



# POLYGEM

Revision date 09-Sep-2025

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** Part A: 519HT

### Other means of identification

**Product Code(s)** FG-2297A

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended use** Ceramic Tile Adhesive

### Restrictions on use

### Details of the supplier of the safety data sheet

#### Supplier Address

Polygem, 5600 Lower Macungie Rd, Macungie, PA 18062, USA, Phone: +01.610.252.5800, www.smooth-on.com, sds@smooth-on.com

**E-mail** sds@smooth-on.com

### Emergency telephone number

**Emergency Telephone** Chemtel: US: 1-800.255.3924; International: 1-813.248.0585

## 2. Hazard(s) identification

### Classification

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

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements



Warning

**Hazard statements**

H315 - Causes skin irritation  
 H317 - May cause an allergic skin reaction  
 H320 - Causes eye irritation

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling.  
 Avoid breathing dust, fume, gas, mist, vapors and spray.  
 Contaminated work clothing must not be allowed out of the workplace.  
 Wear protective gloves.

**Precautionary Statements - Response**

Specific treatment (see supplemental first aid instructions on this label).  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 If eye irritation persists: Get medical advice/attention.  
 IF ON SKIN: Wash with plenty of water and soap.  
 Take off contaminated clothing and wash it before reuse.  
 If skin irritation or rash occurs: Get medical advice/attention.

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

**Other information**

Toxic to aquatic life with long lasting effects.

### 3. Composition/information on ingredients

**Substance**

Not applicable.

**Mixture**

| Chemical name   | CAS No.    | Weight-% | Trade secret |
|---|------------|----------|--------------|
| Oxirane,<br>2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer | 25085-99-8 | 60-80    | *            |
| Phenol, polymer with formaldehyde,<br>glycidyl ether                                  | 28064-14-4 | 7-13     | *            |
| Oxirane, [[[2-ethylhexyl)oxy]methyl]-   | 2461-15-6  | 1-5      | *            |
| Quartz  | 14808-60-7 | 0.1-1    | *            |

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

### 4. First-aid measures

**Description of first aid measures**

|   |   |
|---|---|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance.  |
| <b>Inhalation</b>                         | Remove to fresh air. Get medical attention immediately if symptoms occur.   |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Get medical attention if irritation develops and persists. Remove contact lenses, if present and easy to do. Continue rinsing. |
| <b>Skin contact</b>                       | May cause an allergic skin reaction. In the case of skin irritation or allergic reactions see a physician. Wash off immediately with soap and plenty of water for at least 15 minutes.  |
| <b>Ingestion</b>                          | Rinse mouth. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.   |
| <b>Self-protection of the first aider</b> | Avoid contact with skin, eyes or clothing. Wear personal protective clothing (see section 8).   |

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

|                            |                           |
|----------------------------|---------------------------|
| <b>Symptoms</b>            | Itching. Rashes. Hives.   |
| <b>Effects of Exposure</b> | No information available. |

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

|                           |  |
|---------------------------|--|
| <b>Note to physicians</b> | May cause sensitization in susceptible persons. Treat symptomatically. |
|---------------------------|--|

**5. Fire-fighting measures**

|   |  |
|---|--|
| <b>Suitable Extinguishing Media</b>                                   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.                            |
| <b>Large Fire</b>   | CAUTION: Use of water spray when fighting fire may be inefficient.   |
| <b>Unsuitable extinguishing media</b>                                 | Do not scatter spilled material with high pressure water streams.  |
| <b>Specific hazards arising from the chemical</b>                     | Product is or contains a sensitizer. May cause sensitization by skin contact.  |
| <b>Explosion data</b>   |  |
| <b>Sensitivity to mechanical impact</b>                               | None.  |
| <b>Sensitivity to static discharge</b>                                | None.  |
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

**6. Accidental release measures****Personal precautions, protective equipment and emergency procedures**

|                             |  |
|-----------------------------|--|
| <b>Personal precautions</b> | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. |
| <b>Other information</b>    | Refer to protective measures listed in Sections 7 and 8.   |

**Methods and material for containment and cleaning up**

- Methods for containment** Prevent further leakage or spillage if safe to do so.
- Methods for cleaning up** Pick up and transfer to properly labeled containers.
- Prevention of secondary hazards** Clean contaminated objects and areas thoroughly observing environmental regulations.

**7. Handling and storage**

**Precautions for safe handling**

**Advice on safe handling** Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

**Conditions for safe storage, including any incompatibilities**

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

**8. Exposure controls/personal protection**

**Control Parameters**

**Exposure Limits**

| Chemical name        | ACGIH TLV  | OSHA PEL  | NIOSH   |
|----------------------|--|---|---|
| Quartz<br>14808-60-7 | TWA: 0.025 mg/m <sup>3</sup> respirable particulate matter | TWA: 50 µg/m <sup>3</sup><br>(vacated) TWA: 0.1 mg/m <sup>3</sup> respirable dust<br>: (250)/(%SiO <sub>2</sub> + 5) mppcf<br>TWA respirable fraction<br>: (10)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup> TWA respirable fraction | TWA: 0.05 mg/m <sup>3</sup> ; respirable dust<br>IDLH: 50 mg/m <sup>3</sup> respirable dust |

**Appropriate engineering controls**

**Engineering controls** Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

- Eye/face protection** Wear safety glasses with side shields (or goggles).
- Hand protection** Wear suitable gloves.
- Skin and body protection** Wear suitable protective clothing. Long sleeved clothing.
- Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required. Use appropriate respiratory protection.
- General hygiene considerations** Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Avoid contact with skin, eyes or clothing.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

|                |                          |
|----------------|--------------------------|
| Physical state | Paste / Gel              |
| Appearance     | Paste / Gel              |
| Color          | gray                     |
| Odor           | No information available |
| Odor threshold | No information available |

| <u>Property</u>                         | <u>Values</u>     | <u>Remarks • Method</u> |
|---|-------------------|-------------------------|
| pH                                      | No data available | None known              |
| pH (as aqueous solution)                |                   | None known              |
| Melting point / freezing point          | No data available | None known              |
| Initial boiling point and boiling range | No data available | None known              |
| Flash point                             | No data available | None known              |
| Evaporation rate                        | No data available | None known              |
| Flammability                            | No data available | None known              |
| Flammability Limit in Air               |                   | None known              |
| Upper flammability or explosive limits  | No data available |                         |
| Lower flammability or explosive limits  | No data available |                         |
| Vapor pressure                          | No data available | None known              |
| Relative vapor density                  | No data available | None known              |
| Relative density                        | 1.15              | None known              |
| Water solubility                        | No data available | None known              |
| Solubility(ies)                         | No data available | None known              |
| Partition coefficient                   | No data available | None known              |
| Autoignition temperature                | No data available | None known              |
| Decomposition temperature               |                   | None known              |
| Kinematic viscosity                     | No data available | None known              |
| Dynamic viscosity                       | No data available | None known              |

### Other information

|                      |                          |
|----------------------|--------------------------|
| Explosive properties | No information available |
| Oxidizing properties | No information available |
| Softening point      | No information available |
| Molecular weight     | No information available |
| VOC content          | No information available |
| Liquid Density       | No information available |
| Bulk density         | No information available |

## 10. Stability and reactivity

|                                    |  |
|------------------------------------|--|
| Reactivity                         | No information available.                            |
| Chemical stability                 | Stable under normal conditions.                      |
| Possibility of hazardous reactions | None under normal processing.                        |
| Conditions to avoid                | None known based on information supplied.            |
| Incompatible materials             | Strong acids. Strong bases. Strong oxidizing agents. |
| Hazardous decomposition products   | None known based on information supplied.            |

## 11. Toxicological information

**Information on likely routes of exposure**

**Product Information**

- Inhalation** Specific test data for the substance or mixture is not available. May cause irritation of respiratory tract.
- Eye contact** Specific test data for the substance or mixture is not available. Causes eye irritation. May cause redness, itching, and pain.
- Skin contact** May cause sensitization by skin contact. Specific test data for the substance or mixture is not available. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. (based on components). Causes skin irritation.
- Ingestion** Specific test data for the substance or mixture is not available. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Itching. Rashes. Hives. Redness. May cause redness and tearing of the eyes.

**Acute toxicity**

**Numerical measures of toxicity**

The following ATE values have been calculated for the mixture

- ATEmix (oral) 14,588.60 mg/kg
- ATEmix (dermal) 23,132.00 mg/kg

**Component Information**

| Chemical name                                      | Oral LD50            | Dermal LD50 | Inhalation LC50 |
|--|----------------------|-------------|-----------------|
| Oxirane, [[[2-ethylhexyl]oxy]methyl]-<br>2461-15-6 | = 7800 mg/kg ( Rat ) | -           | -               |

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

- Skin corrosion/irritation** Classification based on data available for ingredients. Causes skin irritation.
- Serious eye damage/eye irritation** Classification based on data available for ingredients. Causes eye irritation.
- Respiratory or skin sensitization** May cause an allergic skin reaction.
- Germ cell mutagenicity** No information available.

**Carcinogenicity** Based on available data, the classification criteria are not met. The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name        | ACGIH                           | IARC                             | NTP                    | OSHA    |
|----------------------|---------------------------------|----------------------------------|------------------------|---------|
| Quartz<br>14808-60-7 | A2 - Suspected Human Carcinogen | Group 1 - Carcinogenic to humans | Known Human Carcinogen | Present |

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

**12. Ecological information**

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

**Persistence and degradability** No information available.

**Bioaccumulation**

**Component Information**

| Chemical name                                      | Partition coefficient |
|--|-----------------------|
| Oxirane, [[(2-ethylhexyl)oxy]methyl]-<br>2461-15-6 | 3.83                  |

**Other adverse effects** No information available.

**13. Disposal considerations**

**Disposal methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**14. Transport information**

**DOT** Not regulated

**IATA** Regulated  
This product is not regulated for single or combination packaging having a net quantity of 5L or less.

**UN number or ID number** UN 3082

**UN proper shipping name** Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin)

**Transport hazard class(es)** 9

**Packing group** III

|                                   |  |
|-----------------------------------|--|
| <b>IMDG</b>                       | Regulated  |
|                                   | This product is not regulated for single or combination packaging having a net quantity of 5L or less. |
| <b>UN number or ID number</b>     | UN 3082  |
| <b>UN proper shipping name</b>    | Environmentally hazardous substance, liquid, n.o.s. (Epoxy Resin)                                      |
| <b>Transport hazard class(es)</b> | 9  |
| <b>Packing group</b>              | III  |
| <b>Marine pollutant</b>           | P  |

## 15. Regulatory information

### International Inventories

|                      |   |
|----------------------|---|
| <b>TSCA</b>          | Contact supplier for inventory compliance status. |
| <b>DSL/NDSL</b>      | Contact supplier for inventory compliance status. |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status. |
| <b>ENCS</b>          | Contact supplier for inventory compliance status. |
| <b>IECSC</b>         | Contact supplier for inventory compliance status. |
| <b>KECL</b>          | Contact supplier for inventory compliance status. |
| <b>PICCS</b>         | Contact supplier for inventory compliance status. |
| <b>AIIC</b>          | Contact supplier for inventory compliance status. |
| <b>NZIoC</b>         | Contact supplier for inventory compliance status. |

#### **Legend:**

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing Chemicals Inventory
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AIIC** - Australian Inventory of Industrial Chemicals
- NZIoC** - New Zealand Inventory of Chemicals

### US Federal Regulations

#### **SARA 313**

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

#### **SARA 311/312 Hazard Categories**

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

#### **CWA (Clean Water Act)**

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

#### **CERCLA**

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

### US State Regulations

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals

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

| Chemical name        | New Jersey | Massachusetts | Pennsylvania |
|----------------------|------------|---------------|--------------|
| Quartz<br>14808-60-7 | X          | X             | X            |

**U.S. EPA Label Information**

EPA Pesticide Registration Number Not applicable

**16. Other information**

|             |                         |                       |                           |                              |
|-------------|-------------------------|-----------------------|---------------------------|------------------------------|
| <b>NFPA</b> | <b>Health hazards</b> 0 | <b>Flammability</b> 1 | <b>Instability</b> 0      | <b>Special hazards</b> -     |
| <b>HMIS</b> | <b>Health hazards</b> 0 | <b>Flammability</b> 1 | <b>Physical hazards</b> 0 | <b>Personal protection</b> X |

**Key or legend to abbreviations and acronyms used in the safety data sheet**

**Legend**

- SVHC: Substances of Very High Concern for Authorization:
- PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
- vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
- STOT: Specific Target Organ Toxicity
- ATE: Acute Toxicity Estimate
- LC50: 50% Lethal Concentration
- LD50: 50% Lethal Dose

**Legend Section 8: Exposure controls/personal protection**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | Sk*  | Skin designation                 |
| +       | Sensitizers                 |      |                                  |

**Key literature references and sources for data used to compile the SDS**

- U.S. Agency for Toxic Substances and Disease Registry (ATSDR)
- U.S. Environmental Protection Agency ChemView Database
- European Food Safety Authority (EFSA)
- U.S. Environmental Protection Agency
- Acute Exposure Guideline Level(s) (AEGl(s))
- U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
- U.S. Environmental Protection Agency High Production Volume Chemicals
- Food Research Journal
- Hazardous Substance Database
- International Uniform Chemical Information Database (IUCLID)
- Japan National Institute of Technology and Evaluation (NITE)
- Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)
- NIOSH (National Institute for Occupational Safety and Health)
- National Library of Medicine's ChemID Plus (NLM CIP)
- National Library of Medicine's PubMed database (NLM PUBMED)
- U.S. National Toxicology Program (NTP)
- New Zealand's Chemical Classification and Information Database (CCID)
- International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications
- International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program
- International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set
- United Nations World Health Organization (WHO)

**Revision date** 09-Sep-2025  
**Revision Note** No information available.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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**



# POLYGEM

Revision date 09-Sep-2025

# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)

Revision Number 2

## 1. Identification

### Product identifier

**Product Name** Part B: 519HT

### Other means of identification

**Product Code(s)** FG-2297B

**UN number or ID number** UN 2735

**Synonyms** None

### Recommended use of the chemical and restrictions on use

**Recommended use** Ceramic Tile Adhesive

### Restrictions on use

### Details of the supplier of the safety data sheet

#### Supplier Address

Polygem, 5600 Lower Macungie Rd, Macungie, PA 18062, USA, Phone: +01.610.252.5800, www.smooth-on.com, sds@smooth-on.com

**E-mail** sds@smooth-on.com

### Emergency telephone number

**Emergency Telephone** Chemtel: US: 1-800.255.3924; International: 1-813.248.0585

## 2. Hazard(s) identification

### Classification

|                                   |                           |
|-----------------------------------|---------------------------|
| Acute toxicity - Dermal           | Category 4                |
| Skin corrosion/irritation         | Category 1 Sub-category C |
| Serious eye damage/eye irritation | Category 1                |
| Skin sensitization                | Category 1                |
| Reproductive toxicity             | Category 1B               |

### Hazards not otherwise classified (HNOC)

Not applicable

### Label elements



Danger

**Hazard statements**

- H312 - Harmful in contact with skin
- H314 - Causes severe skin burns and eye damage
- H317 - May cause an allergic skin reaction
- H360 - May damage fertility or the unborn child

**Precautionary Statements - Prevention**

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust.
- Wash face, hands and any exposed skin thoroughly after handling.
- Contaminated work clothing must not be allowed out of the workplace.
- Wear protective gloves.

**Precautionary Statements - Response**

- IF exposed or concerned: Get medical advice/attention.
- Specific treatment (see supplemental first aid instructions on this label).
- Immediately call a POISON CENTER or doctor.
- Immediately call a POISON CENTER or doctor.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IF ON SKIN: Wash with plenty of water and soap.
- Call a POISON CENTER or doctor if you feel unwell.
- Take off contaminated clothing and wash it before reuse.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
- Wash contaminated clothing before reuse.
- If skin irritation or rash occurs: Get medical advice/attention.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- Immediately call a POISON CENTER or doctor.
- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

**Precautionary Statements - Storage**

Store locked up.

**Precautionary Statements - Disposal**

Dispose of contents and container in accordance with local, regional, national, and international regulations as applicable.

**Other information**

May be harmful if swallowed. Toxic to aquatic life with long lasting effects.

**3. Composition/information on ingredients**

**Substance**

Not applicable.

**Mixture**

| Chemical name  | CAS No.    | Weight-% | Trade secret |
|--|------------|----------|--------------|
| Fatty acids, C18-unsaturated, dimers, polymers with tall-oil fatty acids and | 68082-29-1 | 10-30    | *            |

|   |             |       |   |
|---|-------------|-------|---|
| triethylenetetramine  |             |       |   |
| Phenol, 4-nonyl-, branched  | 84852-15-3  | 1-5   | * |
| Diethylenetriamine  | 111-40-0    | 1-5   | * |
| Formaldehyde, polymer with benzenamine, hydrogenated                      | 135108-88-2 | 1-5   | * |
| 1,2-Cyclohexanediamine  | 694-83-7    | 1-5   | * |
| 1,2-Ethanediamine, N,N-bis(2-aminoethyl)-, polymer with methyloxirane     | 26950-63-0  | 1-5   | * |
| Triethylenetetramine Oxirane,   | 112-24-3    | 1-5   | * |
| 2,2-[(1-methylethylidene)bis(4,1-phenyleneoxymethylene)]bis-, homopolymer | 25085-99-8  | 1-5   | * |
| Bisphenol A   | 80-05-7     | 1-5   | * |
| 1-Piperazineethanamine  | 140-31-8    | 1-5   | * |
| Quartz  | 14808-60-7  | 0.1-1 | * |

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

## 4. First-aid measures

### Description of first aid measures

|   |  |
|---|--|
| <b>General advice</b>                     | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.  |
| <b>Inhalation</b>                         | Remove to fresh air. If breathing has stopped, give artificial respiration. Get medical attention immediately. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur. |
| <b>Eye contact</b>                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical attention.  |
| <b>Skin contact</b>                       | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get immediate medical attention. May cause an allergic skin reaction.  |
| <b>Ingestion</b>                          | Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Get immediate medical attention.   |
| <b>Self-protection of the first aider</b> | Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Wear personal protective clothing (see section 8). Avoid contact with skin, eyes or clothing. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.   |

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

|                            |  |
|----------------------------|--|
| <b>Symptoms</b>            | Burning sensation. Itching. Rashes. Hives.   |
| <b>Effects of Exposure</b> | May cause adverse reproductive effects - such as birth defect, miscarriages, or infertility. |

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

|                           |  |
|---------------------------|--|
| <b>Note to physicians</b> | Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure. May cause |
|---------------------------|--|

sensitization in susceptible persons. Treat symptomatically.

## 5. Fire-fighting measures

|   |  |
|---|--|
| <b>Suitable Extinguishing Media</b>                                   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.  |
| <b>Large Fire</b>   | CAUTION: Use of water spray when fighting fire may be inefficient.   |
| <b>Unsuitable extinguishing media</b>                                 | Do not scatter spilled material with high pressure water streams.  |
| <b>Specific hazards arising from the chemical</b>                     | The product causes burns of eyes, skin and mucous membranes. Thermal decomposition can lead to release of irritating gases and vapors. Product is or contains a sensitizer. May cause sensitization by skin contact. |
| <b>Explosion data</b>   |  |
| <b>Sensitivity to mechanical impact</b>                               | None.  |
| <b>Sensitivity to static discharge</b>                                | None.  |
| <b>Special protective equipment and precautions for fire-fighters</b> | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.   |

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

|                             |   |
|-----------------------------|---|
| <b>Personal precautions</b> | Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Use personal protective equipment as required. Attention! Corrosive material. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. |
| <b>Other information</b>    | Refer to protective measures listed in Sections 7 and 8.  |

### Methods and material for containment and cleaning up

|  |  |
|--|--|
| <b>Methods for containment</b>         | Prevent further leakage or spillage if safe to do so.                                |
| <b>Methods for cleaning up</b>         | Pick up and transfer to properly labeled containers.                                 |
| <b>Prevention of secondary hazards</b> | Clean contaminated objects and areas thoroughly observing environmental regulations. |

## 7. Handling and storage

### Precautions for safe handling

|                                |  |
|--------------------------------|--|
| <b>Advice on safe handling</b> | Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. In case of insufficient ventilation, wear suitable respiratory equipment. Handle product only in closed system or provide appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse. Remove contaminated clothing and shoes. |
|--------------------------------|--|

### Conditions for safe storage, including any incompatibilities

|                           |  |
|---------------------------|--|
| <b>Storage Conditions</b> | Keep containers tightly closed in a dry, cool and well-ventilated place. Store locked up. Protect from moisture. Keep out of the reach of children. Store away from other materials. |
|---------------------------|--|

**8. Exposure controls/personal protection**

**Control Parameters**

**Exposure Limits**

| Chemical name                  | ACGIH TLV   | OSHA PEL  | NIOSH   |
|--------------------------------|---|---|---|
| Diethylenetriamine<br>111-40-0 | TWA: 1 ppm<br>pSk   | (vacated) TWA: 1 ppm<br>(vacated) TWA: 4 mg/m <sup>3</sup>  | TWA: 1 ppm;<br>TWA: 4 mg/m <sup>3</sup> ;   |
| Quartz<br>14808-60-7           | TWA: 0.025 mg/m <sup>3</sup> respirable<br>particulate matter | TWA: 50 µg/m <sup>3</sup><br>(vacated) TWA: 0.1 mg/m <sup>3</sup><br>respirable dust<br>: (250)/(%SiO <sub>2</sub> + 5) mppcf<br>TWA respirable fraction<br>: (10)/(%SiO <sub>2</sub> + 2) mg/m <sup>3</sup><br>TWA respirable fraction | TWA: 0.05 mg/m <sup>3</sup> ;<br>respirable dust<br>IDLH: 50 mg/m <sup>3</sup> respirable<br>dust |

**Appropriate engineering controls**

**Engineering controls**                      Showers  
    Eyewash stations  
    Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**                      Wear safety glasses with side shields (or goggles). Face protection shield. Tight sealing safety goggles.

**Hand protection**                              Wear suitable gloves.

**Skin and body protection**                      Wear suitable protective clothing. Chemical resistant apron.

**Respiratory protection**                      Use appropriate respiratory protection.

**General hygiene considerations**                      Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing must not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

**9. Physical and chemical properties**

**Information on basic physical and chemical properties**

**Physical state**                                      Paste / Gel  
**Appearance**                                      Paste / Gel  
**Color**    Tan  
**Odor**    Amines  
**Odor threshold**                                      No information available

| <u>Property</u>                                | <u>Values</u>     | <u>Remarks • Method</u> |
|--|-------------------|-------------------------|
| <b>pH</b>                                      | No data available | None known              |
| <b>pH (as aqueous solution)</b>                |                   | None known              |
| <b>Melting point / freezing point</b>          | No data available | None known              |
| <b>Initial boiling point and boiling range</b> | No data available | None known              |
| <b>Flash point</b>                             | No data available | None known              |
| <b>Evaporation rate</b>                        | No data available | None known              |

|   |                          |            |
|---|--------------------------|------------|
| <b>Flammability</b>                           | No data available        | None known |
| <b>Flammability Limit in Air</b>              |                          | None known |
| <b>Upper flammability or explosive limits</b> | No data available        |            |
| <b>Lower flammability or explosive limits</b> | No data available        |            |
| <b>Vapor pressure</b>                         | No data available        | None known |
| <b>Relative vapor density</b>                 | No data available        | None known |
| <b>Relative density</b>                       | 1.53                     | None known |
| <b>Water solubility</b>                       | No data available        | None known |
| <b>Solubility(ies)</b>                        | No data available        | None known |
| <b>Partition coefficient</b>                  | No data available        | None known |
| <b>Autoignition temperature</b>               | No data available        | None known |
| <b>Decomposition temperature</b>              |                          | None known |
| <b>Kinematic viscosity</b>                    | No data available        | None known |
| <b>Dynamic viscosity</b>                      | No data available        | None known |
| <b><u>Other information</u></b>               |                          |            |
| <b>Explosive properties</b>                   | No information available |            |
| <b>Oxidizing properties</b>                   | No information available |            |
| <b>Softening point</b>                        | No information available |            |
| <b>Molecular weight</b>                       | No information available |            |
| <b>VOC content</b>                            | No information available |            |
| <b>Liquid Density</b>                         | No information available |            |
| <b>Bulk density</b>                           | No information available |            |

## 10. Stability and reactivity

|   |   |
|---|---|
| <b>Reactivity</b>                         | No information available.                           |
| <b>Chemical stability</b>                 | Stable under normal conditions.                     |
| <b>Possibility of hazardous reactions</b> | None under normal processing.                       |
| <b>Conditions to avoid</b>                | Exposure to air or moisture over prolonged periods. |
| <b>Incompatible materials</b>             | Acids. Bases. Oxidizing agent.                      |
| <b>Hazardous decomposition products</b>   | None known based on information supplied.           |

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Specific test data for the substance or mixture is not available. Corrosive by inhalation. (based on components). Inhalation of corrosive fumes/gases may cause coughing, choking, headache, dizziness, and weakness for several hours. Pulmonary edema may occur with tightness in the chest, shortness of breath, bluish skin, decreased blood pressure, and increased heart rate. Inhaled corrosive substances can lead to a toxic edema of the lungs. Pulmonary edema can be fatal. |
| <b>Eye contact</b>  | Specific test data for the substance or mixture is not available. Causes serious eye damage. (based on components). Corrosive to the eyes and may cause severe damage including blindness. May cause irreversible damage to eyes.   |
| <b>Skin contact</b> | Prolonged skin contact causes burns. Symptoms may be delayed. Specific test data for the substance or mixture is not available. May cause irritation. May cause sensitization by skin contact. Repeated or prolonged skin contact may cause allergic reactions with susceptible   |

persons. (based on components). May be absorbed through the skin in harmful amounts. Harmful in contact with skin.

**Ingestion**

Specific test data for the substance or mixture is not available. Causes burns. (based on components). Ingestion causes burns of the upper digestive and respiratory tracts. May cause severe burning pain in the mouth and stomach with vomiting and diarrhea of dark blood. Blood pressure may decrease. Brownish or yellowish stains may be seen around the mouth. Swelling of the throat may cause shortness of breath and choking. May cause lung damage if swallowed. May be fatal if swallowed and enters airways.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Symptoms** Redness. Burning. May cause blindness. Coughing and/ or wheezing. Itching. Rashes. Hives.

**Acute toxicity** Harmful by skin contact.

**Numerical measures of toxicity**

The following ATE values have been calculated for the mixture

ATEmix (oral) 2,823.70 mg/kg  
 ATEmix (dermal) 1,869.90 mg/kg

**Component Information**

| Chemical name   | Oral LD50              | Dermal LD50  | Inhalation LC50                     |
|---|------------------------|--|-------------------------------------|
| Fatty acids, C18-unsaturated, dimers, polymers with tall-oil fatty acids and triethylenetetramine<br>68082-29-1 | -                      | > 2000 mg/kg ( Rat )                                 | -                                   |
| Phenol, 4-nonyl-, branched<br>84852-15-3  | = 1300 mg/kg ( Rat )   | = 2000 mg/kg ( Rabbit )                              | -                                   |
| Diethylenetriamine<br>111-40-0  | = 1080 mg/kg ( Rat )   | = 672 mg/kg ( Rabbit )                               | = 70 mg/L ( Rat ) 4 h               |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2   | -                      | > 1000 mg/kg ( Rabbit )                              | -                                   |
| 1,2-Cyclohexanediamine<br>694-83-7  | = 4556 mg/kg ( Rat )   | = 1870 mg/kg ( Rat )                                 | > 3.23 mg/L ( Rat ) 4 h             |
| Triethylenetetramine<br>112-24-3  | = 1716.2 mg/kg ( Rat ) | = 1720 mg/kg ( Rabbit )<br>= 1465.4 mg/kg ( Rabbit ) | -                                   |
| Bisphenol A<br>80-05-7  | = 3300 mg/kg ( Rat )   | = 3000 mg/kg ( Rabbit )                              | > 170 mg/m <sup>3</sup> ( Rat ) 6 h |
| 1-Piperazineethanamine<br>140-31-8  | = 2140 µL/kg ( Rat )   | = 866 mg/kg ( Rabbit )                               | -                                   |

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

**Skin corrosion/irritation** Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation** Causes serious eye damage. Causes burns. Classification based on data available for ingredients.

**Respiratory or skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** Based on available data, the classification criteria are not met.  
The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Chemical name        | ACGIH                           | IARC                             | NTP                    | OSHA    |
|----------------------|---------------------------------|----------------------------------|------------------------|---------|
| Quartz<br>14808-60-7 | A2 - Suspected Human Carcinogen | Group 1 - Carcinogenic to humans | Known Human Carcinogen | Present |

**Reproductive toxicity** Contains a known or suspected reproductive toxin. Classification based on data available for ingredients. May damage fertility or the unborn child.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**Interactive effects** No information available.

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

| Chemical name   | Algae/aquatic plants  | Fish  | Toxicity to microorganisms | Crustacea                            |
|---|---|---|----------------------------|--------------------------------------|
| Fatty acids, C18-unsaturated, dimers, polymers with tall-oil fatty acids and triethylenetetramine<br>68082-29-1 | -   | LC50: =7.07mg/L (96h, Danio rerio)  | -                          | -                                    |
| Phenol, 4-nonyl-, branched<br>84852-15-3  | EC50: 0.36 - 0.48mg/L (96h, Pseudokirchneriella subcapitata)<br>EC50: 0.16 - 0.72mg/L (72h, Pseudokirchneriella subcapitata)<br>EC50: =1.3mg/L (72h, Desmodesmus subspicatus) | LC50: =0.135mg/L (96h, Pimephales promelas)<br>LC50: =0.1351mg/L (96h, Lepomis macrochirus) | -                          | EC50: =0.14mg/L (48h, Daphnia magna) |
| Diethylenetriamine<br>111-40-0  | EC50: =1164mg/L (72h, Pseudokirchneriella subcapitata)<br>EC50: =345.6mg/L (96h, Pseudokirchneriella subcapitata)<br>EC50: =592mg/L (96h, Desmodesmus subspicatus)            | LC50: =248mg/L (96h, Poecilia reticulata)<br>LC50: =1014mg/L (96h, Poecilia reticulata)     | -                          | EC50: =16mg/L (48h, Daphnia magna)   |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2   | -   | LC50: =63mg/L (96h, Poecilia reticulata)  | -                          | -                                    |

|                                    |   |  |   |  |
|------------------------------------|---|--|---|--|
| Triethylenetetramine<br>112-24-3   | EC50: =2.5mg/L (72h, Desmodemus subspicatus)<br>EC50: =20mg/L (72h, Pseudokirchneriella subcapitata)<br>EC50: =3.7mg/L (96h, Pseudokirchneriella subcapitata) | LC50: =570mg/L (96h, Poecilia reticulata)<br>LC50: =495mg/L (96h, Pimephales promelas)   | - | EC50: =31.1mg/L (48h, Daphnia magna)   |
| Bisphenol A<br>80-05-7             | EC50: =2.5mg/L (96h, Pseudokirchneriella subcapitata)   | LC50: 3.6 - 5.4mg/L (96h, Pimephales promelas)<br>LC50: 4.0 - 5.5mg/L (96h, Pimephales promelas)<br>LC50: =4mg/L (96h, Oncorhynchus mykiss)<br>LC50: =9.9mg/L (96h, Brachydanio rerio) | - | EC50: =10.2mg/L (48h, Daphnia magna)<br>EC50: =3.9mg/L (48h, Daphnia magna)<br>EC50: 9.2 - 11.4mg/L (48h, Daphnia magna) |
| 1-Piperazineethanamine<br>140-31-8 | EC50: =495mg/L (72h, Pseudokirchneriella subcapitata)   | LC50: 1950 - 2460mg/L (96h, Pimephales promelas)<br>LC50: >1000mg/L (96h, Poecilia reticulata)<br>LC50: >=100mg/L (96h, Oncorhynchus mykiss)   | - | EC50: =32mg/L (48h, Daphnia magna)   |

**Persistence and degradability** No information available.

**Bioaccumulation**

**Component Information**

| Chemical name   | Partition coefficient |
|---|-----------------------|
| Phenol, 4-nonyl-, branched<br>84852-15-3                            | 5.4                   |
| Diethylenetriamine<br>111-40-0                                      | -1.3                  |
| Formaldehyde, polymer with benzenamine, hydrogenated<br>135108-88-2 | 2.68                  |
| 1,2-Cyclohexanediamine<br>694-83-7                                  | -0.02                 |
| Triethylenetetramine<br>112-24-3                                    | -1.4                  |
| Bisphenol A<br>80-05-7  | 3.4                   |
| 1-Piperazineethanamine<br>140-31-8                                  | -1.48                 |

**Other adverse effects** No information available.

**13. Disposal considerations**

**Disposal methods**

**Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

**Contaminated packaging** Do not reuse empty containers.

**California Hazardous Waste Status** This product contains one or more substances that are listed with the State of California as a hazardous waste.

## 14. Transport information

**DOT** Regulated  
**UN number or ID number** UN 2735  
**Proper shipping name** Amines, liquid, corrosive, n.o.s. (Copolymer of formaldehyde and aniline, hydrogenated, Cyclohex-1,2-ylenediamine)  
**Transport hazard class(es)** 8  
**Packing group** III

**IATA** Regulated  
**UN number or ID number** UN 2735  
**UN proper shipping name** Amines, liquid, corrosive, n.o.s. (Copolymer of formaldehyde and aniline, hydrogenated, Cyclohex-1,2-ylenediamine)  
**Transport hazard class(es)** 8  
**Packing group** III

**IMDG** Regulated  
**UN number or ID number** UN 2735  
**UN proper shipping name** Amines, liquid, corrosive, n.o.s. (Copolymer of formaldehyde and aniline, hydrogenated, Cyclohex-1,2-ylenediamine)  
**Transport hazard class(es)** 8  
**Packing group** III  
**Marine pollutant** P

## 15. Regulatory information

### International Inventories

**TSCA** Contact supplier for inventory compliance status.  
**DSL/NDSL** Contact supplier for inventory compliance status.  
**EINECS/ELINCS** Contact supplier for inventory compliance status.  
**ENCS** Contact supplier for inventory compliance status.  
**IECSC** Contact supplier for inventory compliance status.  
**KECL** Contact supplier for inventory compliance status.  
**PICCS** Contact supplier for inventory compliance status.  
**AIIC** Contact supplier for inventory compliance status.  
**NZIoC** Contact supplier for inventory compliance status.

#### **Legend:**

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory  
**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List  
**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances  
**ENCS** - Japan Existing and New Chemical Substances  
**IECSC** - China Inventory of Existing Chemical Substances  
**KECL** - Korean Existing Chemicals Inventory  
**PICCS** - Philippines Inventory of Chemicals and Chemical Substances  
**AIIC** - Australian Inventory of Industrial Chemicals  
**NZIoC** - New Zealand Inventory of Chemicals

### US Federal Regulations



**Legend**

SVHC: Substances of Very High Concern for Authorization:  
 PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances  
 vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances  
 STOT: Specific Target Organ Toxicity  
 ATE: Acute Toxicity Estimate  
 LC50: 50% Lethal Concentration  
 LD50: 50% Lethal Dose

**Legend Section 8: Exposure controls/personal protection**

|         |                             |      |                                  |
|---------|-----------------------------|------|----------------------------------|
| TWA     | TWA (time-weighted average) | STEL | STEL (Short Term Exposure Limit) |
| Ceiling | Maximum limit value         | Sk*  | Skin designation                 |
| +       | Sensitizers                 |      |                                  |

**Key literature references and sources for data used to compile the SDS**

U.S. Agency for Toxic Substances and Disease Registry (ATSDR)  
 U.S. Environmental Protection Agency ChemView Database  
 European Food Safety Authority (EFSA)  
 U.S. Environmental Protection Agency  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan National Institute of Technology and Evaluation (NITE)  
 Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 U.S. National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 International Organization for Economic Co-operation and Development (OECD) Environment, Health, and Safety Publications  
 International Organization for Economic Co-operation and Development (OECD) High Production Volume Chemicals Program  
 International Organization for Economic Co-operation and Development (OECD) Screening Information Data Set  
 United Nations World Health Organization (WHO)

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**Disclaimer**

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**End of Safety Data Sheet**