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

## 1.1. Product identifier

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</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>Diallyldibromotin, tech-95</td>
</tr>
<tr>
<td>Product code</td>
<td>SND2730</td>
</tr>
<tr>
<td>Formula</td>
<td>C6H10Br2Sn</td>
</tr>
<tr>
<td>Synonyms</td>
<td>Diallyltribromide; dipropenyldibromostannane; dibromodiallyltin; dibromodi-2-propen-1-ylstannane</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]**

- **Acute toxicity (oral)**, Category 3: H301
- **Acute toxicity (dermal)**, Category 3: H311
- **Acute toxicity (inhalation/vapour)** Category 3: H331
- **Skin corrosion/irritation**, Category 2: H315
- **Serious eye damage/eye irritation**, Category 2: H319

**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)**:

  ![GHS06](image)
DIALLYLDIBROMOTIN, tech-95
Safety Data Sheet

Signal word (CLP) : Danger

Hazard statements (CLP) :
H301+H311+H331 - Toxic if swallowed, in contact with skin or if inhaled
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.

Precautionary statements (CLP) :
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P261 - Avoid breathing vapours.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P301+P310 - IF SWALLOWED: Immediately call a doctor.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

<table>
<thead>
<tr>
<th>Substance type</th>
<th>Product identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mono-constituent</td>
<td>(CAS-No.) 17381-88-3</td>
</tr>
</tbody>
</table>

<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>Diallyldibromotin</td>
<td>(CAS-No.) 17381-88-3</td>
<td>95 - 100</td>
<td>Acute Tox. 3 (Oral), H301 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319</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. Immediately call a POISON CENTER/doctor.

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 :
Toxic if inhaled. May cause irritation to the respiratory tract.

Symptoms/effects after skin contact :
Toxic in contact with skin. 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. 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 :
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 all eye and skin contact and do not breathe vapour 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.

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.

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. Use only outdoors or in a well-ventilated area.
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 cold.
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>Diallyldibromotin (17381-88-3)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Italy - Portugal - USA ACGIH</td>
<td>ACGIH TWA (mg/m³)</td>
</tr>
<tr>
<td>0.1 mg/m³ as tin</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
- Physical state: Liquid
- Appearance: Liquid.
- Molecular mass: 360.65 g/mol
- Colour: Off-white to red-orange.
- Odour: No data available
- Odour threshold: No data available
- Refractive index: 1.864
- pH: No data available
- Relative evaporation rate (butylacetate=1): No data available
- Melting point: No data available
- Freezing point: < 0 °C
- Boiling point: 77 - 79 °C @ 2 mm Hg
- Flash point: > 110 °C
- Auto-ignition temperature: No data available
- Decomposition temperature: No data available
- Flammability (solid, gas): No data available
- Vapour pressure: < 0.5 mm Hg @ 20°C
- Relative vapour density at 20 °C: > 1
- Relative density: 1.864
- Solubility: Insoluble in 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
- Oxidising properties: No data available
- Explosive 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
Direct sunlight causes slow degradation to an inorganic tin salt. Non-hazardous Polymerization will occur if heated above 70°C.

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

10.5. Incompatible materials

10.6. Hazardous decomposition products

SECTION 11: Toxicological information
11.1. Information on toxicological effects
Acute toxicity: Toxic if swallowed. Toxic in contact with skin. Toxic if inhaled.

<table>
<thead>
<tr>
<th>DIALLYLDIBROMOTIN, tech-95 (17381-88-3)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE CLP (oral)</td>
<td>100 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (dermal)</td>
<td>300 mg/kg bodyweight</td>
</tr>
<tr>
<td>ATE CLP (vapours)</td>
<td>3 mg/l/4h</td>
</tr>
</tbody>
</table>
Diallyldibromotin (17381-88-3)

ATE CLP (oral) 100 mg/kg bodyweight
ATE CLP (dermal) 300 mg/kg bodyweight
ATE CLP (gases) 700 ppmv/4h
ATE CLP (vapours) 3 mg/l/4h
ATE CLP (dust, mist) 0.5 mg/l/4h

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

Symptoms/effects after inhalation : Toxic if inhaled. May cause irritation to the respiratory tract.
Symptoms/effects after skin contact : Toxic in contact with skin. 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
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
Other adverse effects : This substance may be hazardous to the environment.

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. 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

14.1. UN number
UN-No. (ADR) : 2788
UN-No. (IMDG) : 2788
UN-No. (IATA) : 2788
UN-No. (ADN) : 2788
UN-No. (RID) : 2788

14.2. UN proper shipping name
Proper Shipping Name (ADR) : ORGANOTIN COMPOUND, LIQUID, N.O.S.
## 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

**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: No
- Marine pollutant: Yes (IMDG only)
- 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): 5L
  - Excepted quantities (ADR): E1
  - Packing instructions (ADR): P001, IBC03, LP01, R001
  - Mixed packing provisions (ADR): MP19
  - Portable tank and bulk container instructions (ADR): T7
  - Portable tank and bulk container special provisions (ADR): TP2, TP28
  - Tank code (ADR): L4BH
  - Tank special provisions (ADR): TU15, TE19
  - Vehicle for tank carriage: AT
  - Transport category (ADR): 2
  - Special provisions for carriage - Packages (ADR): V12
  - 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: 60
    - Tunnel restriction code (ADR): E
    - EAC code: 2X
    - APP code: B

- **Transport by sea**
  - Special provisions (IMDG): 43, 223, 274
  - Limited quantities (IMDG): 5L
  - Excepted quantities (IMDG): E1
  - Packing instructions (IMDG): P001, LP01
  - IBC packing instructions (IMDG): IBC03
  - Tank instructions (IMDG): T7
  - Tank special provisions (IMDG): TP2, TP28
  - 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 liquids. Toxic if swallowed, by skin contact or by inhalation.

- **Air transport**
  - PCA Excepted quantities (IATA): E1
  - PCA Limited quantities (IATA): Y642
DIALLYLDIBROMOTIN, tech-95
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PCA limited quantity max net quantity (IATA) : 2L  
PCA packing instructions (IATA) : 655  
PCA max net quantity (IATA) : 60L  
CAO packing instructions (IATA) : 663  
CAO max net quantity (IATA) : 220L  
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 L  
  Exected quantities (ADN) : E1  
  Equipment required (ADN) : PP, EP, TOX, A  
  Ventilation (ADN) : VE02  
  Number of blue cones/lights (ADN) : 0  

- Rail transport
  Classification code (RID) : T3  
  Special provisions (RID) : 43, 274  
  Limited quantities (RID) : 5L  
  Exected quantities (RID) : E1  
  Packing instructions (RID) : P001, IBC03, LP01, R001  
  Mixed packing provisions (RID) : MP19  
  Portable tank and bulk container instructions (RID) : T7  
  Portable tank and bulk container special provisions (RID) : TP2, TP28  
  Tank codes for RID tanks (RID) : L4BH  
  Special provisions for RID tanks (RID) : TU15  
  Transport category (RID) : 2  
  Special provisions for carriage – Packages (RID) : W12  
  Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW28, CW31  
  Colis express (express parcels) (RID) : CE8  
  Hazard identification number (RID) : 60  

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
DIALLYLDIBROMOTIN, tech-95 is not on the REACH Candidate List
DIALLYLDIBROMOTIN, tech-95 is not on the REACH Annex XIV List
DIALLYLDIBROMOTIN, tech-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
NIET-limitatieve lijst van voor de voortplanting
giftige stoffen – Ontwikkeling : The substance is not listed

Denmark
Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with 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 (Dermal) Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation) Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Inhalation:vapour) Acute toxicity (inhalation:vapour) Category 3
Acute Tox. 3 (Oral) Acute toxicity (oral), Category 3
Eye Irrit. 2 Serious eye damage/eye irritation, Category 2
Skin Irrit. 2 Skin corrosion/irritation, Category 2
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.

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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