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

1.1. Product identifier

Product form : Substance
Physical state : Solid
Substance name : TRIPHENYLIODOTIN, 95%
Product code : SNT8683
Formula : C18H15ISn
Synonyms : TRIPHENYLTIN IODIDE
TRIPHENYLIODOSTANNANE
Chemical family : ORGANOTIN

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 - F +49 (0) 69 3535106-501 - (M-F): 8:00 AM - 4:00 PM
info@gelestdc.com - www.gelestdc.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]

Acute toxicity (oral), Category 3 : H301
Skin corrosion/irritation, Category 2 : H315
Serious eye damage/eye irritation, Category 1 : H318
Hazardous to the aquatic environment — Acute Hazard, Category 1 : H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1 : H410

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) : GHS05, GHS06, GHS09
TRIPHENYLIODOTIN, 95%
Safety Data Sheet

Signal word (CLP): Danger

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances
Substance type: Multi-constituent
Name: TRIPHENYLIODOTIN, 95%
CAS-No.: 894-09-7

<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>
<tbody>
<tr>
<td>Triphenyliodotin</td>
<td>(CAS-No.) 894-09-7</td>
<td>95</td>
<td>Acute Tox. 3 (Oral), H301 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410</td>
</tr>
<tr>
<td>Other Organotins</td>
<td></td>
<td>0 - 5</td>
<td>Not classified</td>
</tr>
</tbody>
</table>

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 immediate 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 damage.
Symptoms/effects after ingestion: Toxic if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

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
Unsuitable extinguishing media: Do not use straight streams.
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 contact with skin and eyes. Do not breathe dust.

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
Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product 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. Collect spillage.

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 contact with skin and eyes. Do not breathe dust. Avoid dust formation. Provide local exhaust or general room ventilation to minimize exposure to dust.
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.
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>Other Organotins</th>
<th>ACGIH TWA (mg/m³)</th>
<th>USA OSHA OSHA PEL (TWA) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>0.1 mg/m³ as tin</td>
<td>0.1 mg/m³ as tin</td>
</tr>
<tr>
<td>USA OSHA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Triphenyliodotin (894-09-7)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>0.1 mg/m³ as tin</td>
<td></td>
</tr>
<tr>
<td>USA OSHA</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Appropriate engineering controls:
Handle in an enclosing hood with exhaust 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>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Solid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Powder</td>
</tr>
<tr>
<td>Molecular mass</td>
<td>476.9 g/mol</td>
</tr>
<tr>
<td>Colour</td>
<td>Off-white</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>Refractive index</td>
<td>No additional information available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point</td>
<td>117 - 121 °C</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>250 - 253 °C @ 13 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>Vapour pressure</td>
<td>&lt; 0.1 mm Hg @ 25°C</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>&gt; 1</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
No additional information available

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

#### 10.5. Incompatible materials
Acids. Oxidizing agent.

#### 10.6. Hazardous decomposition products
SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity: Toxic if swallowed.

TRIPHENYLIODOTIN, 95% (894-09-7)

ATE CLP (oral) 118 mg/kg bodyweight

Triphenyliodotin (894-09-7)

LD50 oral rat 118 - 135 mg/kg (triphenylchlorotin)
LD50 intravenous mouse 56 mg/kg
ATE CLP (oral) 118 mg/kg bodyweight

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/irritation: Causes serious eye damage.
Eye irritation: Corrosive
Respiratory or skin sensitisation: Not classified
Germ cell mutagenicity: Not classified

Atrophy and degeneration of the testes were reported in young rats fed analogous triphenylchlorotin in the diet for 19-20 days at concentrations equivalent to 20 and 40 mg/kg, while degenerative changes in the ovaries were reported in sexually mature female rats after 5 days or oral administration of 20 mg/kg. Administration of triphenylchlorotin to rats for 2 weeks caused evidence of immunosuppression at 15 ppm and above, reduced bodyweight growth and spleen changes. Triphenylichlorotin has been reported to cause gene mutations in bacteria and chromosome damage in in vitro assays of human white blood cells.

Carcinogenicity: Not classified
Reproductive toxicity: Not classified
STOT-single exposure: Not classified
STOT-repeated exposure: Not classified
Aspiration hazard: Not classified

Reason for classification: Expert judgment

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.
Ecology - water: This material is toxic to wildlife and fish. For the analogous compound triphenylchlorotin: LC50 values for freshwater invertebrate, mollusc and fish species are in the range of 50-200 ppb. The EC50 values for algal growth in several species is in the range of 1-40 ppb. A half-life of 160 days for biodegradation in soil has been measured for the analogous compound triphenylacetoxitin.

Acute aquatic toxicity: Very toxic to aquatic life.
Chronic aquatic toxicity: Very toxic to aquatic life with long lasting effects.

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.
TRIPHENYLIODOTIN, 95%
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| 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**
In accordance with ADR / RID / IMDG / IATA / ADN

| UN-No. (ADR) | : 3146 |
| UN-No. (IMDG) | : 3146 |
| UN-No. (IATA) | : 3146 |
| UN-No. (ADN) | : 3146 |
| UN-No. (RID) | : 3146 |

14.2. **UN proper shipping name**

| Proper Shipping Name (ADR) | : ORGANOTIN COMPOUND, SOLID, N.O.S. |
| Proper Shipping Name (IMDG) | : ORGANOTIN COMPOUND, SOLID, N.O.S. |
| Proper Shipping Name (IATA) | : Organotin compound, solid, n.o.s. |
| Proper Shipping Name (ADN) | : ORGANOTIN COMPOUND, SOLID, N.O.S. |
| Proper Shipping Name (RID) | : ORGANOTIN COMPOUND, SOLID, N.O.S. |
| Transport document description (ADR) | : UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (TRIPHENYLIODOTIN), 6.1, III, (E), ENVIRONMENTALLY HAZARDOUS |
| Transport document description (IMDG) | : UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (TRIPHENYLIODOTIN), 6.1, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS |
| Transport document description (IATA) | : UN 3146 Organotin compound, solid, n.o.s. (TRIPHENYLIODOTIN), 6.1, III, ENVIRONMENTALLY HAZARDOUS |
| Transport document description (ADN) | : UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (TRIPHENYLIODOTIN), 6.1, III, ENVIRONMENTALLY HAZARDOUS |
| Transport document description (RID) | : UN 3146 ORGANOTIN COMPOUND, SOLID, N.O.S. (TRIPHENYLIODOTIN), 6.1, III, ENVIRONMENTALLY HAZARDOUS |

14.3. **Transport hazard class(es)**

**ADR**

Transport hazard class(es) (ADR) | : 6.1 |
Danger labels (ADR) | : 6.1 |

**IMDG**

Transport hazard class(es) (IMDG) | : 6.1 |
Danger labels (IMDG) | : 6.1 |

**IATA**

Transport hazard class(es) (IATA) | : 6.1 |
Hazard labels (IATA) | : 6.1 |
TRIPHENYLIODOTIN, 95%
Safety Data Sheet

ADN
Transport hazard class(es) (ADN) : 6.1
Danger labels (ADN) : 6.1

RID
Transport hazard class(es) (RID) : 6.1
Danger labels (RID) : 6.1

14.4. Packing group
Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

14.5. Environmental hazards
Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : No supplementary information available

14.6. Special precautions for user
- Overland transport
Classification code (ADR) : T3
Special provisions (ADR) : 43, 274
Limited quantities (ADR) : 5kg
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P002, IBC08, LP02, R001
Mixed packing provisions (ADR) : MP10
Portable tank and bulk container instructions (ADR) : T1
Portable tank and bulk container special provisions (ADR) : TP33
Tank code (ADR) : SGAH, L4BH
Tank special provisions (ADR) : TU15, TE19
Vehicle for tank carriage : AT
Transport category (ADR) : 2
Special provisions for carriage - Bulk (ADR) : VC1, VC2, AP7
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13, CV28
Special provisions for carriage - Operation (ADR) : S9
Hazard identification number (Kemler No.) : 60
Orange plates : 3146

Tunnel restriction code (ADR) : E
EAC code : 2X
- **Transport by sea**
  
  Special provisions (IMDG): 43, 223, 274  
  Limited quantities (IMDG): 5 kg  
  Excepted quantities (IMDG): E1  
  Packing instructions (IMDG): P002, LP02  
  IBC packing instructions (IMDG): IBC08  
  IBC special provisions (IMDG): B3  
  Tank instructions (IMDG): T1  
  Tank special provisions (IMDG): TP33  
  EmS-No. (Fire): F-A  
  EmS-No. (Spillage): S-A  
  Stowage category (IMDG): A  
  Stowage and handling (IMDG): SW2  
  Properties and observations (IMDG): A wide variety of toxic solids. Toxic if swallowed, by skin contact or by inhalation.

- **Air transport**
  
  PCA Excepted quantities (IATA): E1  
  PCA Limited quantities (IATA): Y645  
  PCA limited quantity max net quantity (IATA): 10kg  
  PCA packing instructions (IATA): 670  
  PCA max net quantity (IATA): 100kg  
  CAO packing instructions (IATA): 677  
  CAO max net quantity (IATA): 200kg  
  Special provisions (IATA): A3, A4, A6  
  ERG code (IATA): 6L

- **Inland waterway transport**
  
  Classification code (ADN): T3  
  Special provisions (ADN): 43, 274, 802  
  Limited quantities (ADN): 5 kg  
  Excepted quantities (ADN): E1  
  Equipment required (ADN): PP, EP  
  Number of blue cones/lights (ADN): 0

- **Rail transport**
  
  Classification code (RID): T3  
  Special provisions (RID): 43, 274  
  Limited quantities (RID): 5kg  
  Excepted quantities (RID): E1  
  Packing instructions (RID): P002, IBC08, LP02, R001  
  Special packing provisions (RID): B3  
  Mixed packing provisions (RID): MP10  
  Portable tank and bulk container instructions (RID): T1  
  Portable tank and bulk container special provisions (RID): TP33  
  Tank codes for RID tanks (RID): SGAH, L4BH  
  Special provisions for RID tanks (RID): TU15  
  Transport category (RID): 2  
  Special provisions for carriage – Bulk (RID): VC1, VC2, AP7  
  Special provisions for carriage - Loading, unloading and handling (RID): CW13, CW28, CW31  
  Colis express (express parcels) (RID): CE11  
  Hazard identification number (RID): 60

14.7. **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable
TRIPHENYLIODOTIN, 95%
Safety Data Sheet

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
TRIPHENYLIODOTIN, 95% is not on the REACH Candidate List
TRIPHENYLIODOTIN, 95% is not on the REACH Annex XIV List
TRIPHENYLIODOTIN, 95% 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
12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV: Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands
SZW-lijst van kankerverwekkende stoffen: The substance is not listed
SZW-lijst van mutagene stoffen: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding: The substance is not listed
NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid: The substance is not listed

Denmark
Danish National Regulations: Young people below the age of 18 years are not allowed to use the product

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

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

Other information
Prepared by safety and environmental affairs.

Full text of H- and EUH-statements:

- Acute Tox. 3 (Oral) - Acute toxicity (oral), Category 3
- Aquatic Acute 1 - Hazardous to the aquatic environment — Acute Hazard, Category 1
- Aquatic Chronic 1 - Hazardous to the aquatic environment — Chronic Hazard, Category 1
- Eye Dam. 1 - Serious eye damage/eye irritation, Category 1
- Skin Irrit. 2 - Skin corrosion/irritation, Category 2
- H301 - Toxic if swallowed.
- H315 - Causes skin irritation.
- H318 - Causes serious eye damage.
- H400 - Very toxic to aquatic life.
- H410 - Very toxic to aquatic life with long lasting effects.

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.