**SECTION 1: Identification**

1.1. Identification

Product name: ALLOYLOXY(POLYETHYLENE OXIDE) (35-50 EO)
Product code: ENEA0264
Product form: Substance
Physical state: Solid
Synonyms: ALLOYLOXY PEG
          ALLYL ALCOHOL ETHOXYLATE
          POLYETHYLENE OXIDE MONOALLYL ETHER
Chemical family: POLYETHER

1.2. Recommended use and restrictions on use

Recommended use: Chemical intermediate

1.3. Supplier

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: Hazard(s) identification**

2.1. Classification of the substance or mixture

GHS-US classification
Not classified

2.2. GHS Label elements, including precautionary statements

GHS US labeling
No labeling applicable

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

Substance type: Mono-constituent
Name: ALLOYLOXY(POLYETHYLENE OXIDE) (35-50 EO)
CAS-No.: 27274-31-3

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyethylene oxide monoallyl ether</td>
<td>(CAS-No.) 27274-31-3</td>
<td>97 - 100</td>
<td>Flam. Liq. 2, H225, Acute Tox. 3 (Oral), H301, Acute Tox. 2 (Dermal), H310, Acute Tox. 1 (Inhalation: vapour), H330, Skin Irrit. 2, H315, Eye Irrit. 2A, H319, STOT SE 3, H335, Aquatic Acute 1, H400</td>
</tr>
<tr>
<td>Allyl alcohol</td>
<td>(CAS-No.) 107-18-6</td>
<td>&lt; 0.1</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-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 victim 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 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 (acute and delayed)

Symptoms/effects after inhalation
No information available.

Symptoms/effects after skin contact
May cause skin irritation.

Symptoms/effects after eye contact
May cause eye irritation.

Symptoms/effects after ingestion
May be harmful if swallowed.

4.3. Immediate medical attention and special treatment, if necessary

No additional information available.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media
None known.

5.2. Specific hazards arising from the chemical

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

5.3. Special protective equipment and precautions for fire-fighters

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

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

Protective equipment
Wear protective equipment as described in Section 8.

Emergency procedures
Evacuate unnecessary personnel.

6.1.2. 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 product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up
Sweep or shovel spills into appropriate container for disposal.

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

Precautions for safe handling
Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Use only in well ventilated areas.

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

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions
Keep container tightly closed.

Incompatible materials
Oxidizing agent.

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>Allyl alcohol (107-18-6)</th>
<th>ACGIH TWA (ppm)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>OSHA PEL (TWA) (ppm)</th>
<th>IDLH (ppm)</th>
<th>NIOSH REL (TWA) (mg/m³)</th>
<th>NIOSH REL (TWA) (ppm)</th>
<th>NIOSH REL (STEL) (mg/m³)</th>
<th>NIOSH REL (STEL) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>0.5 ppm</td>
<td>2 ppm</td>
<td>2 ppm</td>
<td>20 ppm</td>
<td>5 mg/m³</td>
<td>2 ppm</td>
<td>10 mg/m³</td>
<td>4 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. 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 dust and mist (teal cartridge) respirator.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state: Solid
- Appearance: Solid
- Molecular mass: 1500 - 2000 g/mol
- Color: No data available
- Odor: No data available
- Odor threshold: No data available
- Refractive index: No data available
- pH: No data available
- Relative evaporation rate (butyl acetate=1): No data available
- Melting point: 42 - 48 °C
- Freezing point: No data available
- Boiling point: No data available
- Flash point: > 150 °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: 1.1
- Solubility: Insoluble in water
- Log Pow: No data available
ALLYLOXY(POLYETHYLENE OXIDE) (35-50 EO)
Safety Data Sheet

Log Kow : No data available
Viscosity, kinematic : 24.5 - 28 cSt @ 100°C
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidizing properties : No data available
Explosion limits : No data available

9.2. Other information
No additional information 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.

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified

Allyl alcohol (107-18-6)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>64 mg/kg</td>
</tr>
<tr>
<td>LD50 oral mouse</td>
<td>96 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>89 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat (mg/l)</td>
<td>0.391 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>64 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (dermal)</td>
<td>89 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (vapors)</td>
<td>0.391 mg/l/4h</td>
</tr>
<tr>
<td>ATE US (dust, mist)</td>
<td>0.391 mg/l/4h</td>
</tr>
</tbody>
</table>

Polyethylene oxide monoallyl ether (27274-31-3)

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>&gt; 2000 mg/kg</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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/effects after inhalation : No information available.
Symptoms/effects after skin contact : May cause skin irritation.
Symptoms/effects after eye contact : May cause eye irritation.
Symptoms/effects after ingestion : May be harmful if swallowed.
### SECTION 12: Ecological information

**12.1. Toxicity**

<table>
<thead>
<tr>
<th>Allyl alcohol (107-18-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LC50 fish 1</strong></td>
</tr>
<tr>
<td><strong>LC50 fish 2</strong></td>
</tr>
</tbody>
</table>

**12.2. Persistence and degradability**

No additional information available

**12.3. Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Allyl alcohol (107-18-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>BCF fish 1</strong></td>
</tr>
<tr>
<td><strong>Log Pow</strong></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.
- **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**

<table>
<thead>
<tr>
<th>Allyl alcohol (107-18-6)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>Listed on the United States SARA Section 302</td>
</tr>
<tr>
<td>Subject to reporting requirements of United States SARA Section 313</td>
</tr>
<tr>
<td><strong>SARA Section 302 Threshold Planning Quantity (TPQ)</strong></td>
</tr>
<tr>
<td><strong>SARA Section 313 - Emission Reporting</strong></td>
</tr>
</tbody>
</table>

*Polyethylene oxide monoallyl ether (27274-31-3)*

- Listed on the United States TSCA (Toxic Substances Control Act) inventory

**15.2. International regulations**

**CANADA**

ALLYLOXY(POLYETHYLENE OXIDE) (35-50 EO)
Safety Data Sheet

**Allyl alcohol (107-18-6)**
Listed on the Canadian DSL (Domestic Substances List)

<table>
<thead>
<tr>
<th>WHMIS Classification</th>
<th>Polyethylene oxide monoallyl ether (27274-31-3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class B Division 2 - Flammable Liquid</td>
<td>Listed on the Canadian DSL (Domestic Substances List)</td>
</tr>
<tr>
<td>Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects</td>
<td></td>
</tr>
<tr>
<td>Class D Division 2 Subdivision B - Toxic material causing other toxic effects</td>
<td></td>
</tr>
</tbody>
</table>

**Polyethylene oxide monoallyl ether (27274-31-3)**
Listed on the Canadian DSL (Domestic Substances List)

**EU-Regulations**
**Allyl alcohol (107-18-6)**
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**National regulations**
**Allyl alcohol (107-18-6)**
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECCSC (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
Japanese Pollutant Release and Transfer Register Law (PRTR Law)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSO (Mexican National Inventory of Chemical Substances)

**Polyethylene oxide monoallyl ether (27274-31-3)**
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECCSC (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)

**15.3. US State regulations**
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

**Allyl alcohol (107-18-6)**
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

**SECTION 16: Other information**
Full text of H-phrases:

| H225 | Highly flammable liquid and vapor |
| H301 | Toxic if swallowed |
| H310 | Fatal if in contact with skin |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H330 | Fatal if inhaled |
| H335 | May cause respiratory irritation |
| H400 | Very toxic to aquatic life |

Abbreviations and acronyms: ND: Not Determined, 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.

**Hazard Rating**
**Health**: 2 Moderate Hazard - Temporary or minor injury may occur
ALLYLOXY(POLYETHYLENE OXIDE) (35-50 EO)
Safety Data Sheet

Flammability: 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

Physical: 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Prepared by safety and environmental affairs.

Date of issue: 05/30/2017 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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

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