### SECTION 1: Identification

#### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Product name</th>
<th>ALLYL PHENYL ETHER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>ENEA0380</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Formula</td>
<td>C9H10O</td>
</tr>
<tr>
<td>Synonyms</td>
<td>ALLYLOXYBENZENE</td>
</tr>
<tr>
<td></td>
<td>PHENYL ALLYL ETHER</td>
</tr>
<tr>
<td></td>
<td>2-PROPRENYLOXYBENZENE</td>
</tr>
<tr>
<td></td>
<td>BENZENE, (2-PROPEN-1-YLOXY)-</td>
</tr>
<tr>
<td>Chemical family</td>
<td>ORGANIC</td>
</tr>
</tbody>
</table>

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

- **Recommended use**: Chemical intermediate
- **Restrictions**: 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: Hazard(s) Identification

#### 2.1. Classification of the substance or mixture

- **GHS-US classification**: Flammable liquids Category 4 - H227

  - **Full text of H statement**: see section 16

#### 2.2. Label elements

- **GHS-US labeling**
  - **Signal word (GHS-US)**: Warning
  - **Hazard statements (GHS-US)**: H227 - Combustible liquid
  - **Precautionary statements (GHS-US)**:
    - P280 - Wear protective gloves/protective clothing/eye protection/face protection
    - P210 - Keep away from heat, open flames, sparks. - No smoking
    - P370+P378 - In case of fire: Use water spray or fog, foam, carbon dioxide, dry chemical to extinguish
    - P403+P235 - Keep in a cool place
    - 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)

No data available

### SECTION 3: Composition/Information on ingredients

#### 3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allyl phenyl ether ([CAS No]) 1746-13-0</td>
<td>95 - 100</td>
<td>Flam. Liq. 4, H227</td>
<td></td>
</tr>
</tbody>
</table>

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

#### 3.2. Mixtures

Not applicable
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, both acute and delayed
Symptoms/injuries after inhalation: May cause irritation to the respiratory tract. May be harmful if inhaled. Repeated exposure can cause kidney damage.
Symptoms/injuries after skin contact: May cause skin irritation. May be harmful in contact with skin.
Symptoms/injuries after eye contact: May cause eye irritation.
Symptoms/injuries after ingestion: May be harmful if swallowed.

4.3. Indication of any immediate medical attention and special treatment needed
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: Combustible liquid. Irritating fumes and acid vapors may develop when material is exposed to elevated temperatures or open flame.

5.3. Advice for firefighters
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
General measures: Remove ignition sources. Use special care to avoid static electric charges.
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 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. 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: Keep away from heat, open flames, sparks. - No smoking.
Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapor and mist. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent accumulation of vapors. Use only non-sparking tools.
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. Keep in a cool place.
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
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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear liquid.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>134.18 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Straw.</td>
</tr>
<tr>
<td>Odor</td>
<td>Geranium-like.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.522</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=1)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Melting point</td>
<td>&lt; 0 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>192 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>66 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Combustible liquid</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>~ 20 mm Hg @ 20°C</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.978</td>
</tr>
<tr>
<td>VOC content</td>
<td>&lt; 3 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion limits</td>
<td>No data available</td>
</tr>
</tbody>
</table>

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
Decomposes when heated above 150°C in the presence of metal salts.

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

10.5. Incompatible materials
Oxidizing agent.

10.6. Hazardous decomposition products
Organic acid vapors. Including phenolic compounds.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Acute toxicity</th>
<th>Not classified</th>
</tr>
</thead>
</table>

Allyl phenyl ether (1746-13-0)

<table>
<thead>
<tr>
<th>LD50 intraperitoneal mouse</th>
<th>100 mg/kg RTECS Number: DA8575000</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 intravenous mouse</td>
<td>63 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
STOT—single exposure: Not classified
STOT—repeated exposure: Not classified
Aspiration hazard: Not classified
Symptoms/injuries after inhalation: May cause irritation to the respiratory tract. May be harmful if inhaled. Repeated exposure can cause kidney damage.
Symptoms/injuries after skin contact: May cause skin irritation. May be harmful in contact with skin.
Symptoms/injuries after eye contact: May cause eye irritation.
Symptoms/injuries after ingestion: May be harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity
No additional information available

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. Other adverse effects
Other adverse effects: This substance may be hazardous to the environment.
Effect on ozone layer: No additional information available
Effect on the global warming: No known effects from this product.
GWPmix comment: No known effects from this product.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Sewage disposal recommendations: Do not dispose of waste into sewer.
### Product/Packaging disposal recommendations

- Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

**Ecology - waste materials**

- Avoid release to the environment.

### SECTION 14: Transport information

#### 14.1. UN number

- DOT NA no.: NA1993

#### 14.2. UN proper shipping name

- **Transport document description**: NA1993 Combustible liquid, n.o.s. (ALLYL PHENYL ETHER), 3, III
- **Proper Shipping Name (DOT)**: Combustible liquid, n.o.s. (ALLYL PHENYL ETHER)
- **Class (DOT)**: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- **Packing group (DOT)**: III - Minor Danger
- **DOT Packaging Non Bulk (49 CFR 173.xxx)**: 203
- **DOT Packaging Bulk (49 CFR 173.xxx)**: 241
- **DOT Packaging Exceptions (49 CFR 173.xxx)**: 150
- **DOT Symbols**: D - Proper shipping name for domestic use only, or to and from Canada,G - Identifies PSN requiring a technical name

#### 14.3. Additional information

- **Emergency Response Guide (ERG) Number**: 128
- **Other information**: No supplementary information available.

**Transport by sea**

- **DOT Vessel Stowage Location**: A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.

**Air transport**

- **DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)**: 60 L
- **DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)**: 220 L

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

**Allyl phenyl ether (1746-13-0)**

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

#### 15.2. International regulations

**CANADA**

**Allyl phenyl ether (1746-13-0)**

- Listed on the Canadian NDSL (Non-Domestic Substances List)
- WHMIS Classification: Class B Division 3 - Combustible Liquid

**EU-Regulations**

**Allyl phenyl ether (1746-13-0)**

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

**National regulations**

**Allyl phenyl ether (1746-13-0)**

- Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
- Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

#### 15.3. US State regulations

No additional information available

### SECTION 16: Other information

**Full text of H-phrases:**

- **H227**: Combustible liquid
ALLYL PHENYL ETHER
Safety Data Sheet

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; GHS: The Globally Harmonized System of Classification and Labelling.

HMIS III Rating
Health: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability: 2 Moderate Hazard - Materials which must be moderately heated or exposed to high ambient temperatures before ignition will occur. Includes liquids having a flash point at or above 100 F but below 200 F. (Classes II & IIIA)
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.

Prepared by safety and environmental affairs.
Date of issue: 02/20/2017 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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