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

1.1. **Product identifier**

- **Product form**: Substone
- **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**

- **Use of the substance/mixture**: Chemical intermediate
- **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: Hazards identification**

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

- **Classification (GHS-US)**:
  - Flam. Liq. 2 H225
  - Acute Tox. 3 (Oral) H301
  - Eye Irrit. 2A H319

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

2.2. **Label elements**

- **GHS-US labeling**:
  - ![GHS02](image)
  - ![GHS06](image)
  - ![GHS07](image)

- **Signal word (GHS-US)**: Danger
- **Hazard statements (GHS-US)**:
  - H225 - Highly flammable liquid and vapor
  - H301 - Toxic if swallowed
  - H319 - Causes serious eye irritation
- **Precautionary statements (GHS-US)**:
  - P280 - Wear protective gloves/protective clothing/eye protection/face protection
  - P210 - Keep away from heat, open flames, sparks. - No smoking
  - P233 - Keep container tightly closed
  - P240 - Ground/bond container and receiving equipment
  - P241 - Use explosion-proof electrical equipment
  - P242 - Use only non-sparking tools
  - P243 - Take precautionary measures against static discharge
  - P264 - Wash hands thoroughly after handling
  - P270 - Do not eat, drink or smoke when using this product
  - P330 - Rinse mouth
  - P301+P310 - If swallowed: Immediately call a doctor
  - P303+P361+P353 - If on skin (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower
  - P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
  - P337+P313 - If eye irritation persists: Get medical advice/attention
  - P370+P378 - In case of fire: Use water spray or fog, foam, carbon dioxide, dry chemical to extinguish
2.3. Other hazards
No additional information available

2.4. Unknown acute toxicity (GHS US)
No data available

SECTION 3: Composition/information on ingredients

3.1. Substance
Substance type: Mono-constituent
Name: ALLYL ACETATE
CAS No: 591-87-7
EC no: 209-734-8

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification (GHS-US)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allyl acetate</td>
<td>(CAS No) 591-87-7</td>
<td>&gt; 98</td>
<td>Flam. Liq. 2, H225</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Acute Tox. 3 (Oral), H301</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Irrit. 2A, H319</td>
</tr>
</tbody>
</table>

3.2. Mixture
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, both acute and delayed
Symptoms/injuries after inhalation: May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact: May cause skin irritation.
Symptoms/injuries after eye contact: Causes serious eye irritation.
Symptoms/injuries 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 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. 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 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.

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: 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
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
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 vapor
Vapor pressure : 35.2 mm Hg @ 25°C
Relative vapor density at 20 °C : > 1
Relative density : 0.928
VOC content : < 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
Oxidizing properties : No data available
Explosion 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 : Oral: Toxic if swallowed.

<table>
<thead>
<tr>
<th>Allyl acetate (591-87-7)</th>
<th></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>130,000 mg/kg body weight</td>
</tr>
<tr>
<td>ATE US (gases)</td>
<td>500,000 ppmV/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/injuries after inhalation : May cause irritation to the respiratory tract.
Symptoms/injuries after skin contact : May cause skin irritation.
Symptoms/injuries after eye contact : Causes serious eye irritation.
Symptoms/injuries 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 ozone layer: No additional information available
Effect on the global warming: No known ecological damage caused by this product.

**SECTION 13: Disposal considerations**

13.1. **Waste treatment methods**
Waste disposal recommendations: Incinerate. Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to licensed waste disposal facility.

**SECTION 14: Transport information**

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

14.2. **UN proper shipping name**
Proper Shipping Name (DOT) : Allyl acetate
Department of Transportation (DOT) Hazard Classes : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120

Hazard labels (DOT) : 3 - Flammable liquid 6.1 - Poison inhalation hazard

Packing group (DOT) : II - Medium Danger
DOT Packaging Exceptions (49 CFR 173.xxx) : 150
DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 243

14.3. **Additional information**
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”

**Air transport**
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 1 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L

**SECTION 15: Regulatory information**

15.1. **US Federal regulations**
ALLYL ACETATE
Safety Data Sheet

15.2. International regulations

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

Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Canadian NDSL (Non-Domestic Substances List)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)
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

ALLYL ACETATE (591-87-7)

<table>
<thead>
<tr>
<th>State</th>
<th>Proposition 65 - Carcinogens List</th>
<th>Proposition 65 - Developmental Toxicity</th>
<th>Proposition 65 - Reproductive Toxicity - Female</th>
<th>Proposition 65 - Reproductive Toxicity - Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Allyl acetate (591-87-7)

<table>
<thead>
<tr>
<th>State</th>
<th>Proposition 65 - Carcinogens List</th>
<th>Proposition 65 - Developmental Toxicity</th>
<th>Proposition 65 - Reproductive Toxicity - Female</th>
<th>Proposition 65 - Reproductive Toxicity - Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State</th>
<th>Proposition 65 - Carcinogens List</th>
<th>Proposition 65 - Developmental Toxicity</th>
<th>Proposition 65 - Reproductive Toxicity - Female</th>
<th>Proposition 65 - Reproductive Toxicity - Male</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. - California</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

No significance risk level (NSRL)

SECTION 16: Other information

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.

Full text of H-phrases:

- Acute Tox. 3 (Oral)
- Acute toxicity (oral) Category 3
- Eye Irrit. 2A
- Serious eye damage/eye irritation Category 2A
- Flam. Liq. 2
- Flammable liquids Category 2
- H225
- Highly flammable liquid and vapor
- H301
- Toxic if swallowed
- H319
- Causes serious eye irritation

HMIS III Rating

Health: 2 Moderate Hazard - Temporary or minor injury may occur
Flammability: 3 Serious Hazard
Physical: 0 Minimal Hazard

Prepared by safety and environmental affairs.

Date of issue: 06/24/2015
Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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

06/24/2015
EN (English US)
SDS ID: ENEA0015