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

### 1.1. Product identifier

<table>
<thead>
<tr>
<th>Product form</th>
<th>: Sub stance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>: Liquid</td>
</tr>
<tr>
<td>Substance name</td>
<td>: ALLYLTRIETHYLGERMANE</td>
</tr>
<tr>
<td>Product code</td>
<td>: GEA0530</td>
</tr>
<tr>
<td>Formula</td>
<td>: C9H20Ge</td>
</tr>
<tr>
<td>Synonyms</td>
<td>: PROPENYLTRIETHYLGERMANE</td>
</tr>
<tr>
<td></td>
<td>: 3-TRIETHYLGERMYLPROPENE</td>
</tr>
<tr>
<td></td>
<td>: TRIETHYLALLYLGERMANIUM</td>
</tr>
<tr>
<td>Chemical family</td>
<td>: ORGANOGERMANE</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 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestde.com - www.gelestde.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]**

- Flammable liquids, Category 3 - **H226**
- Acute toxicity (oral), Category 3 - **H301**
- Serious eye damage/eye irritation, Category 2 - **H319**

Full text of H statements: see section 16

**Adverse physicochemical, human health and environmental effects**
No additional information available

### 2.2. Label elements

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

**Hazard pictograms (CLP)**

- GHS02
- GHS06

**Signal word (CLP)**
Danger

**Hazard statements (CLP)**
H226 - Flammable liquid and vapour.
Precautionary statements (CLP):

P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Ground/bond container and receiving equipment.
P301 + P310 - IF SWALLOWED: Immediately call a doctor.

P264 - Wash hands thoroughly after handling.
P330 - Rinse mouth.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 - Ground/bond container and receiving equipment.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Name</th>
<th>CAS-No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono-constituent</td>
<td>ALLYLTRIETHYLGERMANE</td>
<td>1793-90-4</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>Allyltriethylgermane</td>
<td>(CAS-No.) 1793-90-4</td>
<td>95 - 100</td>
<td>Flam. Liq. 3, H226, Acute Tox. 3 (Oral), H301, Eye Irrit. 2, H319</td>
</tr>
</tbody>
</table>

Full text of 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 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/…. 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. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects after inhalation: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact: May cause skin irritation.
Symptoms/effects after eye contact: Causes serious eye irritation.
Symptoms/effects after ingestion: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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: Flammable liquid and vapour. Irritating fumes and organic acid vapors may develop when material is exposed to water or open flame.
Explosion hazard: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions: Exercise caution when fighting any chemical fire. Use water spray to cool exposed surfaces.
### 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

<table>
<thead>
<tr>
<th>General measures</th>
<th>Eliminate every possible source of ignition. Use special care to avoid static electric charges.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>6.1.1. For non-emergency personnel</strong></td>
<td><strong>Protective equipment</strong></td>
</tr>
<tr>
<td><strong>Emergency procedures</strong></td>
<td>Evacuate unnecessary personnel.</td>
</tr>
<tr>
<td><strong>6.1.2. For emergency responders</strong></td>
<td><strong>Protective equipment</strong></td>
</tr>
</tbody>
</table>

#### 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 vapours are flammable. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
| Precautions for safe handling | Avoid all eye and skin contact and do not breathe vapour and mist. Ground/bond container and receiving equipment. Provide good ventilation in process area to prevent formation of vapour. Take precautionary measures against static discharge. 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

| Technical measures | Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment. |
| 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. |

#### 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:**
Handle in an enclosing hood with exhaust 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

<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>200.85 g/mol</td>
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<tr>
<td>Colour</td>
<td>Straw.</td>
</tr>
<tr>
<td>Odour</td>
<td>Distinct. Mild.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.4594</td>
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<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>&lt; 0 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>181 - 182 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>48 °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>Flammable liquid and vapour.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
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<tr>
<td>Relative vapour density at 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>1</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>100 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
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<tr>
<td>Log Kow</td>
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<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>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive 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 in sealed containers stored under a dry inert atmosphere.

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 : Toxic if swallowed.
ALLYLTRIETHYLGERMANE
Safety Data Sheet

**ALLYLTRIETHYLGERMANE (1793-90-4)**
ATE CLP (oral) 114 mg/kg bodyweight

**Allyltriethylgermane (1793-90-4)**
LD50 oral rat 114 mg/kg
ATE CLP (oral) 114 mg/kg bodyweight

- **Skin corrosion/irritation**: Not classified
- **Serious eye damage/irritation**: Causes serious eye irritation.
- **Respiratory or skin sensitisation**: Not classified
- **Germ cell mutagenicity**: Not classified
- **Reproductive toxicity**: Not classified
- **STOT-single exposure**: Not classified
- **STOT-repeated exposure**: Not classified
- **Aspiration hazard**: Not classified
- **Symptoms/effects after inhalation**: May cause irritation to the respiratory tract.
- **Symptoms/effects after skin contact**: May cause skin irritation.
- **Symptoms/effects after eye contact**: Causes serious eye irritation.
- **Symptoms/effects after ingestion**: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.
- **Reason for classification**: Expert judgment

**SECTION 12: Ecological information**

12.1. **Toxicity**
- **Acute aquatic toxicity**: Not classified
- **Chronic aquatic toxicity**: 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. **Other adverse effects**
These adverse effects: This substance may be hazardous to the environment.

**SECTION 13: Disposal considerations**

13.1. **Waste treatment methods**
- **Sewage disposal recommendations**: Do not dispose of waste into sewer.
- **Product/Packaging disposal recommendations**: May be incinerated. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.
- **Additional information**: Handle empty containers with care because residual vapours are flammable.
- **Ecology - waste materials**: Avoid release to the environment.

**SECTION 14: Transport information**

14.1. **UN number**
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. **UN number**
- **UN-No. (ADR)**: 1992
- **UN-No. (IMDG)**: 1992
- **UN-No. (IATA)**: 1992
- **UN-No. (ADN)**: 1992
- **UN-No. (RID)**: 1992

14.2. **UN proper shipping name**
Proper Shipping Name (ADR): FLAMMABLE LIQUID, TOXIC, N.O.S.
### 14.3. Transport hazard class(es)

**ADR**
- Transport hazard class(es) (ADR): 3 (6.1)
- Danger labels (ADR): 3, 6.1

**IMDG**
- Transport hazard class(es) (IMDG): 3 (6.1)
- Danger labels (IMDG): 3, 6.1

**IATA**
- Transport hazard class(es) (IATA): 3 (6.1)
- Hazard labels (IATA): 3, 6.1

**ADN**
- Transport hazard class(es) (ADN): 3 (6.1)
- Danger labels (ADN): 3, 6.1

**RID**
- Transport hazard class(es) (RID): 3 (6.1)
- Danger labels (RID): 3, 6.1
14.4. Packing group

<table>
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<tr>
<th>Packing group (ADR)</th>
<th>III</th>
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</thead>
<tbody>
<tr>
<td>Packing group (IMDG)</td>
<td>III</td>
</tr>
<tr>
<td>Packing group (IATA)</td>
<td>III</td>
</tr>
<tr>
<td>Packing group (ADN)</td>
<td>III</td>
</tr>
<tr>
<td>Packing group (RID)</td>
<td>III</td>
</tr>
</tbody>
</table>

14.5. Environmental hazards

- Dangerous for the environment: No
- Marine pollutant: No
- Other information: No supplementary information available

14.6. Special precautions for user

- Overland transport
  - Classification code (ADR): FT1
  - Special provisions (ADR): 274
  - Limited quantities (ADR): 5L
  - Excepted quantities (ADR): E1
  - Packing instructions (ADR): P001, IBC03, R001
  - Mixed packing provisions (ADR): MP19
  - Portable tank and bulk container instructions (ADR): T7
  - Portable tank and bulk container special provisions (ADR): TP1, TP28
  - Tank code (ADR): L4BH
  - Tank special provisions (ADR): TU15
  - Vehicle for tank carriage: FL
  - Transport category (ADR): 3
  - Special provisions for carriage - Packages (ADR): V12
  - Special provisions for carriage - Loading, unloading and handling (ADR): CV13, CV28
  - Special provisions for carriage - Operation (ADR): S2
  - Hazard identification number (Kemler No.): 36
  - Orange plates: 36 1992
  - Tunnel restriction code (ADR): D/E

- Transport by sea
  - Special provisions (IMDG): 223, 274
  - Limited quantities (IMDG): 5 L
  - Excepted quantities (IMDG): E1
  - Packing instructions (IMDG): P001
  - IBC packing instructions (IMDG): IBC03
  - Tank instructions (IMDG): T7
  - Tank special provisions (IMDG): TP1, TP28
  - EmS-No. (Fire): F-E
  - EmS-No. (Spillage): S-D
  - Stowage category (IMDG): A
  - Properties and observations (IMDG): Flammable toxic liquid which is not specified by name in this class or, on account of its characteristics, in some other class. Toxic if swallowed, by skin contact or by inhalation.

- Air transport
  - PCA Excepted quantities (IATA): E1
  - PCA Limited quantities (IATA): Y343
  - PCA limited quantity max net quantity (IATA): 2L
  - PCA packing instructions (IATA): 355
ALLYLTRIETHYLGERMANE
Safety Data Sheet

PCA max net quantity (IATA) : 60L
CAO packing instructions (IATA) : 366
CAO max net quantity (IATA) : 220L
Special provisions (IATA) : A3
ERG code (IATA) : 3P

- Inland waterway transport
  Classification code (ADN) : FT1
  Special provisions (ADN) : 274, 802
  Limited quantities (ADN) : 5 L
  Excepted quantities (ADN) : E1
  Carriage permitted (ADN) : T
  Equipment required (ADN) : PP, EP, EX, TOX, A
  Ventilation (ADN) : VE01, VE02
  Number of blue cones/lights (ADN) : 0

- Rail transport
  Classification code (RID) : FT1
  Special provisions (RID) : 274
  Limited quantities (RID) : 5L
  Excepted quantities (RID) : E1
  Packing instructions (RID) : P001, IBC03, R001
  Mixed packing provisions (RID) : MP19
  Portable tank and bulk container instructions (RID) : T7
  Portable tank and bulk container special provisions (RID) : TP1, TP28
  Tank codes for RID tanks (RID) : L4BH
  Special provisions for RID tanks (RID) : TU15
  Transport category (RID) : 3
  Special provisions for carriage – Packages (RID) : W12
  Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28
  Colis express (express parcels) (RID) : CE4
  Hazard identification number (RID) : 36

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code
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
No REACH Annex XVII restrictions
ALLYLTRIETHYLGERMANE is not on the REACH Candidate List
ALLYLTRIETHYLGERMANE is not on the REACH Annex XIV List
ALLYLTRIETHYLGERMANE is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

% Volatiles : 100 %

15.1.2. National regulations

Germany
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-list van kankerverwekkende stoffen : The substance is not listed
15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Abbreviations and acronyms:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ND</td>
<td>Not Determined, No Data</td>
</tr>
<tr>
<td>NA</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>LD/LC</td>
<td>Lethal Dose/Lethal Concentration</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimates</td>
</tr>
<tr>
<td>H</td>
<td>Hour; ° unless otherwise stated</td>
</tr>
<tr>
<td>°C</td>
<td>°C unless otherwise stated</td>
</tr>
<tr>
<td>mmHg/Torr</td>
<td>Millimeters Hg, torr</td>
</tr>
<tr>
<td>PEL</td>
<td>Permissible exposure level</td>
</tr>
<tr>
<td>TWA</td>
<td>Time weighted average</td>
</tr>
<tr>
<td>TLV</td>
<td>Threshold limit value</td>
</tr>
<tr>
<td>NIOSH</td>
<td>National Institute for Occupational Safety and Health</td>
</tr>
<tr>
<td>IARC</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>NTP</td>
<td>National Toxicology Program</td>
</tr>
<tr>
<td>HMIS</td>
<td>Hazardous Material Information System</td>
</tr>
<tr>
<td>CAS No.</td>
<td>Chemical Abstract Service Registration Number</td>
</tr>
<tr>
<td>EC No.</td>
<td>European Commission Registration Number</td>
</tr>
<tr>
<td>EC Index No.</td>
<td>European Commission Index Number</td>
</tr>
<tr>
<td>OECD</td>
<td>The Organisation for Economic Co-operation and Development</td>
</tr>
<tr>
<td>GHS</td>
<td>The Globally Harmonized System of Classification and Labelling</td>
</tr>
<tr>
<td>APF</td>
<td>Assigned Protection Factor</td>
</tr>
</tbody>
</table>

Other information:
Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

<table>
<thead>
<tr>
<th>Acute Tox. 3 (Oral)</th>
<th>Acute toxicity (oral), Category 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>Flam. Lq. 3</td>
<td>Flammable liquids, Category 3</td>
</tr>
<tr>
<td>H226</td>
<td>Flammable liquid and vapour.</td>
</tr>
<tr>
<td>H301</td>
<td>Toxic if swallowed.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

SDS EU (REACH Annex II) - Custom

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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