1. Identification of the substance/mixture and of the company/undertaking

1.1. Product Details

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product Code</td>
<td>B171</td>
</tr>
<tr>
<td>Full Name</td>
<td>2,5-bis(trimethylstannyl)thieno[3,2-b]thiophene</td>
</tr>
<tr>
<td>REACH No.</td>
<td>A registration number is not available for this substance as the substance or its uses are exempted from registration or the annual tonnage does not require a registration.</td>
</tr>
<tr>
<td>CAS No.</td>
<td>469912-82-1</td>
</tr>
</tbody>
</table>

1.2. Relevant identified uses of the substance or mixture and uses advised against

| Identified uses                      | Laboratory chemicals |

1.3. Supplier details

<table>
<thead>
<tr>
<th>Supplier</th>
<th>Ossila Limited</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Kroto Innovation Centre</td>
</tr>
<tr>
<td></td>
<td>Broad Lane, Sheffield</td>
</tr>
<tr>
<td></td>
<td>S3 7HQ, UK</td>
</tr>
<tr>
<td>Telephone</td>
<td>0114 2999 180</td>
</tr>
<tr>
<td>Email address</td>
<td><a href="mailto:info@ossila.com">info@ossila.com</a></td>
</tr>
</tbody>
</table>

2. Hazards identification

2.1. Classification of the substance or mixture

Hazard statements according to Regulation (EC) 1272/2008

- Acute toxicity, Oral (Category 2), H300
- Acute toxicity, Inhalation (Category 2), H330
- Acute toxicity, Dermal (Category 1), H310
- Acute aquatic toxicity (Category 1), H400
- Chronic aquatic toxicity (Category 1), H410

2.2. Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Signal word | Danger
--- | ---
Hazard statement(s) | Fatal if swallowed, in contact with skin or if inhaled. Very toxic to aquatic life with long lasting effects.
Precautionary statement(s) | Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
| Wash hands thoroughly after handling. P273 Avoid release to the environment. Wear protective gloves/ protective clothing. P284 Wear respiratory protection.
| IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
Supplemental information | None.
2.3. Other hazards
None.

3. Composition/Information on ingredients

3.1. Substances


Formula: C_{12}H_{20}S_{2}Sn_{2}

Molecular weight: 465.84 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Weight %</th>
<th>CLP Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,5-bis(trimethylstannyl)thieno[3,2-b]thiophene</td>
<td>469912-82-1</td>
<td>&gt; 98%</td>
<td>Acute Tox. 2 (H300); Acute Tox. 2 (H330); Acute Tox. 1 (H310); Acute Aqua. Tox. 1 (H400); Chronic Aqua. Tox. 1 (H410)</td>
</tr>
</tbody>
</table>

4. First aid measures

4.1. Description of first aid measures

After Inhalation
If inhaled, remove to fresh air. If not breathing give artificial respiration. Call a physician.

After skin contact
In case of skin contact, wash with soap and flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

After eye contact
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

After Ingestion
If swallowed, wash out mouth with water. Call a physician.

4.2. Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in section 11.

4.3. Indication of any immediate medical attention and special treatment needed

No data available.

5. Fire fighting

5.1. Extinguishing media

Suitable extinguishing media: Dry chemical, alcohol-resistant foam, carbon dioxide or water spray. Consult with local fire authorities before attempting large scale fire-fighting operations.
5.2. Special hazards arising from the substance of mixture

Hazardous combustion products: Carbon oxides, sulfur oxides.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus if necessary. During a fire, irritating and highly toxic gases and vapours may be generated by thermal decomposition.

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment (section 8). Avoid dust formation. Ensure room is well ventilated. Remove all sources of ignition.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Containment and cleaning

Contain and clean up spill if safe to do so using an electrically protected vacuum cleaner or by wet-brushing. Dispose of dry waste in closed container for proper disposal according to local regulations.

7. Handling and storage

7.1. Precautions for safe handling

Avoid formation of dust and aerosols. Keep away from sources of ignition and avoid the build-up of electrostatic charge. Provide exhaust ventilation in places where dust is formed.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry and well-ventilated place inside of a tightly sealed container. Reseal containers that have been opened and keep upright to prevent leakage. Store locked up.

Quality-related information: Product is air sensitive. Store under inert gas.

7.3. Specific end uses

Use in laboratories.

8. Exposure controls / Personal protection

8.1. Control parameters

Exposure limit sources

UK – EH40 Workplace Exposure Limits (WEL).

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Control parameters</th>
</tr>
</thead>
</table>
| 2,5-bis(trimethylstannyl)thieno[3,2-b]thiophene | 469912-82-1 | 0.1 mg(Sn)/m3 (skin) (TWA)  
0.2 mg(Sn)/m3 (skin) (STEL)  
Can be absorbed through skin. The assigned substances are those for which there are concerns |
that dermal absorption will lead to systemic toxicity.

### Biological occupational exposure limits

This product does not contain any hazardous materials with biological limits.

### 8.2. Exposure controls

#### Engineering measures

Handle in accordance with good industrial engineering/laboratory practices for hygiene and safety. Ensure eyewash stations and safety showers are close to the laboratory workstation. Ensure good general ventilation is present when handling the product.

#### Personal protective equipment

**Eyes:** Wear safety glasses with side-shields conforming to appropriate government standards such as NOISH (US) or EN166 (EU).

**Skin:** Handle with appropriate gloves and use proper glove removal technique to avoid skin contact. Dispose of gloves in accordance with applicable laws. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Clothing:** Wear complete suit protecting against chemicals; the type of equipment should be appropriate for the concentration and amount of dangerous substance used.

**Respirators:** Where protection from nuisance dusts is needed, use type N95 (US) or type P1 (EN 143) dust masks. Use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. Respirators should be approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### General hygiene measures

Wash thoroughly after handling. Wash contaminated clothing before reuse.

### 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>Appearance</td>
<td>Solid white crystals/powder</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>128-131°C</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</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>
</tbody>
</table>
9.2. Other safety information
No data available.

10. Stability and reactivity

10.1 Reactivity
No data available.

10.2. Chemical stability
Stable under normal temperatures and pressures under recommended storage conditions.

10.3. Possibility of hazardous reactions
No data available.

10.4. Conditions to avoid
No data available.

10.5. Incompatible materials
Strong oxidising agents.

10.6. Hazardous decomposition products
No known hazardous decomposition products.

11. Toxicological information

11.1. Information on toxicological effects

Acute toxicity
No data available.
Skin corrosion/irritation
No data available.
Serious eye damage/eye irritation
No data available.
Respiratory or skin sensitization
No data available.
Germ cell mutagenicity
No data available.
Carcinogenicity
No data available.
Reproductive toxicity
No data available.
Specific target organ toxicity - single exposure
No data available.
Specific target organ toxicity - repeated exposure
No data available.
Aspiration hazard
No data available.
Routes of exposure
Eye contact, ingestion, inhalation, skin contact.
Signs and Symptoms of Exposure
Skin: inflammation (redness, swelling, itching and pain). Eyes: inflammation, tearing, impaired vision and pain.
Inhalation: cough, nose and throat pain.
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. Ecological information

12.1. Toxicity
No data available.

12.2. Persistence and degradability
No data available.

12.3. Bioaccumulative potential
No data available.

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6. Other adverse effects
No data available.

13. Disposal

13.1. Waste treatment methods

Product
Burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations and directives on waste and hazardous waste. Offer surplus material to a licensed professional waste disposal professional.

Contaminated packaging
Dispose of as unused product.

14. Transport

14.1. UN number
IATA: 3146

14.1. UN number
ADR/RID: 3146 IMDG: 3146 IATA: 3146

14.2. UN proper shipping name

ADR/RID: ORGANOTIN COMPOUND, SOLID, N.O.S. (2,5-Bis(trimethylstannyl)-thieno[3,2-b]thiophene)
IMDG: ORGANOTIN COMPOUND, SOLID, N.O.S. (2,5-Bis(trimethylstannyl)-thieno[3,2-b]thiophene)
IATA: Organotin compound, solid, n.o.s. (2,5-Bis(trimethylstannyl)-thieno[3,2-b]thiophene)
14.3. Transport hazard class
ADR/RID: 6.1        IMDG: 6.1        IATA: 6.1

14.4. Packaging group
ADR/RID: III        IMDG: III        IATA: III

14.5. Environmental hazards
No hazards identified.

14.6. Special precautions for user
No special precautions required.

15. Regulatory information
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006, the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
No data available.

15.2 Chemical safety assessment
No chemical safety report/assessment was carried out for this product.

16. Other information

Warranty
This material is for research and development use only. The information provided here is based upon the available information from material suppliers but not warranted as complete and is provided only as a guide. Ossila Limited shall not be held responsible for any damage resulting from use or handling of this product.