# SECTION 1: Identification

## 1.1. Identification

<table>
<thead>
<tr>
<th>Product name</th>
<th>METHACRYLOXYTRI-n-BUTYL Tin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>SNM6488</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>C16H32O2Sn</td>
</tr>
<tr>
<td>Synonyms</td>
<td>TRIBUTYL METHACRYLATE</td>
</tr>
<tr>
<td></td>
<td>TRIBUTYL METHACRYLOXYSTANNANE</td>
</tr>
<tr>
<td>Chemical family</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**
- **Acute toxicity (oral) Category 3**
  - H301 - Toxic if swallowed
- **Skin corrosion/irritation Category 2**
  - H315 - Causes skin irritation
- **Serious eye damage/eye irritation Category 2A**
  - H319 - Causes serious eye irritation

**Full text of H statements:** see section 16

## 2.2. GHS Label elements, including precautionary statements

**GHS US labeling**
- **Hazard pictograms (GHS US):**
  ![Hazard pictogram]

- **Signal word (GHS US):** Danger
- **Hazard statements (GHS US):**
  - H301 - Toxic if swallowed
  - 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.
  - P270 - Do not eat, drink or smoke when using this product.
  - P301+P310 - If swallowed: Immediately call a doctor
  - P302+P352 - If on skin: Wash with plenty of soap and water
  - P330 - Rinse mouth.
  - P301+P310 - If swallowed: Immediately call a doctor
  - 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.
  - P321 - Specific treatment (see first aid instructions on this label)
  - P362+P364 - Take off contaminated clothing and wash it before reuse.
  - P405 - Store locked up.
  - P501 - Dispose of contents/container to licensed waste disposal facility.

## 2.3. Hazards not otherwise classified (HNOC)

No additional information available
METHACRYLOXYTRI-n-BUTYL Tin
Safety Data Sheet

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>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methacryloxytri-n-butyltin</td>
<td>(CAS-No.) 2155-70-6</td>
<td>95 - 100</td>
<td>Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 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. Immediately call a poison center or doctor/physician.

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: 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

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


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: 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 vapor and mist.

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.

Print date: 04/11/2019 EN (English US) SDS ID: SNM6488 2/7
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.

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 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

Storage conditions: Keep container tightly closed. Store locked up. Store < 5°C.


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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Methacryloxytri-n-butyltin (2155-70-6)</th>
<th>ACGIH</th>
<th>ACGIH TWA (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>0.1 mg/m³ as tin</td>
<td></td>
</tr>
</tbody>
</table>

8.2. Appropriate engineering controls

Appropriate engineering controls: Handle in an enclosing hood with exhaust 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 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>Physical state</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Clear liquid.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>375.12 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>Straw.</td>
</tr>
<tr>
<td>Odor</td>
<td>Acrid.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.4811</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butyl acetate=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>17 - 20 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 76 °C</td>
</tr>
</tbody>
</table>
**METHACRYLOXYTRI-n-BUTYLTIN**
Safety Data Sheet

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<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>No data available</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.15</td>
</tr>
<tr>
<td>% Volatiles</td>
<td>&lt; 3 %</td>
</tr>
<tr>
<td>Solubility</td>
<td>Insoluble in water.</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>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>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosion 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.

10.3. Possibility of hazardous reactions
Hazardous polymerization can occur if heated. Methacryloxytri-n-butyltin hydrolyzes in the presence of moisture, forming methacrylic acid and bis(tri-n-butyl)oxide. Do not store above 25°C.

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

10.5. Incompatible materials
Free radical initiators. Oxidizers. sunlight.

10.6. Hazardous decomposition products

**SECTION 11: Toxicological information**

11.1. Information on toxicological effects
Acute toxicity : Not classified

**METHACRYLOXYTRI-n-BUTYLTIN (2155-70-6)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (oral)</td>
<td>100 mg/kg body weight</td>
</tr>
<tr>
<td>Methacryloxytri-n-butyltin (2155-70-6)</td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>160 mg/kg</td>
</tr>
<tr>
<td>LD50 intravenous mouse</td>
<td>18 mg/kg</td>
</tr>
<tr>
<td>ATE US (oral)</td>
<td>160 mg/kg body weight</td>
</tr>
</tbody>
</table>

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
None of the components in this product at concentrations >0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

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.
**METHACRYLOXYTRI-n-BUTYLTIN**

Safety Data Sheet

| 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 | 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: Tributyltin compounds are extremely hazardous to marine life.

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. Dispose of contents/container to licensed waste disposal facility.

Ecology - waste materials: Avoid release to the environment.

**SECTION 14: Transport information**

14.1. **UN number**

UN-No.(DOT): 2788

DOT NA no.: UN2788

14.2. **UN proper shipping name**

Transport document description: UN2788 Organotin compounds, liquid, n.o.s. (METHACRYLOXYTRI-n-BUTYLTIN), 6.1, III

Proper Shipping Name (DOT): Organotin compounds, liquid, n.o.s. (METHACRYLOXYTRI-n-BUTYLTIN)


Packing group (DOT): III - Minor Danger

Hazard labels (DOT): 6.1 - Poison

Marine pollutant: Yes (IMDG only)

DOT Packaging Non Bulk (49 CFR 173.xxx): 203

DOT Packaging Bulk (49 CFR 173.xxx): 241

DOT Packaging Exceptions (49 CFR 173.xxx): 153

14.3. **Additional information**

Emergency Response Guide (ERG) Number: 153

Other information: No supplementary information available.
**Transport by sea**
DOT Vessel Stowage Location: A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.
DOT Vessel Stowage Other: 40 - Stow “clear of living quarters”

**Air transport**
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 60 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 220 L

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

**Methacryloxytri-n-butylin (2155-70-6)**
- Listed on the United States TSCA (Toxic Substances Control Act) inventory
- Subject to reporting requirements of United States SARA Section 313
- SARA Section 313 - Emission Reporting 1 %

### 15.2. International regulations

**CANADA**
**Methacryloxytri-n-butylin (2155-70-6)**
- Listed on the Canadian DSL (Domestic Substances List)
  - WHMIS Classification
    - Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects
    - Class D Division 2 Subdivision B - Toxic material causing other toxic effects

**EU-Regulations**
**Methacryloxytri-n-butylin (2155-70-6)**
- Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**National regulations**
**Methacryloxytri-n-butylin (2155-70-6)**
- 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 and Chemical Substances)
- Japanese Poisonous and Deleterious Substances Control Law
- Japanese Pollutant Release and Transfer Register Law (PRTR Law)
- Listed on the Canadian IDL (Ingredient Disclosure List)

### 15.3. US State regulations

**WARNING:** This product can expose you to Methacryloxytri-n-butylin, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

**Methacryloxytri-n-butylin (2155-70-6)**

<table>
<thead>
<tr>
<th>U.S. - California - Proposition 65 - Carcinogens List</th>
<th>U.S. - California - Proposition 65 - Developmental Toxicity</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Female</th>
<th>U.S. - California - Proposition 65 - Reproductive Toxicity - Male</th>
<th>No significant risk level (NSRL)</th>
<th>Maximum allowable dose level (MADL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

**Methacryloxytri-n-butylin (2155-70-6)**
- U.S. - New Jersey - Right to Know Hazardous Substance List

### SECTION 16: Other information

Full text of H-phrases:
- **H301** Toxic if swallowed
- **H315** Causes skin irritation
- **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:
- 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given.

Flammability:
- 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)

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: 12/20/2016
Revision date: 03/11/2019
Version: 1.1

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

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