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

1.1. **Product identifier**

<table>
<thead>
<tr>
<th>Field</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product form</td>
<td>Substance</td>
</tr>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Substance name</td>
<td>t-BUTYLTRI n-BUTYLTIN</td>
</tr>
<tr>
<td>Product code</td>
<td>SNB1979</td>
</tr>
<tr>
<td>Formula</td>
<td>C16H36Sn</td>
</tr>
<tr>
<td>Synonyms</td>
<td>TRI-n-BUTYL-t-BUTYLTANNANE</td>
</tr>
<tr>
<td>Chemical family</td>
<td>ORGANOTIN</td>
</tr>
</tbody>
</table>

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]**

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin corrosion/irritation</td>
<td>2</td>
<td>H315</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>2</td>
<td>H319</td>
</tr>
</tbody>
</table>

Full text of H statements: see section 16

**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):**

- GHS07

**Signal word (CLP):** Warning

**Hazard statements (CLP):**

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

**Precautionary statements (CLP):**

- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P264 - Wash hands thoroughly after handling.
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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.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>Classification according to Regulation (EC) No. 1272/2008 [CLP]</th>
</tr>
</thead>
</table>
| t-Butyltri n-butylin  | (CAS-No.) 157066-15-4 | 95 - 100 | Skin Irrit. 2, H315
| Other Organotins     |                    | 0 - 5 | Eye Irrit. 2, H319

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. If you feel unwell, seek medical advice.

First-aid measures after skin contact
Wash with plenty of 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/doctor.

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
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. Indication of any immediate medical attention and special treatment needed

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: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Unsuitable extinguishing media
None known.

5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

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 vapour and mist.
# t-BUTYLTRI n-BUTYL Tin
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### 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.

**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 vapour and mist. Provide good ventilation in process area to prevent formation of vapour.
- **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.
- **Incompatible materials**: Direct sunlight. Oxidizers.
- **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**

<table>
<thead>
<tr>
<th>t-Butyltri n-butyltin (157066-15-4)</th>
<th>ACGIH TWA (mg/m³)</th>
<th>0.1 mg/m³ as tin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Organotins</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
<td>0.1 mg/m³ as tin</td>
</tr>
<tr>
<td>USA OSHA</td>
<td>OSHA PEL (TWA) (mg/m³)</td>
<td>0.1 mg/m³ as tin</td>
</tr>
</tbody>
</table>

**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 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>347.15 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Straw.</td>
</tr>
<tr>
<td>Odour</td>
<td>Mild.</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.4735</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>&lt; 0 °C</td>
</tr>
<tr>
<td>Boiling point</td>
<td>135 - 140 °C @ 10 mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>102 °C</td>
</tr>
<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>Vapour pressure</td>
<td>&lt; 0.1 mm Hg @ 20°C</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>&gt; 1</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.037</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>Oxidising properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive 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.

10.3. Possibility of hazardous reactions

Direct sunlight causes degradation to an inorganic tin salt.

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Direct sunlight. Oxidizers.

10.6. Hazardous decomposition products

Organic acid vapors. Tin oxides.

### SECTION 11: Toxicological information

11.1. Information on toxicological effects

| Acute toxicity   | Not classified |
| Skin corrosion/irritation | Causes skin irritation. |
| Serious eye damage/irritation | Causes serious eye irritation. |
| Respiratory or skin sensitisation | 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.
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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 : 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
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
No additional information available

SECTION 13: Disposal considerations
13.1. Waste treatment 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
In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name
Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)
ADR
Transport hazard class(es) (ADR) : Not applicable

IMDG
Transport hazard class(es) (IMDG) : Not applicable
**t-BUTYLTRI n-BUTYLTIN**

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<table>
<thead>
<tr>
<th>Transport hazard class(es) (IATA)</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ADN</strong></td>
<td></td>
</tr>
<tr>
<td>Transport hazard class(es) (ADN)</td>
<td>Not applicable</td>
</tr>
<tr>
<td><strong>RID</strong></td>
<td></td>
</tr>
<tr>
<td>Transport hazard class(es) (RID)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### 14.4. Packing group

<table>
<thead>
<tr>
<th>Packing group (ADR)</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group (IMDG)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (IATA)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (ADN)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Packing group (RID)</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

### 14.5. Environmental hazards

<table>
<thead>
<tr>
<th>Dangerous for the environment</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine pollutant</td>
<td>No</td>
</tr>
<tr>
<td>Other information</td>
<td>No supplementary information available</td>
</tr>
</tbody>
</table>

### 14.6. Special precautions for user

- **Overland transport**
  Not applicable

- **Transport by sea**
  Not applicable

- **Air transport**
  Not applicable

- **Inland waterway transport**
  Not applicable

- **Rail transport**
  Not applicable

### 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
- t-BUTYLTRI n-BUTYLTIN is not on the REACH Candidate List
- t-BUTYLTRI n-BUTYLTIN is not on the REACH Annex XIV List
- t-BUTYLTIN 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.

**15.1.2. National regulations**

- **Germany**

- **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
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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

15.2. Chemical safety assessment
No additional information available

SECTION 16: Other information

Abbreviations and acronyms:
Abbreviation: 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

Other information: Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |

SDS EU (REACH Annex II) - Custom

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.

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