### SECTION 1: Identification

#### 1.1. Identification

<table>
<thead>
<tr>
<th>Product name</th>
<th>BIS(TRI-n-BUTYLTIN)SULFIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product code</td>
<td>SNB1805</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>C24H54SSn2</td>
</tr>
<tr>
<td>Synonyms</td>
<td>HEXABUTYLDISTANNATHIANE</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**

- **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) : ![Warning]

<table>
<thead>
<tr>
<th>Signal word (GHS US)</th>
<th>Warning</th>
</tr>
</thead>
</table>
| 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
- **P333+P343** - If skin irritation occurs: Get medical advice/attention.
- **P337+P313** - If eye irritation persists: 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.
- **P321** - Specific treatment (see first aid instructions on this label)
- **P362+P364** - Take off contaminated clothing and wash it before reuse.

#### 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>Substance type</th>
<th>Mono-constituent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>BIS(TRI-n-BUTYLTIN)SULFIDE</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>4808-30-4</td>
</tr>
</tbody>
</table>
Name: Bis(tri-n-butyltin)sulfide
Product identifier: (CAS No.) 4808-30-4
%: 95 - 100
GHS-US classification: Skin Irrit. 2, H315
Eye Irrit. 2A, H319

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.
Symptoms/effects after eye contact: Causes serious eye irritation.
Symptoms/effects after ingestion: No information available.
Chronic symptoms: Exposure to dust or fumes of inorganic tin compounds is known to cause a benign pneumoniosis. (stannosis).

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: 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 protective. 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.
BIS(TRI-n-BUTYLTIN) SULFIDE
Safety Data Sheet

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.

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>Compound</th>
<th>ACGIH TWA (mg/m³)</th>
<th>ACGIH STEL (mg/m³)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bis(tri-n-butyltin)sulfide (4808-30-4)</td>
<td>0.1 mg/m³ as tin</td>
<td>0.2 mg/m³ (skin)</td>
<td>0.1 mg/m³ as tin</td>
</tr>
</tbody>
</table>

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 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>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Liquid. Viscous.</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>612.14 g/mol</td>
</tr>
<tr>
<td>Color</td>
<td>No data available</td>
</tr>
<tr>
<td>Odor</td>
<td>Stench.</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Refractive index</td>
<td>1.518</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>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>208 °C @ 1 mm Hg</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 110 °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>Vapor pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapor density at 20 °C</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Relative density : > 1
% Volatiles : < 0.3 %
Solubility : Insoluble in water. Reacts slowly with 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
No additional information available

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

#### 10.5. Incompatible materials
No additional information available

#### 10.6. Hazardous decomposition products

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects
Acute toxicity : Not classified

<table>
<thead>
<tr>
<th>Bis(tri-n-butyltin)sulfide (4808-30-4)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LD50 oral mouse</td>
<td>470 mg/kg</td>
</tr>
<tr>
<td>LD50 dermal rabbit</td>
<td>90 µl/kg</td>
</tr>
<tr>
<td>LD50 intravenous mouse</td>
<td>144 mg/kg</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
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 : Causes skin irritation.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : No information available.
Chronic symptoms : Exposure to dust or fumes of inorganic tin compounds is known to cause a benign pneumoniosis. (stannosis).
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

<table>
<thead>
<tr>
<th>Other adverse effects</th>
<th>Effect on the ozone layer</th>
</tr>
</thead>
<tbody>
<tr>
<td>This substance may be hazardous to the environment.</td>
<td>No additional information available</td>
</tr>
</tbody>
</table>

### 13. Disposal considerations

#### 13.1. Disposal methods

<table>
<thead>
<tr>
<th>Sewage disposal recommendations</th>
<th>Product/Packaging disposal recommendations</th>
<th>Ecology - waste materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not dispose of waste into sewer.</td>
<td>Dispose in a safe manner in accordance with local/national regulations.</td>
<td>Avoid release to the environment.</td>
</tr>
</tbody>
</table>

### 14. Transport information

#### 14.1. UN number
Not regulated for transport.

#### 14.2. UN proper shipping name
Not applicable

#### 14.3. Additional information

<table>
<thead>
<tr>
<th>Other information</th>
</tr>
</thead>
<tbody>
<tr>
<td>No supplementary information available.</td>
</tr>
</tbody>
</table>

**Transport by sea**
No additional information available

**Air transport**
No additional information available

### 15. Regulatory information

#### 15.1. US Federal regulations

**Bis(tri-n-butyltin)sulfide (4808-30-4)**
Listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

**CANADA**

**Bis(tri-n-butyltin)sulfide (4808-30-4)**
Listed on the Canadian NDSL (Non-Domestic Substances List)

**EU-Regulations**

**Bis(tri-n-butyltin)sulfide (4808-30-4)**
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

**National regulations**

**Bis(tri-n-butyltin)sulfide (4808-30-4)**
Listed on the Japanese ISHL (Industrial Safety and Health Law)

#### 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

### 16. Other information

Full text of H-phrases:

- **H315**: Causes skin irritation
- **H319**: Causes serious eye irritation
BIS(TRI-n-BUTYLTIN)SULFIDE
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: 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: 11/02/2015 Version: 1.0

SDS US (GHS HazCom 2012) - Custom

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

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