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

1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>Substance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substance name</td>
<td>N-(TRIETHOXYSILYLPROPYL)-O-POLYETHYLENE OXIDE URETHANE, 95%</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>74695-91-3</td>
</tr>
<tr>
<td>Product code</td>
<td>SIT8192.0</td>
</tr>
<tr>
<td>Formula</td>
<td>C10H22NO4SiO(CH2CH2O)4-6H</td>
</tr>
<tr>
<td>Synonyms</td>
<td>O-POLYETHYLENE OXIDE-N-(TRIETHOXYSILYLPROPYL)-URETHANE</td>
</tr>
<tr>
<td>Product group</td>
<td>Trade product</td>
</tr>
<tr>
<td>Chemical family</td>
<td>POLYALKYLENE OXIDE</td>
</tr>
</tbody>
</table>

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

1.2.1. Relevant identified uses

Use of the substance/mixture: Chemical intermediate

1.2.2. Uses advised against

No additional information available

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

GELEST INC.
Fritz-Klatte-Strasse 8
65933 Frankfurt
Germany
T +49 (0) 69 3535106-500 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.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 according to Regulation (EC) No. 1272/2008 [CLP]

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>H319</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-statements: see section 16

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP): ☑️
N-(TRIETHOXYSILYLPROPYL)-O-POLYETHYLENE OXIDE URETHANE, 95%

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

GHS07

Signal word (CLP) : Warning
Hazard statements (CLP) : H319 - Causes serious eye irritation.
Precautionary statements (CLP) : P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
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.

2.3. Other hazards

Other hazards which do not result in classification : The hydrolysis product of this compound is ethanol. Overexposure to ethanol by skin absorption, inhalation or ingestion may have a narcotic effect (headache, nausea, drowsiness). Ethanol is metabolized to acetaldehyde and acetic acid which in large quantities result in metabolic acidosis, CNS depression and death due to respiratory arrest. This product contains ethanol which is classified as a carcinogen by IARC in alcoholic beverages.

Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Mono-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>N-(TRIETHOXYSILYLPROPYL)-O-POLYETHYLENE OXIDE URETHANE, 95%</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>74695-91-3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-(Triethoxysilylpropyl)-o-polyethylene urethane oxide</td>
<td>CAS-No.: 74695-91-3</td>
<td>&gt; 95</td>
<td>Eye Irrit. 2, H319</td>
</tr>
</tbody>
</table>

Full text of H- and EUH-statements: see section 16

3.2. Mixtures

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 person to fresh air and keep comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact : Wash with plenty of water/…. 
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/effects after inhalation : May cause irritation to the respiratory tract. Overexposure may cause: Cough. Headache. Nausea.
Symptoms/effects after skin contact : May cause skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.
Chronic symptoms : On contact with water this compound liberates ethanol which is known to have a chronic effect on the central nervous system.
4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

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 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 vapour 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 Section 8. Exposure controls and personal protection.

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 vapour and mist. Provide good ventilation in process area to prevent formation of vapour.
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.
Incompatible materials: Moisture. Water:
Storage area: Store in a well-ventilated place. Store away from heat.

7.3. Specific end use(s)
No additional information available
N-(TRIETHOXYSILYLPROPYL)-O-POLYETHYLENE OXIDE URETHANE, 95%

Safety Data Sheet

 according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values
No additional information available

8.1.2 Recommended monitoring procedures
No additional information available

8.1.3 Air contaminants formed
No additional information available

8.1.4 DNEL and PNEC
No additional information available

8.1.5 Control banding
No additional information available

8.2 Exposure controls

8.2.1 Appropriate engineering controls

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

8.2.2 Personal protection 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.

8.2.2.1 Eye and face protection

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

8.2.2.2 Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
Neoprene or nitrile rubber gloves

8.2.2.3 Respiratory protection

Respiratory protection:
Air-purifying respirator with a combination of HEPA filter.

8.2.2.4 Thermal hazards
No additional information available

8.2.3 Environmental exposure controls
No additional information available

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Straw</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>400 – 500 g/mol</td>
</tr>
<tr>
<td>Odour</td>
<td>Mild.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>Not available</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>&lt; 0 °C</td>
</tr>
</tbody>
</table>
N-(TRIETHOXYSILYLPROPYL)-O-POLYETHYLENE OXIDE URETHANE, 95%

Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Boiling point: > 180 °C decomposes
Flammability: Not available
Explosive limits: Not available
Lower explosion limit: Not available
Upper explosion limit: Not available
Flash point: > 110 °C
Auto-ignition temperature: Not available
Decomposition temperature: Not available
pH: Not available
Viscosity, kinematic: 75 – 125 mm²/s
Solubility: Reacts with water.
Partition coefficient n-octanol/water (Log Kow): Not available
Vapour pressure: < 1 mm Hg @ 20°C
Vapour pressure at 50°C: Not available
Density: Not available
Relative density: 1,09
Relative vapour density at 20°C: Not available
Particle characteristics: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes
No additional information available

9.2.2. Other safety characteristics
VOC content: < 1 %
Refractive index: 1,454

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable in sealed containers.

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

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

10.5. Incompatible materials
Moisture. Water:

10.6. Hazardous decomposition products
Ethanol. Organic acid vapors.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Acute toxicity (oral): Not classified
Acute toxicity (dermal): Not classified
Acute toxicity (inhalation): Not classified
Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitisation: Not classified
N-(TRIETHOXYSILYLPROPYL)-O-POLYETHYLENE OXIDE URETHANE, 95%

Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

09.11.2023 (Revision date)

Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

N-(TRIETHOXYSILYLPROPYL)-O-POLYETHYLENE OXIDE URETHANE, 95% (74695-91-3)

Viscosity, kinematic 75 – 125 mm²/s

11.2. Information on other hazards
No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Not classified
Hazardous to the aquatic environment, long–term (chronic) : Not classified

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Endocrine disrupting properties
No additional information available

12.7. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

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

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

14.2. UN proper shipping name
Not applicable

09.11.2023 (Revision date)
N-(TRIETHOXYSILYLPROPYL)-O-POLYETHYLENE OXIDE URETHANE, 95%

Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

09.11.2023 (Revision date)  EU - en  7/8

<table>
<thead>
<tr>
<th>ADR</th>
<th>IMDG</th>
<th>IATA</th>
<th>ADN</th>
<th>RID</th>
</tr>
</thead>
<tbody>
<tr>
<td>14.3. Transport hazard class(es)</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

| 14.4. Packing group | Not applicable | Not applicable | Not applicable | Not applicable |

<table>
<thead>
<tr>
<th>14.5. Environmental hazards</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dangerous for the environment: No</td>
</tr>
<tr>
<td>Dangerous for the environment: No</td>
</tr>
<tr>
<td>Dangerous for the environment: No</td>
</tr>
<tr>
<td>Dangerous for the environment: No</td>
</tr>
</tbody>
</table>

| Dangerous for the environment: No|
| Marine pollutant: No |

No supplementary information available

<table>
<thead>
<tr>
<th>14.6. Special precautions for user</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overland transport</td>
</tr>
<tr>
<td>No data available</td>
</tr>
</tbody>
</table>

| Transport by sea |
| No data available |

| Air transport |
| No data available |

| Inland waterway transport |
| No data available |

| Rail transport |
| No data available |

| 14.7. Maritime transport in bulk according to IMO instruments |
| Not applicable |

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

<table>
<thead>
<tr>
<th>EU restriction list (REACH Annex XVII)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reference code</td>
</tr>
<tr>
<td>----------------</td>
</tr>
<tr>
<td>3(b)</td>
</tr>
</tbody>
</table>

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List
N-(TRIETHOXYSILYLPROPYL)-O-POLYETHYLENE OXIDE URETHANE, 95%

Safety Data Sheet
according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

**PIC Regulation (Prior Informed Consent)**
Not listed on the PIC list (Regulation EU 649/2012)

**POP Regulation (Persistent Organic Pollutants)**
Not listed on the POP list (Regulation EU 2019/1021)

**Ozone Regulation (1005/2009)**
Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

**VOC Directive (2004/42)**
VOC content : < 1 %

**Explosives Precursors Regulation (2019/1148)**
Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

**Drug Precursors Regulation (273/2004)**
Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

**15.1.2. National regulations**
No additional information available

**15.2. Chemical safety assessment**
No additional information available

**SECTION 16: Other information**

<table>
<thead>
<tr>
<th>Abbreviations and acronyms:</th>
</tr>
</thead>
<tbody>
<tr>
<td>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; GHS: The Globally Harmonized System of Classification and Labelling; APF: Assigned Protection Factor</td>
</tr>
</tbody>
</table>

Other information : Prepared by safety and environmental affairs.

<table>
<thead>
<tr>
<th>Full text of H- and EUH-statements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2</td>
</tr>
<tr>
<td>H319</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom v22

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.

© 2023 Gelest Inc. Morrisville, PA 19067
NOTICE OF TSCA USE RESTRICTIONS AND REQUIRED CONTROLS FOR
SIT8192.0
N-(TRIETHOXYSILYLPROPYL)- O-POLYETHYLENE OXIDE URETHANE 95%

Dear Customer:

The chemical product purchased, SIT8192.0 has been granted a Low Volume Exemption by the U.S. Environmental Protection Agency (EPA) under the Toxic Substances Control Act (TSCA) regulations (40 CFR 723.50). Any manufacturer or processor who intends to use this chemical substance for commercial purposes must comply with the specific use restrictions and controls specified as follows:

**USE OF THIS CHEMICAL SUBSTANCE IS RESTRICTED TO:** Hydrophilic modification of surfaces such as silica, glass, titania

**CONTROLS:** Workers must use personal protection equipment to limit dermal and inhalation exposures as described in Section 8: Exposure Controls/Personal Protection of the Safety Data Sheet (SDS). These exposure controls include:

- **Hand protection:** Impervious gloves (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:** Air-purifying respirator with a combination of HEPA filter.

**WASTE DISPOSAL:** Customer must rinse containers with solvent prior to disposal. Residues and wash solvents must be containerized for off-site disposal by incineration at licensed waste disposal facility. Do not release to publicly owned treatment works (POTW) via sewer or to surface waters.

If you have questions or need more information related to allowable use of this substance, contact Gelest Regulatory Affairs at 215-547-1015.

Best Regards,

Gelest, Inc.
Regulatory Affairs Department