**SECTION 1: Identification**

<table>
<thead>
<tr>
<th>1.1. Identification</th>
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</thead>
<tbody>
<tr>
<td><strong>Product name</strong></td>
<td>N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methanol</td>
</tr>
<tr>
<td><strong>Product code</strong></td>
<td>SIH6172.0</td>
</tr>
<tr>
<td><strong>Product form</strong></td>
<td>Mixture</td>
</tr>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Formula</strong></td>
<td>C9H23NO4Si</td>
</tr>
<tr>
<td><strong>Synonyms</strong></td>
<td>N-(TRIMETHOXY SILYLPROPYL)-N-METHYLAMINOETHANOL</td>
</tr>
<tr>
<td><strong>Chemical family</strong></td>
<td>ORGANOMETHOXYSILANE</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.2. Recommended use and restrictions on use</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommended use</strong></td>
<td>Chemical intermediate</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>1.3. Supplier</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GELEST, INC.</strong></td>
<td></td>
</tr>
<tr>
<td>11 East Steel Road</td>
<td></td>
</tr>
<tr>
<td>Morrisville, PA 19067</td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td></td>
</tr>
<tr>
<td>T 215-547-1015 - F 215-547-2484 - (M-F): 8:00 AM - 5:30 PM EST</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:info@gelest.com">info@gelest.com</a> - <a href="http://www.gelest.com">www.gelest.com</a></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1.4. Emergency telephone number</th>
<th></th>
</tr>
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<tbody>
<tr>
<td><strong>Emergency number</strong></td>
<td>CHEMTREC: 1-800-424-9300 (USA); +1 703-527-3887 (International)</td>
</tr>
</tbody>
</table>

**SECTION 2: Hazard(s) identification**

<table>
<thead>
<tr>
<th>2.1. Classification of the substance or mixture</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GHS-US classification</strong></td>
<td></td>
</tr>
<tr>
<td>Flammable liquids Category 2</td>
<td>H225 - Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>Acute toxicity (oral) Category 4</td>
<td>H302 - Harmful if swallowed</td>
</tr>
<tr>
<td>Acute toxicity (dermal) Category 4</td>
<td>H312 - Harmful in contact with skin</td>
</tr>
<tr>
<td>Acute toxicity (inhalation/vapor) Category 4</td>
<td>H332 - Harmful if inhaled</td>
</tr>
<tr>
<td>Skin corrosion/irritation Category 2</td>
<td>H315 - Causes skin irritation</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation Category 1</td>
<td>H318 - Causes serious eye damage</td>
</tr>
<tr>
<td>Reproductive toxicity Category 1B</td>
<td>H360 - May damage fertility or the unborn child</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure) Category 1</td>
<td>H370 - Causes damage to organs</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure) Category 3</td>
<td>H366 - May cause drowsiness or dizziness</td>
</tr>
<tr>
<td>Full text of H statements : see section 16</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2.2. GHS Label elements, including precautionary statements</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>GHS US labeling</strong></td>
<td></td>
</tr>
<tr>
<td>Hazard pictograms (GHS US)</td>
<td></td>
</tr>
<tr>
<td>Signal word (GHS US)</td>
<td>Danger</td>
</tr>
<tr>
<td>Hazard statements (GHS US)</td>
<td>H225 - Highly flammable liquid and vapor</td>
</tr>
<tr>
<td></td>
<td>H302 - Harmful if swallowed</td>
</tr>
<tr>
<td></td>
<td>H312 - Harmful in contact with skin</td>
</tr>
<tr>
<td></td>
<td>H332 - Harmful if inhaled</td>
</tr>
<tr>
<td></td>
<td>H315 - Causes skin irritation</td>
</tr>
<tr>
<td></td>
<td>H318 - Causes serious eye damage</td>
</tr>
<tr>
<td></td>
<td>H366 - May cause drowsiness or dizziness</td>
</tr>
<tr>
<td></td>
<td>H360 - May damage fertility or the unborn child</td>
</tr>
<tr>
<td></td>
<td>H370 - Causes damage to organs</td>
</tr>
<tr>
<td>Precautionary statements (GHS US)</td>
<td>P201 - Obtain special instructions before use.</td>
</tr>
<tr>
<td></td>
<td>P202 - Do not handle until all safety precautions have been read and understood.</td>
</tr>
<tr>
<td></td>
<td>P280 - Wear protective gloves/protective clothing/eye protection/face protection.</td>
</tr>
<tr>
<td></td>
<td>P210 - Keep away from heat, open flames, sparks. - No smoking.</td>
</tr>
<tr>
<td></td>
<td>P240 - Ground/Bond container and receiving equipment</td>
</tr>
<tr>
<td></td>
<td>P241 - Use explosion-proof electrical equipment</td>
</tr>
<tr>
<td></td>
<td>P243 - Use only non-sparking tools.</td>
</tr>
<tr>
<td></td>
<td>P243 - Take precautionary measures against static discharge.</td>
</tr>
<tr>
<td></td>
<td>P260 - Do not breathe vapors.</td>
</tr>
<tr>
<td></td>
<td>P261 - Avoid breathing vapors.</td>
</tr>
<tr>
<td></td>
<td>P264 - Wash hands thoroughly after handling.</td>
</tr>
</tbody>
</table>
N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methanol

Safety Data Sheet

P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower.
P330+P312 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P301 - Rinse mouth.
P330+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P353 - If skin or hair: wash with soap and water.
P304+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P321 - Specific treatment (see first aid instructions on this label).
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use water spray, foam, carbon dioxide, dry chemical to extinguish.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Keep in a cool place.
P405 - Store locked up.
P501 - Dispose of contents/container to licensed waste disposal facility.

2.3. Hazards not otherwise classified (HNOC)
No additional information available

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances
Not applicable

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-Hydroxyethyl-N-methyaminopropyltrimethoxysilane</td>
<td>(CAS-No.) 330457-46-0</td>
<td>&gt; 70</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>Methanol</td>
<td>(CAS-No.) 67-56-1</td>
<td>&gt; 20</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 3 (Oral), H301</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 3 (Dermal), H311</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 3 (Inhalation-vapour), H331</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 1, H370</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>STOT SE 3, H336</td>
</tr>
<tr>
<td>2-Methoxyethanol</td>
<td>(CAS-No.) 109-86-4</td>
<td>&lt; 3</td>
<td>Flam. Liq. 3, H226</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (Dermal), H312</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 4 (Inhalation), H332</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Repr. 1B, H360</td>
</tr>
</tbody>
</table>

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

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures general : 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. Call a POISON CENTER or doctor/physician.

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

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

First-aid measures after ingestion : Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor/physician.

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

Symptoms/effects : Causes damage to organs. May damage fertility or the unborn child.


Symptoms/effects after skin contact : Toxic in contact with skin. Causes skin irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard.

Symptoms/effects after eye contact : Causes serious eye damage.
# N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methanol

## Safety Data Sheet

### Sections:

- **Precautions for safe handling**
- **Methods for cleaning up**
- **Methods for containment**
- **For emergency responders**
- **For non-emergency personnel**
- **Environments precautions**
- **Suitable (and unsuitable) extinguishing media**
- **Firefighting instructions**
- **Special protective equipment and precautions for fire-fighters**
- **Safe storage**

### Sections and Subsections:

#### Section 5: Fire-fighting measures

- **5.1. Suitable (and unsuitable) extinguishing media**
  - Unsuitable extinguishing media: Do not use straight streams.

- **5.2. Specific hazards arising from the chemical**
  - Fire hazard: Highly flammable liquid and vapor. Irritating fumes and organic acid vapors may develop when material is exposed to elevated temperatures or open flame.
  - Explosion hazard: May form flammable/explosive vapor-air mixture.

- **5.3. Special protective equipment and precautions for fire-fighters**
  - Firefighting instructions: Use water spray to cool exposed surfaces. 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**
  - General measures: Eliminate every possible source of ignition. Use special care to avoid static electric charges.
  - For non-emergency personnel:
    - Protective equipment: Wear protective equipment as described in Section 8.
    - Emergency procedures: Evacuate unnecessary personnel.
  - For emergency responders:
    - Protective equipment: Do not attempt to take action without suitable protective equipment. Equip cleanup crew with proper protection. For further information refer to section 8: "Exposure controls/personal 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**
  - For containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
  - 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. Use only non-sparking tools.

- **6.4. Reference to other sections**
  - See Heading 8. Exposure controls and personal protection.

#### Section 7: Handling and storage

- **7.1. Precautions for safe handling**
  - Additional hazards when processed: Handle empty containers with care because residual vapors are flammable.
  - Precautions for safe handling: Do not handle until all safety precautions have been read and understood. Avoid all eye and skin contact and do not breathe vapor and mist. Containers must be properly grounded before beginning transfer. Provide good ventilation in process area to prevent accumulation of vapors. Use only outdoors or in a well-ventilated area. Use only non-sparking tools.
  - 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**
  - Technical measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof ventilating equipment.
  - Storage conditions: Keep container tightly closed. Store locked up.

---

Print date: 04/10/2019

EN (English US)

SDS ID: SIH6172.0
N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methanol
Safety Data Sheet

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Methanol (67-56-1)</th>
<th>ACGIH</th>
<th>ACGIH STEL (ppm)</th>
<th>200 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>ACGIH TWA (ppm)</td>
<td>250 ppm</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>260 mg/m³</td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>200 ppm</td>
<td></td>
</tr>
<tr>
<td>IDLH</td>
<td>US IDLH (ppm)</td>
<td>6000 ppm</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>260 mg/m³</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA) (ppm)</td>
<td>200 ppm</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (STEL) (mg/m³)</td>
<td>325 mg/m³</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (STEL) (ppm)</td>
<td>250 ppm</td>
<td></td>
</tr>
</tbody>
</table>

2-Methoxy ethanol (109-86-4)

<table>
<thead>
<tr>
<th>ACGIH</th>
<th>ACGIH TWA (ppm)</th>
<th>0.1 ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>80 mg/m³</td>
</tr>
<tr>
<td>OSHA</td>
<td>OSHA PEL (TWA) (ppm)</td>
<td>25 ppm</td>
</tr>
<tr>
<td>IDLH</td>
<td>US IDLH (ppm)</td>
<td>200 ppm</td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA) (mg/m³)</td>
<td>0.3 mg/m³</td>
</tr>
<tr>
<td>NIOSH</td>
<td>NIOSH REL (TWA) (ppm)</td>
<td>0.1 ppm</td>
</tr>
</tbody>
</table>

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

8.3. Individual protection measures/Personal protective equipment

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 or face shield. 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 combination organic vapor - amine gas (brown cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>237.37 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Straw.</td>
</tr>
<tr>
<td>Odor</td>
<td>Amine. Ammonia-like.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.417</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Melting point : < 0 °C
Freezing point : No data available
Boiling point : 68 °C (initial, methanol)
Flash point : 11 °C
Auto-ignition temperature : No data available
Decomposition temperature : No data available
Flammability (solid, gas) : Highly flammable liquid and vapor
Vapor pressure : 50 mm Hg @ 25°C
Relative vapor density at 20 °C : > 1
Relative density : 0.99
% Volatiles : 25 %
Solubility : Reacts with water. Dissolves.
Log Pow : No data available
Log Kow : No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Explosion limits : 6 - 36.5 vol % (lower; upper: methanol)

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable when stored in sealed containers.

10.3. Possibility of hazardous reactions
Reacts with water and moisture in air, liberating methanol.

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

10.5. Incompatible materials

10.6. Hazardous decomposition products
Methanol. Organic amine vapors.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSilane, 75% in methanol (330457-46-0)

ATE US (oral) : 500 mg/kg body weight
ATE US (dermal) : 1449.057 mg/kg body weight
ATE US (vapors) : 14.41 mg/l/4h

Methanol (67-56-1)

LC50 inhalation rat (ppm) : 22500 ppm (Exposure time: 8 h)
ATE US (oral) : 100 mg/kg body weight
ATE US (dermal) : 300 mg/kg body weight
ATE US (vapors) : 3 mg/l/4h

2-Methoxyethanol (109-86-4)

LD50 oral rat : 2370 mg/kg 2460 mg/kg
LD50 dermal rabbit : 1280 mg/kg
LC50 inhalation rat (ppm) : 1478 ppm (Exposure time: 7 h)
ATE US (oral) : 2370 mg/kg body weight
ATE US (dermal) : 1280 mg/kg body weight
ATE US (gases) : 4500 ppmV/4h
N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methanol

Safety Data Sheet

2-Methoxyethanol (109-86-4)

<table>
<thead>
<tr>
<th>ATE US (vapors)</th>
<th>11 mg/l/4h</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (dust, mist)</td>
<td>1.5 mg/l/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye damage.
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: May damage fertility or the unborn child.
Specific target organ toxicity – single exposure: Causes damage to organs. May cause drowsiness or dizziness.
Specific target organ toxicity – repeated exposure: Not classified
Aspiration hazard: Not classified
Symptoms/effects after skin contact: Toxic in contact with skin. Causes skin irritation. Repeated exposure to this material can result in absorption through skin causing significant health hazard.
Symptoms/effects after eye contact: Causes serious eye damage.
Symptoms/effects after ingestion: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard. Oral toxicity is associated with methanol, the solvent and a hydrolysis product which causes nausea, vomiting, headache, visual effects including blindness. Onset of symptoms may be delayed up to 48 hours.
Chronic symptoms: Methanol may effect the central nervous system resulting in persistent or recurring headaches or impaired vision.
Reason for classification: Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Methanol (67-56-1)

<table>
<thead>
<tr>
<th>LC50 fish 1</th>
<th>28200 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 2</td>
<td>&gt; 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])</td>
</tr>
</tbody>
</table>

2-Methoxyethanol (109-86-4)

<table>
<thead>
<tr>
<th>LC50 fish 1</th>
<th>10000 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 2</td>
<td>9650 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Methanol (67-56-1)

<table>
<thead>
<tr>
<th>BCF fish 1</th>
<th>&lt; 10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Pow</td>
<td>-0.77</td>
</tr>
</tbody>
</table>

2-Methoxyethanol (109-86-4)

<table>
<thead>
<tr>
<th>Log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>-0.85</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other adverse effects: This substance may be hazardous to the environment.
Effect on the ozone layer: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Sewage disposal recommendations: Do not dispose of waste into sewer.
Product/Packaging disposal recommendations: Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methanol
Safety Data Sheet

SECTION 14: Transport information

14.1. UN number
UN-No.(DOT) : 1992
DOT NA no. : UN1992

14.2. UN proper shipping name
Transport document description : UN1992 Flammable liquids, toxic, n.o.s. (N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methano), 3 (6.1), II
Proper Shipping Name (DOT) : Flammable liquids, toxic, n.o.s.
(N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methano)
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT) : II - Medium Danger
Hazard labels (DOT) : 3 - Flammable liquid
6.1 - Poison

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 243
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Symbols : G - Identifies PSN requiring a technical name

14.3. Additional information
Emergency Response Guide (ERG) Number : 131
Other information : No supplementary information available.

Transport by sea
DOT Vessel Stowage Location : B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
DOT Vessel Stowage Other : 40 - Stow “clear of living quarters”

Air transport
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

SECTION 15: Regulatory information

15.1. US Federal regulations

N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methanol (330457-46-0)

TSCA Exemption/Exclusion : CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

Methanol (67-56-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Subject to reporting requirements of United States SARA Section 313
SARA Section 313 - Emission Reporting : 1 %

N-Hydroxyethyl-n-methyaminopropyltrimethoxysilane (330457-46-0)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory
## N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methanol

### Safety Data Sheet

**Print date:** 04/10/2019  
**EN (English US)**  
**SDS ID:** SIH6172.0  

### 2-Methoxyethanol (109-86-4)

- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Subject to reporting requirements of United States SARA Section 313

#### EPA TSCA Regulatory Flag

<table>
<thead>
<tr>
<th>S - S - indicates a substance that is identified in a final Significant New Use Rule.</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 313 - Emission Reporting</td>
</tr>
</tbody>
</table>

### 15.2. International regulations

#### CANADA

**Methanol (67-56-1)**

- Listed on the Canadian DSL (Domestic Substances List)

<table>
<thead>
<tr>
<th>WHMIS Classification</th>
<th>Class B Division 2 - Flammable Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects</td>
</tr>
<tr>
<td></td>
<td>Class D Division 2 Subdivision A - Very toxic material causing other toxic effects</td>
</tr>
<tr>
<td></td>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
</tr>
</tbody>
</table>

**2-Methoxyethanol (109-86-4)**

- Listed on the Canadian DSL (Domestic Substances List)

<table>
<thead>
<tr>
<th>WHMIS Classification</th>
<th>Class B Division 3 - Combustible Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects</td>
</tr>
<tr>
<td></td>
<td>Class D Division 2 Subdivision A - Very toxic material causing other toxic effects</td>
</tr>
</tbody>
</table>

#### EU-Regulations

**Methanol (67-56-1)**

- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**2-Methoxyethanol (109-86-4)**

- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

### National regulations

**Methanol (67-56-1)**

- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- 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)
- Japanese Poisonous and Deleterious Substances Control Law
- Listed on the Canadian IDL (Ingredient Disclosure List)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)
- Listed on CICR (Turkish Inventory and Control of Chemicals)

**2-Methoxyethanol (109-86-4)**

- Listed on the AICS (Australian Inventory of Chemical Substances)
- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- 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)
- Japanese Pollutant Release and Transfer Register Law (PRTR Law)
- Listed on the Canadian IDL (Ingredient Disclosure List)
- Listed on INSQ (Mexican National Inventory of Chemical Substances)
- Listed on CICR (Turkish Inventory and Control of Chemicals)

### 15.3. US State regulations

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

<table>
<thead>
<tr>
<th>Methanol (67-56-1)</th>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significant risk level (NSRL)</th>
<th>Maximum allowable dose level (MADL)</th>
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</thead>
<tbody>
<tr>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
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Print date: 04/10/2019  
EN (English US)  
SDS ID: SIH6172.0  
8/10
### 2-Methoxyethanol (109-86-4)

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<td></td>
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### Methanol (67-56-1)

<table>
<thead>
<tr>
<th>U.S. - Massachusetts - Right To Know List</th>
<th>U.S. - New Jersey - Right to Know Hazardous Substance List</th>
<th>U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List</th>
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### SECTION 16: Other information

**Full text of H-phrases:**

- **H225**: Highly flammable liquid and vapor
- **H226**: Flammable liquid and vapor
- **H301**: Toxic if swallowed
- **H302**: Harmful if swallowed
- **H311**: Toxic in contact with skin
- **H312**: Harmful in contact with skin
- **H315**: Causes skin irritation
- **H318**: Causes serious eye damage
- **H319**: Causes serious eye irritation
- **H331**: Toxic if inhaled
- **H332**: Harmful if inhaled
- **H336**: May cause drowsiness or dizziness
- **H360**: May damage fertility or the unborn child
- **H370**: Causes damage to organs

**Abbreviations and acronyms**

- ND: Not Determined, No Data
- NA: Not Applicable
- LD: Lethal Dose
- LC: Lethal Concentration
- ATE: Acute Toxicity Estimates
- H: hour
- °: °C
- mm Hg, torr
- PEL: permissible exposure level
- 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
- GHS: The Globally Harmonized System of Classification and Labelling
- APF: Assigned Protection Factor

### Hazard Rating

- **Health**: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
- **Flammability**: 4 Severe Hazard - Flammable gases, or very volatile flammable liquids with flash points below 73 F, and boiling points below 100 F. Materials may ignite spontaneously with air. (Class IA)
- **Physical**: 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.
N-(HYDROXYETHYL)-N-METHYLAMINOPROPYLTRIMETHOXYSILANE, 75% in methanol

Safety Data Sheet

The information contained in this document has been gathered from reference materials and/or Gelest, Inc. test data and is to the best knowledge and belief of Gelest, Inc. accurate and reliable. Such information is offered solely for your consideration, investigation and verification. It is not suggested or guaranteed that the hazard precautions or procedures described are the only ones which exist. Gelest, Inc. makes no warranties, express or implied, with respect to the use of such information and assumes no responsibility therefore. Information on this safety data sheet is not intended to constitute a basis for product specifications.

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