## SECTION 1: Identification

### 1.1. Identification

<table>
<thead>
<tr>
<th><strong>Product name</strong></th>
<th>ALLYLTRI-n-BUTYLTIN</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Product code</strong></td>
<td>SNA0500</td>
</tr>
<tr>
<td><strong>Product form</strong></td>
<td>Substance</td>
</tr>
<tr>
<td><strong>Physical state</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Formula</strong></td>
<td>C₁₅H₃₂Sn</td>
</tr>
<tr>
<td><strong>Synonyms</strong></td>
<td>TRI-n-BUTYLPROPENYLSTANNANE; ALLYLTRIBUTYLSTANNANE</td>
</tr>
<tr>
<td><strong>Chemical family</strong></td>
<td>ORGANOTIN</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><strong>Skin corrosion/irritation Category</strong></th>
<th><strong>H315</strong> Causes skin irritation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Serious eye damage/eye irritation Category</strong></td>
<td><strong>H319</strong> 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):**

### 2.3. Hazards not otherwise classified (HNOC)

**Signal word (GHS US):** Warning

**Hazard statements (GHS US):**

- **H315** - Causes skin irritation
- **H319** - Causes serious eye irritation

**Precautionary statements (GHS US):**

- **P280** - Wear protective gloves/protective clothing/eye protection/face protection.
- **P264** - Wash hands thoroughly after handling.
- **P302+P352** - If on skin: Wash with plenty of soap and water
- **P332+P313** - If skin irritation occurs: Get medical advice/attention.
- **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.
- **P362** - Take off contaminated clothing and wash before reuse.
- **P321** - Specific treatment (see first aid instructions on this label)

### 2.4. Unknown acute toxicity (GHS US)

Not applicable

## SECTION 3: Composition/Information on ingredients

### 3.1. Substances

**Substance type:** Mono-constituent

**Name:** ALLYLTRI-n-BUTYLTIN

**CAS-No.:** 24850-33-7
**ALLYLTRI-n-BUTYLTIN**
Safety Data Sheet

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier (CAS-No.)</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allyltri-n-butyltin</td>
<td>24850-33-7</td>
<td>96 - 100</td>
<td>Skin Irrit. 2, H315</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>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. 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 (acute and delayed)

- **Symptoms/effects after inhalation**: May cause irritation to the respiratory tract.
- **Symptoms/effects after skin contact**: Causes skin irritation. Organotins may be absorbed through the skin.
- **Symptoms/effects after eye contact**: Causes serious eye irritation.
- **Symptoms/effects after ingestion**: May be harmful if swallowed.

#### 4.3. Immediate medical attention and special treatment, if necessary

Note to physician: Application of corticosteroid creams has been effective in treating severe skin irritation. If blisters develop, they may require abrasion to promote healing.

**SECTION 5: Fire-fighting measures**

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

- **Suitable extinguishing media**: Water spray. Foam. Carbon dioxide. Dry chemical.
- **Unsuitable extinguishing media**: Do not use straight streams.

#### 5.2. Specific hazards arising from the chemical

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

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

- **Firefighting instructions**: Use water spray to cool exposed surfaces. 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.
- **Other information**: Moderately toxic by inhalation. Self-contained breathing apparatus should be worn at all times to avoid inhalation.

**SECTION 6: Accidental release measures**

#### 6.1. Personal precautions, protective equipment and emergency procedures

**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. Sweep or shovel spills into appropriate container for disposal.

#### 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

**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.

**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

**Storage conditions**: Keep container tightly closed. Store in sealed containers in a manner consistent with safe-handling and regulatory requirements for a hazardous substance.

**Incompatible materials**: Oxidizing agent. Direct sunlight.

**Storage area**: Store in a well-ventilated place. Store away from heat.

**SECTION 8: Exposure controls/personal protection**

### 8.1. Control parameters

**Allyltri-n-butyltin (24850-33-7)**

<table>
<thead>
<tr>
<th>ACGIH</th>
<th>ACGIH TWA (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.1 mg/m³ (Tin)</td>
</tr>
</tbody>
</table>

### 8.2. Appropriate engineering controls

**Appropriate engineering controls**: Provide local exhaust or general room ventilation. Insure that exhaust is vented properly - caustic scrubbing is recommended.

### 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 combination organic vapor/acid gas (yellow 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><strong>Physical state</strong></td>
<td>Liquid</td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>Clear liquid.</td>
</tr>
<tr>
<td><strong>Molecular mass</strong></td>
<td>331.11 g/mol</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Colorless.</td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Distinct.</td>
</tr>
<tr>
<td><strong>Odor threshold</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Refractive index</strong></td>
<td>1.4846</td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Relative evaporation rate (butyl acetate=1)</strong></td>
<td>&lt; 1</td>
</tr>
<tr>
<td><strong>Melting point</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Freezing point</strong></td>
<td>&lt; 0 °C</td>
</tr>
<tr>
<td><strong>Boiling point</strong></td>
<td>88 - 92 °C @ 0.2 mm Hg</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td>103 °C</td>
</tr>
<tr>
<td><strong>Auto-ignition temperature</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td>No data available</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td>&lt; 0.1 mm Hg @ 20°C</td>
</tr>
<tr>
<td><strong>Relative vapor density at 20 °C</strong></td>
<td>&gt; 1</td>
</tr>
</tbody>
</table>
### Relative density
1.068

### % Volatiles
< 3%

### Solubility
Insoluble in water.

### Log Pow
No data available

### Log Kow
No data available

### Viscosity, kinematic
No data available

### Viscosity, dynamic
No data available

### Explosive properties
No data available

### Oxidizing properties
No data available

### Explosion limits
No data available

#### 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
Direct sunlight causes slow degradation to an inorganic tin salt.

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

#### 10.5. Incompatible materials
Oxidizing agent. Direct sunlight.

#### 10.6. Hazardous decomposition products
Organic acid vapors. Tin oxides.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Effect</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>Respiratory or skin sensitization</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity – single exposure</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

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: Causes skin irritation. Organotins may be absorbed through the skin.

Symptoms/effects after eye contact: Causes serious eye irritation.

Symptoms/effects after ingestion: May be harmful if swallowed.

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
Effect on the ozone layer : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods
Sewage disposal recommendations : Do not dispose of waste into sewer.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

14.1. UN number
Not regulated for transport.

14.2. UN proper shipping name
Not applicable

14.3. Additional information
Other information : No supplementary information available.

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

ALLYLTRI-n-BUTYLTIN (24850-33-7)

TSCA Exemption/Exclusion

CAUTION: This material is supplied for research and development purposes subject to the R&D exemption under TSCA, 40 CFR 720.36, and must meet the requirements of the exemption, including supervision by a "technically qualified individual" as defined by 40 CFR 720.3(ee). The use of this material for "commercial purposes" as defined by 40 CFR 720.3(r) is not permitted in the United States.

Allyltri-n-butyltin (24850-33-7)
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA
No additional information available

EU-Regulations

Allyltri-n-butyltin (24850-33-7)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Allyltri-n-butyltin (24850-33-7)
Listed on NZIoC (New Zealand Inventory of Chemicals)

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

SECTION 16: Other information

Full text of H-phrases:

H315 Causes skin irritation
H319 Causes serious eye irritation
ALYLTRI-n-BUTYLTIN
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; APF: Assigned Protection Factor.

Hazard 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: 03/11/2015
Revision date: 09/25/2015
Version: 1.1

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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