attainable upper limit.

<table>
<thead>
<tr>
<th>Components</th>
<th>CASRN</th>
<th>RQ (RCRA Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>5000 lbs RQ</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>100 lbs RQ (F003)</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>5000 lbs RQ</td>
</tr>
<tr>
<td>Methanol</td>
<td>67-56-1</td>
<td>100 lbs RQ (F003)</td>
</tr>
</tbody>
</table>

Pennsylvania Right To Know
The following chemicals are listed because of the additional requirements of Pennsylvania law:

<table>
<thead>
<tr>
<th>Components</th>
<th>CASRN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium carbonate treated with stearic acid</td>
<td>Not available</td>
</tr>
<tr>
<td>Dimethyl siloxane, trimethoxysilyl-terminated</td>
<td>Not Assigned</td>
</tr>
<tr>
<td>Dimethyl Siloxane, Dimethylvinylsiloxy-terminated</td>
<td>68083-19-2</td>
</tr>
<tr>
<td>Titanium dioxide</td>
<td>13463-67-7</td>
</tr>
</tbody>
</table>

California Prop. 65
WARNING: This product can expose you to chemicals including Titanium dioxide, Quartz, which is/are known to the State of California to cause cancer, and Methanol, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.
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

Hazard Rating System

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2/</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

Revision
Identification Number: 2307251 / A001 / Issue Date: 02/09/2018 / Version: 7.0
Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td>ACGIH BEI</td>
<td>ACGIH - Biological Exposure Indices (BEI)</td>
</tr>
<tr>
<td>Dow IHG</td>
<td>Dow Industrial Hygiene Guideline</td>
</tr>
<tr>
<td>OSHA Z-1</td>
<td>USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants</td>
</tr>
<tr>
<td>SKIN</td>
<td>Absorbed via skin</td>
</tr>
<tr>
<td>STEL</td>
<td>Short-term exposure limit</td>
</tr>
<tr>
<td>TWA</td>
<td>Time weighted average</td>
</tr>
</tbody>
</table>

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire
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.

US
1. Identification of the Substance/Preparation and of the Company/Undertaking

Product Identifier

Product name EPOXY ADHESIVE PART A

Other Means of Identification

Product Code NOMAD-PART A
Product Technology Epoxy A side

Restrictions on use: Do not use this product for any use other than intended

Supplier Address
Northern Manufacturing
111 Royal Group Crescent
Woodbridge, ON. Canada
L4H 1X9

Company Phone Number 508-836-0280 (8AM - 5PM EST) (M-F)
Emergency Telephone Chemtrec 1-800-424-9300 (24 Hours)

2. Hazards Identification

Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS). This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

| Skin corrosion/irritation          | Category 2 |
| Serious eye damage/eye irritation  | Category 2 |
| Skin sensitization                | Category 1 |

EMERGENCY OVERVIEW

WARNING

Hazard Statements
Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
Appearance  Viscous  Off white  Physical State  Paste  Odor  Mild

Precautionary Statements - Prevention
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves, protective clothing, eye protection, face protection
Avoid breathing dust, fumes, or vapors
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response
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 eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

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

Precautionary Statements - Disposal
Dispose of contents/container in accordance with local/regional/international regulations

Hazards Not Otherwise Classified (HNOC)

Other Information
Toxic to aquatic life with long lasting effects
61.69% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No</th>
<th>Weight-%</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A diglycidyl ether resin</td>
<td>25068-38-6</td>
<td>20 - 40</td>
<td>*</td>
</tr>
<tr>
<td>Proprietary resin</td>
<td>17557-23-2</td>
<td>1 - 10</td>
<td>*</td>
</tr>
</tbody>
</table>

* The exact percentage (concentration) of composition may have been withheld as a trade secret.

4. First Aid Measures

FIRST AID MEASURES

General Advice
Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Eye Contact
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
Skin Contact  
Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.

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

Ingestion  
Not an expected route of exposure. If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Self-Protection of the First Aider  
First Aider: Pay attention to self-protection. Use personal protective equipment as required.

Most Important Symptoms and Effects, Both Acute and Delayed

Symptoms  
No information available.

Indication of Any Immediate Medical Attention and Special Treatment Needed

Note to Physicians  
Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media  
Use CO2, dry chemical, or foam

Unsuitable Extinguishing Media  
Caution: Use of water spray when fighting fire may be inefficient.

Specific Hazards Arising From the Chemical

Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water ways. Dike for water control.

Hazardous Combustion Products  
Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous Decomposition Products for additional information.

Explosion Data

Sensitivity to Mechanical Impact  
None.

Sensitivity to Static Discharge  
None.

Protective Equipment and Precautions for Firefighters

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

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Personal Precautions  
Ventilate affected area. Extremely slippery when spilled.

Other Information  
Use personal protective equipment as required.

For Emergency Responders  
Use personal protective equipment as required.

Environmental Precautions

Environmental Precautions  
See Section 12 for additional Ecological Information. Do not allow into any sewer, on the ground or into any body of water.
Methods for Containment  Prevent further leakage or spillage if safe to do so.

Methods for cleaning up  Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for Safe Handling
Advice on Safe Handling  Handle in accordance with good industrial hygiene and safety practice.

Conditions for Safe Storage, Including any Incompatibilities
Storage Conditions  Keep containers tightly closed in a dry, cool and well-ventilated place. Store and handle away from heat, flames and oxidizing materials.


8. Exposure Controls/Personal Protection

Control Parameters
Exposure Guidelines
Appropriate Engineering Controls

Engineering Controls  Showers
Eyewash stations
Ventilation systems

Individual Protection Measures, Such As Personal Protective Equipment

Eye/Face Protection  Splash Goggles.

Skin and Body Protection  Wear protective gloves and protective clothing.

Respiratory Protection  If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene Considerations  Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on Basic Physical and Chemical Properties

Physical State  Paste
Appearance  Viscous
Color  Off white
Odor  Mild
Odor Threshold  No information available

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>pH</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Melting Point/Freezing Point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Boiling Range</td>
<td>&gt; 250 °C</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 220 °C</td>
<td></td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (Solid, Gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper Flammability Limits</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>
Specific Gravity: 1.68
Water Solubility: Negligible
Solubility in Other Solvents: No information available
Partition Coefficient: No information available
Autoignition Temperature: No information available
Decomposition Temperature: No information available
Kinematic Viscosity: 464286 cSt
Dynamic Viscosity: 780000 cps @ 25°C
Explosive Properties: Not an explosive
Oxidizing Properties: No information available

Softening Point: No information available
Molecular Weight: No information available
VOC Content (%): <1g/L
Density: 14.0 pounds/gallon
Bulk Density: No information available

10. Stability and Reactivity

Reactivity

No data available

Chemical Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
Hazardous polymerization does not occur.

Conditions to Avoid
Keep out of reach of children. Extremes of temperature and direct sunlight. Mixture with or exposure to incompatible materials.

Incompatible Materials

Hazardous Decomposition Products

11. Toxicological Information

Information on Likely Routes of Exposure

Product Information
The product has not been tested

Inhalation
Remove to fresh air.

Eye Contact
Vapor may cause irritation. Avoid contact with eyes. Contact with eyes may cause irritation.

Skin Contact
Avoid contact with skin. May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion
Not an expected route of exposure. May be harmful if swallowed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50 (Rat)</th>
<th>Dermal LD50 (Rabbit)</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A diglycidyl ether resin</td>
<td>11400 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>25068-38-6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Proprietary resin</td>
<td>4500 mg/kg (Rat)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Effect</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>Irritating to skin.</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Irritating to eyes.</td>
</tr>
<tr>
<td>Irritation</td>
<td>Irritating to eyes and skin.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>May cause sensitization of susceptible persons.</td>
</tr>
<tr>
<td>Germ Cell Mutagenicity</td>
<td>No information available.</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.</td>
</tr>
<tr>
<td>Reproductive Toxicity</td>
<td>No information available.</td>
</tr>
<tr>
<td>STOT - Single Exposure</td>
<td>No information available.</td>
</tr>
<tr>
<td>STOT - Repeated Exposure</td>
<td>No information available.</td>
</tr>
<tr>
<td>Chronic Toxicity</td>
<td>Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons.</td>
</tr>
<tr>
<td>Sensitization</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

Numerical Measures of Toxicity - Product Information

Unknown Acute Toxicity: 61.69% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral): 9679 mg/kg

12. Ecological Information

Ecotoxicity
No information available
66.27998% of the mixture consists of components(s) of unknown hazards to the aquatic environment

Persistence and Degradability
No information available

Other Adverse Effects
No information available

13. Disposal Considerations

Waste Treatment Methods

Disposal of Wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging: Do not reuse container.

14. Transport Information

DOT: Not regulated

ICAO (air): 

IATA: 
15. Regulatory Information

**International Inventories**

**TSCA**

All components of this product are either exempt or included on the TSCA Inventory in compliance with the Toxic Substances Control Act.

**Legend:**

- **TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- **DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

- **Acute Health Hazard**: Yes
- **Chronic Health Hazard**: Yes
- **Fire Hazard**: No
- **Sudden Release of Pressure Hazard**: No
- **Reactive Hazard**: No

**CWA (Clean Water Act)**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

**CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**US State Regulations**

The following chemicals may be contained in this product in de minimis amounts not required for listing in section 3. However, these chemicals do appear on some state Right-to-Know (RTK) and/or other hazardous substance lists. Please check your state's listings for more information.

**California Proposition 65**
This product contains the following Proposition 65 chemicals:

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Titanium dioxide - 13463-67-7</td>
<td>Carcinogen</td>
</tr>
<tr>
<td>Glycidyl phenyl ether - 122-60-1</td>
<td>Carcinogen Male Reproductive</td>
</tr>
<tr>
<td>Epichlorohydrin - 106-89-8</td>
<td>Carcinogen Male Reproductive</td>
</tr>
<tr>
<td>Silicon dioxide - 14808-60-7</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

**U.S. State Right-to-Know Regulations**

This product does not contain any substances regulated by state right-to-know regulations.

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not applicable

**16. Other Information**

<table>
<thead>
<tr>
<th>HMIS</th>
<th>Health Hazards</th>
<th>Flammability</th>
<th>Physical Hazards</th>
<th>Personal Protection</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>X</td>
</tr>
</tbody>
</table>

Prepared by Compliance
Issue Date 29-Jun-2015
Revision Date 07-May-2018

**Revision note**

No information available

**Disclaimer**

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

*End of Safety Data Sheet*
1. Identification of the Substance/Preparation and of the Company/Undertaking

Product identifier
Product Name EPOXY ADHESIVE PART B

Other means of identification
Product Code(s) NOMAD-PART B
Product Technology Epoxy B side

Restrictions on use: Do not use this product for any use other than intended

Manufacturer Address
Northern Manufacturing
111 Royal Group Crescent
Woodbridge, ON. Canada
L4H 1X9

Company Phone Number 508-836-0280 (8AM - 5PM EST) (M-F)
Emergency Telephone Chemtrec 1-800-424-9300 (24 Hours)

2. Hazards Identification

Classification

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS). This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

<table>
<thead>
<tr>
<th>Hazard Statement</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 1</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>Category 1</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Category 2</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Category 2</td>
</tr>
</tbody>
</table>

Emergency Overview

DANGER

Hazard statements
Harmful if swallowed
Causes skin irritation
Causes serious eye damage
May cause allergy or asthma symptoms or breathing difficulties if inhaled
May cause an allergic skin reaction
Suspected of causing genetic defects
Suspected of damaging fertility or the unborn child

Appearance Viscous Black  Physical state Paste  Odor Mild amine odor

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust, fumes, or vapors
In case of inadequate ventilation wear respiratory protection
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention
IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing
If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

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

Precautionary Statements - Disposal
Dispose of contents/container in accordance with local/regional/international regulations

Hazards Not Otherwise Classified (HNOC)

Other Information
May be harmful in contact with skin. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life
89.596% of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/Information on Ingredients

Substance

<table>
<thead>
<tr>
<th>Chemical Family</th>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxy B Side</td>
<td>N-Aminoethylpiperazine</td>
<td>140-31-8</td>
<td>1 - 3</td>
<td>*</td>
</tr>
</tbody>
</table>
4. First Aid Measures

**Description of first aid measures**

**General advice**
Use first aid treatment according to the nature of the injury. For further assistance, contact your local Poison Control Center. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

**Eye contact**
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call a physician if irritation persists.

**Skin contact**
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If symptoms persist, call a physician. Wash contaminated clothing before reuse.

**Inhalation**
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is irregular or stopped, administer artificial respiration. Administer oxygen if breathing is difficult. If symptoms persist, call a physician.

**Ingestion**
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a physician or Poison Control Center immediately.

**Self-protection of the first aider**
First Aider: Pay attention to self-protection. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**Most important symptoms and effects, both acute and delayed**

**Symptoms**
May cause allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians**
Treat symptomatically.

5. Fire-Fighting Measures

**Suitable Extinguishing Media**
Foam, Dry Chemical, Carbon Dioxide (CO2);

**Unsuitable extinguishing media**
Caution: Use of water spray when fighting fire may be inefficient.

**Specific hazards arising from the chemical**
Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water ways. Dike for water control.

**Hazardous combustion products**
Irritating or toxic substances may be emitted upon burning, combustion or decomposition. See Section 10 Hazardous Decomposition Products for additional information.

**Explosion data**

**Sensitivity to Mechanical Impact**
None.
Sensitivity to Static Discharge

None.

Protective equipment and precautions for firefighters

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

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, especially in confined areas.

Other Information

Use personal protective equipment as required.

For Emergency Responders

Use personal protective equipment as required.

Environmental precautions

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so.

Methods for cleaning up

Pick up and transfer to properly labeled containers.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible materials

Acids; Bases; Strong oxidizing agents; Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide.

8. Exposure Controls/Personal Protection

Control parameters

Exposure Limits

The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethyleneetriamine 111-40-0</td>
<td>TWA: 1 ppm S*</td>
<td>(vacated) TWA: 1 ppm TWA: 4 mg/m³</td>
<td>TWA: 1 ppm TWA: 4 mg/m³</td>
</tr>
<tr>
<td>1,2-Ethylene diamine 107-15-3</td>
<td>TWA: 10 ppm</td>
<td>TWA: 10 ppm TWA: 25 mg/m³</td>
<td>(vacated) TWA: 10 ppm TWA: 25 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering controls

Showers
Eyewash stations
Ventilation systems
Individual protection measures, such as personal protective equipment

Eye/face protection  
Splash Goggles. Avoid contact with eyes.

Skin and body protection  
Wear protective gloves and protective clothing.

Respiratory protection  
If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General hygiene considerations  
Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks</th>
<th>Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Paste</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Viscous</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Mild amine odor</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Melting point / freezing point</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 110 °C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Relative density</td>
<td>1.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Negligible</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kinematic viscosity</td>
<td>N/A cSt</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>N/A cps @ 25° C</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not an explosive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Information</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Softening point</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Molecular weight</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>&lt;1 g/L</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid Density</td>
<td>16.3 pounds/gallon</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bulk density</td>
<td>N/A</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

10. Stability and Reactivity

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.
Possibility of hazardous reactions
None under normal processing.

Conditions to avoid

Incompatible materials
Acids; Bases; Strong oxidizing agents; Product slowly corrodes copper, aluminum, zinc and galvanized surfaces. Reaction with peroxides may result in violent decomposition of peroxide.

Hazardous decomposition products
Carbon oxides; Nitrogen oxides (NOx). Thermal decomposition can lead to release of toxic/corrosive gases and vapors. Nitric acid. Ammonia. Flammable hydrocarbon fragments.

11. Toxicological Information

Information on likely routes of exposure

Product Information
The product has not been tested.

Inhalation
Remove to fresh air.

Eye contact
Avoid contact with eyes. Irritating to eyes.

Skin contact
Avoid contact with skin. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.

Ingestion
Not an expected route of exposure. Do NOT taste or swallow. Harmful if swallowed.

Caution - This preparation contains a substance not yet fully tested

Component Information

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>ATEMix (oral)</th>
<th>ATEMix (dermal)</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Aminoethylpiperazine 140-31-8</td>
<td>= 2140 µL/kg (Rat)</td>
<td>= 880 µL/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>Bisphenol A 80-05-7</td>
<td>= 3300 mg/kg (Rat)</td>
<td>= 3 mL/kg (Rabbit)</td>
<td>&gt; 0.17 mg/L (Rat) 6 h</td>
</tr>
<tr>
<td>Diethylenetriamine 111-40-0</td>
<td>= 1080 mg/kg (Rat)</td>
<td>= 672 mg/kg (Rabbit)</td>
<td>= 70 mg/L (Rat) 4 h</td>
</tr>
<tr>
<td>Phenol, 4-nonyl-, branched 84852-15-3</td>
<td>= 1300 mg/kg (Rat)</td>
<td>= 2031 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>4-tert-Butylphenol 98-64-4</td>
<td>= 3250 µL/kg (Rat)</td>
<td>= 2318 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
<tr>
<td>1,2-Ethylene diamine 107-15-3</td>
<td>= 637 mg/kg (Rat)</td>
<td>= 560 mg/kg (Rabbit)</td>
<td>-</td>
</tr>
</tbody>
</table>

Information on toxicological effects

N/A.

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

Skin corrosion/irritation
Irritating to skin. Repeated or prolonged contact may cause skin irritation and dermatitis.

Serious eye damage/eye irritation
Irritating to eyes.

Irritation
Irritating to eyes and skin.

Sensitization
May cause sensitization by inhalation and skin contact.

Germ cell mutagenicity
Contains a known or suspected mutagen.

Carcinogenicity
This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Reproductive toxicity
Category 2: Substances which should be regarded as if they impair fertility in humans.

STOT - single exposure
N/A.

STOT - repeated exposure
N/A.

Chronic Toxicity
Repeated or prolonged skin contact may cause skin irritation and/or dermatitis and sensitization of susceptible persons. Contains a known or suspected reproductive toxin. May cause harm to the unborn child. May produce an allergic reaction.

Target organ effects
Eyes, Skin, Blood.

Aspiration hazard
N/A.

Numerical measures of toxicity - Product Information

<table>
<thead>
<tr>
<th>Physical property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashpoint</td>
<td>-</td>
</tr>
<tr>
<td>Boiling point</td>
<td>-</td>
</tr>
<tr>
<td>Melting point</td>
<td>-</td>
</tr>
<tr>
<td>Solubility</td>
<td>-</td>
</tr>
</tbody>
</table>

Page 6 / 10
Unknown acute toxicity
89.596% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document
ATEmix (oral) 1,441.00 mg/kg
ATEmix (dermal) 2.197.00 mg/kg
ATEmix (inhalation-dust/mist) 694.00 mg/l

12. Ecological Information

Ecotoxicity

Very toxic to aquatic life with long lasting effects
91.108% of the mixture consists of component(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Aminoethylpiperazine 140-31-8</td>
<td>495: 72 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>100: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 1950 - 2460: 96 h Pimephales promelas mg/L LC50 flow-through 1000: 96 h Poecilia reticulata mg/L LC50 semi-static</td>
<td>32: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Bisphenol A 80-05-7</td>
<td>2.5: 96 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>9.9: 96 h Brachydanio rerio mg/L LC50 static 4.0 - 5.5: 96 h Pimephales promelas mg/L LC50 static 4: 96 h Oncorhynchus mykiss mg/L LC50 3.6 - 5.4: 96 h Pimephales promelas mg/L LC50</td>
<td>9.2 - 11.4: 48 h Daphnia magna mg/L EC50 Static 3.9: 48 h Daphnia magna mg/L EC50 10.2: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Diethylenetriamine 111-40-0</td>
<td>345.6: 96 h Pseudokirchneriella subcapitata mg/L EC50 592: 96 h Desmodesmus subsipicatus mg/L EC50 1164: 72 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>1014: 96 h Poecilia reticulata mg/L LC50 semi-static 430: 96 h Poecilia reticulata mg/L LC50 static</td>
<td>37: 24 h Daphnia magna mg/L EC50 16: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>Phenol, 4-nonyl-, branched 84852-15-3</td>
<td>0.16 - 0.72: 72 h Pseudokirchneriella subcapitata mg/L EC50 0.48: 96 h Pseudokirchneriella subcapitata mg/L EC50 static 1.3: 72 h Desmodesmus subsipicatus mg/L EC50</td>
<td>0.135: 96 h Pimephales promelas mg/L LC50 flow-through 0.1351: 96 h Lepomis macrochirus mg/L LC50 flow-through</td>
<td>0.14: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>4-tert-Butylphenol 98-54-4</td>
<td>0.06 - 0.16: 72 h Pseudokirchneriella subcapitata mg/L EC50 3.4: 4.5: 48 h Daphnia magna mg/L EC50 Static 3.9: 48 h Daphnia magna mg/L EC50</td>
<td>6.9: 96 h Cyprinus carpio mg/L LC50 static 4.71 - 5.62: 96 h Pimephales promelas mg/L LC50 flow-through</td>
<td></td>
</tr>
<tr>
<td>1,2-Ethylene diamine 107-15-3</td>
<td>121: 96 h Pseudokirchneriella subcapitata mg/L EC50 645: 72 h Pseudokirchneriella subcapitata mg/L EC50</td>
<td>115.7: 96 h Pimephales promelas mg/L LC50 semi-static 191 - 254: 96 h Pimephales promelas mg/L LC50 flow-through 98.6 - 131.6: 96 h Pimephales promelas mg/L LC50 static 180 - 560: 96 h Poecilia reticulata mg/L LC50 semi-static</td>
<td>17: 48 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

Persistence and degradability
N/A

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Aminoethylpiperazine 140-31-8</td>
<td>-1.48</td>
</tr>
<tr>
<td>Bisphenol A 80-05-7</td>
<td>2.2</td>
</tr>
<tr>
<td>Diethylenetriamine 111-40-0</td>
<td>-1.3</td>
</tr>
<tr>
<td>4-tert-Butylphenol 98-54-4</td>
<td>2.44</td>
</tr>
<tr>
<td>1,2-Ethylene diamine 107-15-3</td>
<td>-1.221</td>
</tr>
</tbody>
</table>

Other adverse effects
Ozone depletion potential (ODP) N/A

13. Disposal Considerations

Waste treatment methods

Disposal of Wastes
Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging
Do not reuse container.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylenetriamine</td>
<td>Toxic</td>
</tr>
<tr>
<td>111-40-0</td>
<td></td>
</tr>
<tr>
<td>1,2-Ethylene diamine</td>
<td>Toxic</td>
</tr>
<tr>
<td>107-15-3</td>
<td></td>
</tr>
</tbody>
</table>

14. Transport Information

DOT
Not regulated

ICAO (air)
Not regulated

IATA
Not regulated

IMDG
Not regulated

15. Regulatory Information

International Inventories
TSCA
All components of this product are either exempt or included on the TSCA Inventory in compliance with the Toxic Substances Control Act.

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

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

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A - 80-05-7</td>
<td>80-05-7</td>
<td>1 - 3</td>
<td>1.0</td>
</tr>
<tr>
<td>Phenol, 4-nonyl-, branched - 84852-15-3</td>
<td>84852-15-3</td>
<td>&lt;1.0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

SARA 311/312 Hazard Categories

Acute Health Hazard: Yes
Chronic Health Hazard: Yes
Fire Hazard: No
Sudden Release of Pressure Hazard: No
Reactive Hazard: No
CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Ethlenediamine</td>
<td>5000 lb</td>
<td></td>
<td>X</td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,2-Ethylenediamine</td>
<td>5000 lb</td>
<td>5000 lb</td>
<td>RQ 5000 lb final RQ</td>
</tr>
<tr>
<td>107-15-3</td>
<td></td>
<td></td>
<td>RQ 2270 kg final RQ</td>
</tr>
</tbody>
</table>

US State Regulations

The following chemicals may be contained in this product in de minimis amounts not required for listing in section 3. However, these chemicals do appear on some state Right-to-Know (RTK) and/or other hazardous substance lists. Please check your state's listings for more information.

California Proposition 65
This product contains the following Proposition 65 chemicals

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bisphenol A - 80-05-7</td>
<td>Female Reproductive</td>
</tr>
<tr>
<td>ethanol - 64-17-5</td>
<td>Carcinogen</td>
</tr>
<tr>
<td></td>
<td>Developmental</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Aminooethylpiperazine</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>140-31-8</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bisphenol A</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>80-05-7</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diethylenetriamine</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>111-40-0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1,2-Ethylenediamine</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>107-15-3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number  Not applicable

16. Other Information

NFPA
Health hazards 0  Flammability N/A  Instability N/A  Physical and chemical properties - Personal Protection X

HMIS
Health hazards 2*  Flammability 1  Physical hazards 0

Chronic Hazard Star Legend
* = Chronic Health Hazard

Prepared By  Key Polymer Corp Compliance
Issuing Date  05-Aug-2016
Revision Date  07-May-2018

Revision Note
N/A

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

End of Safety Data Sheet