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

1.1. Product identifier

- **Product form**: Substance
- **Physical state**: Liquid
- **Substance name**: EPOXYPROPOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE
- **Product code**: DMS-E12
- **Synonyms**: GLYCIDOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE; POLY(DIMETHYLSILOXANE), 2,3-EPOXYPROPYL PROPYL ETHER TERMINATED
- **Chemical family**: EPOXYSILOXANE

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

- **Use of the substance/mixture**: Chemical intermediate
- **For research and industrial use only**

1.3. Details of the supplier of the safety data sheet

GELEST, INC.
11 East Steel Road
Morrisville, PA 19067
USA
T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST
info@gelest.com - www.gelest.com

1.4. Emergency telephone number

- **Emergency number**: CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

**Classification (GHS-US)**
- Skin Irrit. 2 H315
- Eye Irrit. 2A H319

Full text of H-phrases: see section 16

2.2. Label elements

**GHS-US labeling**

**Signal word (GHS-US)**: Warning

**Hazard statements (GHS-US)**: H315 - Causes skin irritation
- H319 - Causes serious eye irritation

**Precautionary statements (GHS-US)**: P280 - Wear protective gloves/protective clothing/eye protection/face protection
- P264 - Wash hands thoroughly after handling
- P302+P352 - If on skin: Wash with plenty of water
- P332+P313 - If skin irritation occurs: Get medical advice/attention
- P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- P337+P313 - If eye irritation persists: Get medical advice/attention
- P362 - Take off contaminated clothing and wash before reuse

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

- **Substance type**: Multi-constituent
- **Name**: EPOXYPROPOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE
EPOXYPROPOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE

Safety Data Sheet

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epoxypropoxypropyl terminated polydimethylsiloxane</td>
<td>(CAS No) 102782-97-8</td>
<td>&gt; 95</td>
<td>Skin Irrit. 2, H315 Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>Octamethylcyclotetrasiloxane</td>
<td>(CAS No) 556-67-2</td>
<td>&lt; 3</td>
<td>Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Irrit. 2B, H320</td>
</tr>
</tbody>
</table>

3.2. Mixture
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general: Remove contaminated clothing and shoes. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). If possible show this sheet; if not available show packaging or label.

First-aid measures after inhalation: Remove to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

First-aid measures after skin contact: Wash with plenty of soap and water. Get immediate medical advice/attention.

First-aid measures after eye contact: Immediately flush eyes thoroughly with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion: Never give anything by mouth to an unconscious person. Get medical advice/attention.

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

Symptoms/injuries after inhalation: No information available.

Symptoms/injuries after skin contact: Causes skin irritation.

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

Symptoms/injuries after ingestion: No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard: Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters

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

Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Avoid all eye and skin contact and do not breathe vapor and mist.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment: Equip cleanup crew with proper protection.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Methods for cleaning up: Clean up any spills as soon as possible, using an absorbent material to collect it. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.
**EPOXYPROPOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE**

Safety Data Sheet

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

**Precautions for safe handling**: Avoid all eye and skin contact and do not breathe vapor and mist.

**Hygiene measures**: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

#### 7.2. Conditions for safe storage, including any incompatibilities

**Storage conditions**: Keep container tightly closed. Store in a cool area. Store in a dark area.

**Incompatible materials**: Oxidizing agent.

**Storage area**: Store in a well-ventilated place. Store away from heat.

#### 7.3. Specific end use(s)

No additional information available

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

No additional information available

#### 8.2. Exposure controls

**Appropriate engineering controls**: Provide local exhaust or general room ventilation.

**Personal protective equipment**: Avoid all unnecessary exposure. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

**Hand protection**: Neoprene or nitrile rubber gloves.

**Eye protection**: Chemical goggles. Contact lenses should not be worn.

**Skin and body protection**: Wear suitable protective clothing.

**Respiratory protection**: Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. NIOSH-certified organic vapor (black cartridge) respirator.

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

**Physical state**: Liquid

**Appearance**: Clear liquid.

**Molecular mass**: 1000 - 1400 g/mol

**Color**: No data available

**Odor**: No data available

**Odor threshold**: No data available

**Refractive index**: 1.417

**pH**: No data available

**Relative evaporation rate (butyl acetate=1)**: No data available

**Melting point**: < -60 °C

**Freezing point**: No data available

**Boiling point**: > 205 °C

**Flash point**: > 110 °C

**Auto-ignition temperature**: No data available

**Decomposition temperature**: No data available

**Flammability (solid, gas)**: No data available

**Vapor pressure**: No data available

**Relative vapor density at 20 °C**: No data available

**Relative density**: 0.98

**VOC content**: < 3 %

**Solubility**: Insoluble in water.

**Log Pow**: No data available

**Log Kow**: No data available

**Viscosity, kinematic**: 20 - 35 cSt

**Viscosity, dynamic**: No data available

**Explosive properties**: No data available

**Oxidizing properties**: No data available

**Explosive limits**: No data available
SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
Heat. Open flame. Sparks.

10.5. Incompatible materials
Oxidizing agent.

10.6. Hazardous decomposition products
Organic acid vapors. Silicon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Octamethylcyclotetrasiloxane (556-67-2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>1540 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rat</td>
<td>1770 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>794 µl/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>36 g/m³ (Exposure time: 4 h)</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>1540,000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>1770,000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>36.000 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>36.000 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitization: Not classified.
Germ cell mutagenicity: Not classified.
Carcinogenicity: Not classified.
Reproductive toxicity: Not classified.
Specific target organ toxicity (single exposure): Not classified.
Specific target organ toxicity (repeated exposure): Not classified.
Aspiration hazard: Not classified.
Symptoms/injuries after inhalation: No information available.
Symptoms/injuries after skin contact: Causes skin irritation.
Symptoms/injuries after eye contact: Causes serious eye irritation.
Symptoms/injuries after ingestion: No information available.

SECTION 12: Ecological information

12.1. Toxicity

Octamethylcyclotetrasiloxane (556-67-2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>&gt; 500 mg/l (Exposure time: 96 h - Species: Brachydanio rerio)</td>
</tr>
<tr>
<td>LC50 fish 2</td>
<td>&gt; 1000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

Octamethylcyclotetrasiloxane (556-67-2)

Persistence and degradability: May cause long-term adverse effects in the environment.

12.3. Bioaccumulative potential

Octamethylcyclotetrasiloxane (556-67-2)

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BCF fish 1</td>
<td>12400</td>
</tr>
</tbody>
</table>
Octamethylcyclotetrasiloxane (556-67-2)

Log Pow 5.1

12.4. Mobility in soil
No additional information available

12.5. Other adverse effects
Effect on ozone layer: No additional information available
Effect on the global warming: No known ecological damage caused by this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Waste disposal recommendations: Incinerate. Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
Not regulated for transport.

14.2. UN proper shipping name
Not applicable

14.3. Additional information
Other information: No supplementary information available.

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations
Epoxypropoxypropyl terminated polydimethylsiloxane (102782-97-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Octamethylcyclotetrasiloxane (556-67-2)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

EPA TSCA Regulatory Flag
T - T indicates a substance that is the subject of a Section 4 test rule under TSCA.

15.2. International regulations
Epoxypropoxypropyl terminated polydimethylsiloxane (102782-97-8)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian NDSL (Non-Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

Octamethylcyclotetrasiloxane (556-67-2)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian DSL (Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)

15.3. US State regulations
EPOXYPROPOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE(102782-97-8)

U.S. - California - Proposition 65 - Carcinogens List  No
U.S. - California - Proposition 65 - Developmental Toxicity No
U.S. - California - Proposition 65 - Reproductive Toxicity - Female No
U.S. - California - Proposition 65 - Reproductive Toxicity - Male No
EPOXYPROPPOXYPROPYL TERMINATED POLYDIMETHYLSILOXANE
Safety Data Sheet

Epoxypropoxypropyl terminated polydimethylsiloxane (102782-97-8)

<table>
<thead>
<tr>
<th>Safety Data Sheet ID: DMS-E12</th>
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</table>

U.S. - California - Proposition 65 - Carcinogens List
U.S. - California - Proposition 65 - Developmental Toxicity
U.S. - California - Proposition 65 - Reproductive Toxicity - Female
No
No
No
No

Octamethylcyclotetrasiloxane (556-67-2)
No
No
No
No

Octamethylcyclotetrasiloxane (556-67-2)
No
No
No
No

SECTION 16: Other information

Abbreviations and acronyms:
- Abbreviations: ND: Not Determined, No Data; NA: Not Applicable; LD: Lethal Dose; LC: Lethal Concentration; ATE: Acute Toxicity Estimates; H: hour; °: °C unless otherwise stated; mm: millimeters Hg, torr; PEL: permissible exposure level; TWA: time weighted average; TLV: threshold limit value; TG: Test Guideline; NIOSH: National Institute for Occupational Safety and Health; IARC: International Agency for Research on Cancer; NTP: National Toxicology Program; HMIS: Hazardous Material Information System; CAS No.: Chemical Abstract Service Registration Number; EC No.: European Commission Registration Number; EC Index No.: European Commission Index Number; OECD: The Organisation for Economic Co-operation and Development.

Full text of H-phrases::
- Acute Tox. 4 (Dermal) Acute toxicity (dermal) Category 4
- Acute Tox. 4 (Oral) Acute toxicity (oral) Category 4
- Eye Irrit. 2A Serious eye damage/eye irritation Category 2A
- Eye Irrit. 2B Serious eye damage/eye irritation Category 2B
- Flam. Liq. 3 Flammable liquids Category 3
- Skin Irrit. 2 Skin corrosion/irritation Category 2
- H226 Flammable liquid and vapor
- H302 Harmful if swallowed
- H312 Harmful in contact with skin
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H320 Causes eye irritation

HMIS III Rating
- Health: 2 Moderate Hazard - Temporary or minor injury may occur
- Flammability: 1 Slight Hazard
- Physical: 0 Minimal Hazard

Prepared by safety and environmental affairs.
Date of issue: 11/13/2014 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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

11/13/2014 EN (English US) SDS ID: DMS-E12 6/7
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