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

1.1. Product identifier
Product form: Substance
Physical state: Liquid
Substance name: ALLYL ACETATE
Product code: ENEA0015
Formula: C5H8O2
Synonyms: 3-ACETOXYPROPENE; 2-PROPENYL ACETATE; PROP-2-EN-1-YL ACETATE
Chemical family: ESTER

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.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 2 H225
Acute toxicity (oral), Category 3 H301
Serious eye damage/eye irritation, Category 2 H319

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): H225 - Highly flammable liquid and vapour.
H301 - Toxic if swallowed.
H319 - Causes serious eye irritation.
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.  
P264 - Wash hands thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P301+P310 - IF SWALLOWED: Immediately call a doctor.

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>Mono-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>ALLYL ACETATE</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>591-87-7</td>
</tr>
<tr>
<td>EC-No.</td>
<td>209-734-8</td>
</tr>
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</table>

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC No. 1272/2008 [CLP])</th>
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</thead>
<tbody>
<tr>
<td>Allyl acetate</td>
<td>(CAS-No.) 591-87-7 (EC-No.) 209-734-8</td>
<td>98 - 100</td>
<td>Flam. Liq. 2, H225 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. Get medical advice/attention if you feel unwell.

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.

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


Unsuitable extinguishing media: None known.

5.2. Special hazards arising from the substance or mixture

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

Explosion hazard: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. 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

General measures: Eliminate every possible source of ignition. Use special care to avoid static electric charges.

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. 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.

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. Take precautionary measures against static discharge. Containers and transfer lines require grounding during use. 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: Ground/bond container and receiving equipment. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical equipment.

Storage conditions: Keep container tightly closed.

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

| Allyl acetate (591-87-7) | Lithuania | IPRV (mg/m³) | 2 mg/m³ |

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

- Physical state: Liquid
- Appearance: Clear liquid.
- Molecular mass: 100.12 g/mol
- Colour: No data available
- Odour: Acrid.
- Odour threshold: No data available
- Refractive index: 1.404
- pH: No data available
- Relative evaporation rate (butylacetate=1): ~ 1
- Melting point: No data available
- Freezing point: -96 °C
- Boiling point: 103 - 104 °C
- Flash point: 11 °C
- Auto-ignition temperature: 374 °C
- Decomposition temperature: No data available
- Flammability (solid, gas): Highly flammable liquid and vapour.
- Vapour pressure: 35.2 mm Hg @ 25°C
- Relative vapour density at 20 °C: > 1
- Relative density: 0.928
- % Volatiles: < 3 %
- Solubility: Water: 17.4 g/l
- Log Pow: No data available
- Log Kow: No data available
- Viscosity, kinematic: 45 - 55 cSt
- Viscosity, dynamic: No data available
- Explosive properties: No data available
- Oxidising properties: No data available
- Explosive limits: 2.1 - 13 vol % (lower; upper)

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: Toxic if swallowed.

**Allyl acetate (591-87-7)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral rat</td>
<td>130 mg/kg</td>
</tr>
<tr>
<td>LC50 inhalation rat ppm</td>
<td>1000 ppm/1h</td>
</tr>
<tr>
<td>ATE CLP (oral)</td>
<td>130 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (gases)</td>
<td>500 ppmv/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitisation: Not classified
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
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
Other adverse effects: This substance may be hazardous to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
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.
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) | 2333 |
| UN-No. (IMDG) | 2333 |
| UN-No. (IATA) | 2333 |
| UN-No. (ADN) | 2333 |
| UN-No. (RID) | 2333 |

14.2. UN proper shipping name

| Proper Shipping Name (ADR) | ALLYL ACETATE |
| Proper Shipping Name (IMDG) | ALLYL ACETATE |
| Proper Shipping Name (IATA) | Allyl acetate |
| Proper Shipping Name (ADN) | ALLYL ACETATE |
| Proper Shipping Name (RID) | ALLYL ACETATE |
| Transport document description (ADR) | UN 2333 ALLYL ACETATE, 3 (6.1), II, (D/E) |
| Transport document description (IMDG) | UN 2333 ALLYL ACETATE, 3 (6.1), II (7°C c.c.) |
| Transport document description (IATA) | UN 2333 Allyl acetate, 3 (6.1), II |
### Transport document description (ADN)
- UN 2333 ALLYL ACETATE, 3 (6.1), II

### Transport document description (RID)
- UN 2333 ALLYL ACETATE, 3 (6.1), II

### 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

### Packing group
- Packing group (ADR): II
- Packing group (IMDG): II
- Packing group (IATA): II
- Packing group (ADN): II
- Packing group (RID): II

### Environmental hazards
- Dangerous for the environment: No
14.6. Special precautions for user

- Overland transport

Classification code (ADR) : FT1
Limited quantities (ADR) : 1l
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T7
Portable tank and bulk container special provisions (ADR) : TP1
Tank code (ADR) : L4BH
Tank special provisions (ADR) : TU15
Vehicle for tank carriage : FL
Transport category (ADR) : 2
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28
Special provisions for carriage - Operation (ADR) : S2, S19
Hazard identification number (Kemler No.) : 336
Orange plates

Tunnel restriction code (ADR) : D/E

- Transport by sea

Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T7
Tank special provisions (IMDG) : TP1, TP13
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D
Stowage category (IMDG) : E
Stowage and handling (IMDG) : SW2
Flash point (IMDG) : 7°C c.c.
Properties and observations (IMDG) : Colourless liquid. Flashpoint: 7°C c.c. Partially miscible with water. Toxic if swallowed, by skin contact or by inhalation. Harmful if swallowed.

- Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 352
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
ERG code (IATA) : 3P

- Inland waterway transport

Classification code (ADN) : FT1
Special provisions (ADN) : 802
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
### Equipment required (ADN)
- PP, EP, EX, TOX, A

### Ventilation (ADN)
- VE01, VE02

### Number of blue cones/lights (ADN)
- 2

### - Rail transport

- **Classification code (RID)**: FT1
- **Limited quantities (RID)**: 1L
- **Excepted quantities (RID)**: E2
- **Packing instructions (RID)**: P001, IBC02
- **Mixed packing provisions (RID)**: MP19
- **Portable tank and bulk container instructions (RID)**: T7
- **Portable tank and bulk container special provisions (RID)**: TP1
- **Tank codes for RID tanks (RID)**: L4BH
- **Special provisions for RID tanks (RID)**: TU15
- **Transport category (RID)**: 2
- **Special provisions for carriage - Loading, unloading and handling (RID)**: CW13, CW28
- **Colis express (express parcels) (RID)**: CE7
- **Hazard identification number (RID)**: 336

### 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
- ALLYL ACETATE is not on the REACH Candidate List
- ALLYL ACETATE is not on the REACH Annex XIV List
- ALLYL ACETATE 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**: < 3 %

**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
  - SZW-list van mutagene stoffen: The substance is not listed
  - NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding: The substance is not listed
  - NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: The substance is not listed
  - NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling: The substance is not listed

- **Denmark**
  - **Class for fire hazard**: Class I-1
  - **Store unit**: 1 liter
  - **Classification remarks**: F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed
  - **Danish National Regulations**: Young people below the age of 18 years are not allowed to use the product

#### 15.2. Chemical safety assessment

No additional information available
### 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</td>
<td>Lethal Dose</td>
</tr>
<tr>
<td>LC</td>
<td>Lethal Concentration</td>
</tr>
<tr>
<td>ATE</td>
<td>Acute Toxicity Estimates</td>
</tr>
<tr>
<td>H</td>
<td>hour</td>
</tr>
<tr>
<td>°</td>
<td>°C unless otherwise stated</td>
</tr>
<tr>
<td>mm</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>TG</td>
<td>Test Guideline</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>
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</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. Liq. 2</td>
<td>Flammable liquids, Category 2</td>
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<td>H225</td>
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<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
</tbody>
</table>

**SDS EU (REACH Annex II) - Custom**

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