# SECTION 1: Identification

## 1.1. Identification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product name</td>
<td>ALLYL ACETATE</td>
</tr>
<tr>
<td>Product code</td>
<td>ENEA0015</td>
</tr>
<tr>
<td>Product form</td>
<td>Substance</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Formula</td>
<td>C5H8O2</td>
</tr>
<tr>
<td>Synonyms</td>
<td>3-ACETOXYPROPENE; 2-PROPENYL ACETATE; PROP-2-EN-1-YL ACETATE</td>
</tr>
<tr>
<td>Chemical family</td>
<td>ESTER</td>
</tr>
</tbody>
</table>

## 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

<table>
<thead>
<tr>
<th>Flammable liquids Category 2</th>
<th>H225 - Highly flammable liquid and vapor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral) Category 3</td>
<td>H201 - Toxic if swallowed</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation Category 2A</td>
<td>H319 - Causes serious eye irritation</td>
</tr>
</tbody>
</table>

Full text of H statements: see section 16

## 2.2. GHS Label elements, including precautionary statements

### GHS US labeling

| Hazard pictograms (GHS US) | : |

<table>
<thead>
<tr>
<th>Signal word (GHS US)</th>
<th>Danger</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazard statements (GHS US)</td>
<td>H225 - Highly flammable liquid and vapor</td>
</tr>
<tr>
<td></td>
<td>H201 - Toxic if swallowed</td>
</tr>
<tr>
<td></td>
<td>H319 - Causes serious eye irritation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Precautionary statements (GHS US)</th>
<th>P280 - Wear protective gloves/protective clothing/eye protection/face protection.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>P210 - Keep away from heat, open flames, sparks. - No smoking.</td>
</tr>
<tr>
<td></td>
<td>P233 - Keep container tightly closed.</td>
</tr>
<tr>
<td></td>
<td>P240 - Ground/Bond container and receiving equipment</td>
</tr>
<tr>
<td></td>
<td>P241 - Use explosion-proof electrical equipment</td>
</tr>
<tr>
<td></td>
<td>P242 - Use only non-sparking tools.</td>
</tr>
<tr>
<td></td>
<td>P243 - Take precautionary measures against static discharge.</td>
</tr>
<tr>
<td></td>
<td>P264 - Wash hands thoroughly after handling.</td>
</tr>
<tr>
<td></td>
<td>P270 - Do not eat, drink or smoke when using this product.</td>
</tr>
<tr>
<td></td>
<td>P300 - Rinse mouth.</td>
</tr>
<tr>
<td></td>
<td>P301+P310 - If swallowed: Immediately call a doctor</td>
</tr>
<tr>
<td></td>
<td>P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing, rinse skin with water/shower</td>
</tr>
<tr>
<td></td>
<td>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing</td>
</tr>
<tr>
<td></td>
<td>P337+P313 - If eye irritation persists: Get medical advice/attention.</td>
</tr>
<tr>
<td></td>
<td>P370+P378 - In case of fire: Use water spray or fog, foam, carbon dioxide, dry chemical to extinguish.</td>
</tr>
<tr>
<td></td>
<td>P403+P235 - Keep in a cool place</td>
</tr>
<tr>
<td></td>
<td>P405 - Store locked up.</td>
</tr>
<tr>
<td></td>
<td>P501 - Dispose of contents/container to licensed waste disposal facility.</td>
</tr>
</tbody>
</table>
### 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

<table>
<thead>
<tr>
<th>Name</th>
<th>Substance type</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allyl acetate</td>
<td>Mono-constituent</td>
<td>(CAS-No.) 591-87-7</td>
<td>98 - 100</td>
<td>Flam. Liq. 2, H225, Acute Tox. 3 (Oral), H301, Eye Irrit. 2A, H319</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. Get medical advice/attention if you feel unwell.

- **First-aid measures after skin contact**: Wash with plenty of soap and 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 (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. Immediate medical attention and special treatment, if necessary

No additional information available

#### SECTION 5: Fire-fighting measures

### 5.1. Suitable (and unsuitable) extinguishing media


- **Unsuitable extinguishing media**: None known.

### 5.2. Specific hazards arising from the chemical

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

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

### 5.3. Special protective equipment and precautions for fire-fighters

- **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 vapor 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 vapors are flammable.
Precautions for safe handling: Avoid all eye and skin contact and do not breathe vapor and mist. Provide good ventilation in process area to prevent accumulation of vapors. 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.

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
No additional information available

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 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
Color: No data available
Odor: Acrid.
Odor threshold: No data available
Refractive index: 1.404
pH: No data available
Relative evaporation rate (butyl acetate=1): ~ 1
**ALLYL ACETATE**
Safety Data Sheet

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>-96 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>103 - 104 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>11 °C</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>374 °C</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Highly flammable liquid and vapor</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>35.2 mm Hg @ 25°C</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>0.928</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>&lt; 3 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Water: 17.4 g/l</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>45 - 55 cSt</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>2.1 - 13 vol % (lower; upper)</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
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 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 US (oral)</td>
<td>130 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>500 ppm/V/4h</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation: Not classified
Serious eye damage/irritation: Causes serious eye irritation.
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
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: 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
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 the ozone layer: No additional information available

SECTION 13: Disposal considerations

13.1. Disposal 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 vapors are flammable.
Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
UN No.(DOT): 2333
DOT NA no.: UN2333

14.2. UN proper shipping name
Transport document description: UN2333 Allyl acetate, 3 (6.1), II
Proper Shipping Name (DOT): Allyl acetate
Class (DOT): 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT): II - Medium Danger
Hazard labels (DOT): 3 - Flammable liquid 6.1 - Poison

DOT Packaging Non Bulk (49 CFR 173.xxx): 202
DOT Packaging Bulk (49 CFR 173.xxx): 243
DOT Packaging Exceptions (49 CFR 173.xxx): 150

14.3. Additional information
Emergency Response Guide (ERG) Number: 131
Other information: No supplementary information available.

Transport by sea
DOT Vessel Stowage Location: E - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other: 40 - Stow “clear of living quarters”
ALLYL ACETATE
Safety Data Sheet

Air transport
DOT Quantity Limitations Passenger aircraft/rail : 1 L
(49 CFR 173.27)
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)

SECTION 15: Regulatory information

15.1. US Federal regulations

Allyl acetate (591-87-7)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
Allyl acetate (591-87-7)
Listed on the Canadian NDSSL (Non-Domestic Substances List)
WHMIS Classification
Class B Division 2 - Flammable Liquid
Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects
Class D Division 2 Subdivision B - Toxic material causing other toxic effects
EU-Regulations
Allyl acetate (591-87-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations
Allyl acetate (591-87-7)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (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)
Listed on the Canadian IDL (Ingredient Disclosure List)
Listed on INSQ (Mexican National Inventory of 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 acetate (591-87-7)
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance 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
H319 Causes serious eye irritation

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; APF: Assigned Protection Factor.

Hazard Rating
Health : 2 Moderate Hazard - Temporary or minor injury may occur
ALLYL ACETATE
Safety Data Sheet

Flammability: 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. ( Classes IB & IC)

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: 06/24/2015  Revision date: 12/09/2015  Version: 2.0

SDS US (GHS HazCom 2012) - Custom

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

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.

© 2019 Gelest Inc. Morrisville, PA 19067