



# SAFETY DATA SHEET

Revision Date 18-Dec-2025

## Revision Number 8

**This safety data sheet was created pursuant to the requirements of: US OSHA Hazard Communication Standard 2024 (29 CFR 1910.1200)**

## 1. Identification

|                             |  |
|-----------------------------|--|
| <b>Product Name</b>         | Tri-n-butyltin chloride                        |
| <b>Cat No. :</b>            | AC139350000; AC139350050; AC139350100          |
| <b>CAS No</b>               | 1461-22-9                                      |
| <b>Synonyms</b>             | Chlorotributyltin                              |
| <b>Recommended Use</b>      | Laboratory chemicals.                          |
| <b>Uses advised against</b> | Food, drug, pesticide or biocidal product use. |

## **Details of the supplier of the safety data sheet**

## Company

### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

## Classification

This chemical is considered hazardous according to [US] OSHA (29 CFR 1910.1200, 2024).

|  |             |
|--|-------------|
| Acute oral toxicity                                  | Category 3  |
| Acute dermal toxicity                                | Category 4  |
| Skin Corrosion/Irritation                            | Category 2  |
| Serious Eye Damage/Eye Irritation                    | Category 2  |
| Reproductive Toxicity                                | Category 1B |
| Specific target organ toxicity - (repeated exposure) | Category 1  |
| Target Organs - Liver, Kidney, Blood.                |             |

## Label Elements

## Signal Word

## Danger

**Hazard Statements**

Toxic if swallowed  
Harmful in contact with skin  
Causes skin irritation  
Causes serious eye irritation  
May damage fertility. May damage the unborn child  
Causes damage to organs through prolonged or repeated exposure

**Precautionary Statements****Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Wear eye/face protection  
Do not breathe dust/fume/gas/mist/vapors/spray  
Wear protective gloves/protective clothing/eye protection/face protection

**Response**

IF exposed or concerned: Get medical attention/advice

**Skin**

IF ON SKIN: Wash with plenty of soap and water  
Call a POISON CENTER or doctor if you feel unwell  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing

**Eyes**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention

**Ingestion**

IF SWALLOWED: Immediately call a POISON CENTER or doctor  
Rinse mouth

**Storage**

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Very toxic to aquatic life with long lasting effects

**Hazards classified under paragraph (d)(1)(ii) of 1910.1200**

No information available

**Other hazards**

Stench.

**3. Composition/information on Ingredients**

| Component            | CAS No    | Weight % |
|----------------------|-----------|----------|
| Tributyltin chloride | 1461-22-9 | <=100    |

**4. First-aid measures**

|  |  |
|--|--|
| <b>General Advice</b>                      | Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.  |
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.  |
| <b>Skin Contact</b>                        | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.  |
| <b>Inhalation</b>                          | Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. |
| <b>Ingestion</b>                           | Do NOT induce vomiting. Call a physician or poison control center immediately.   |
| <b>Most important symptoms and effects</b> | None reasonably foreseeable.   |
| <b>Notes to Physician</b>                  | Treat symptomatically  |

## 5. Fire-fighting measures

**Suitable Extinguishing Media** Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam.

**Unsuitable Extinguishing Media** No information available

**Flash Point** > 112 °C / > 233.6 °F

**Method -** No information available

**Autoignition Temperature** 150 °C / 302 °F

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

### Specific Hazards Arising from the Chemical

Do not allow run-off from fire-fighting to enter drains or water courses.

### Hazardous Combustion Products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Metal oxides. Hydrogen chloride gas.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

### NFPA

**Health**  
3

**Flammability**  
1

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

|                                  |  |
|----------------------------------|--|
| <b>Personal Precautions</b>      | Use personal protective equipment as required. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.  |
| <b>Environmental Precautions</b> | Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment. |

**Methods for Containment and Clean Up** Keep in suitable, closed containers for disposal. Soak up with inert absorbent material.

## 7. Handling and Storage

|                 |   |
|-----------------|---|
| <b>Handling</b> | Do not get in eyes, on skin, or on clothing. Wear personal protective equipment/face protection. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. |
| <b>Storage.</b> | Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents.   |

## 8. Exposure controls / personal protection

### Exposure Guidelines

| Component            | ACGIH TLV   | OSHA PEL                                     | NIOSH   | Mexico OEL (TWA)  |
|----------------------|---|--|---|---|
| Tributyltin chloride | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup><br>Skin | (Vacated) TWA: 0.1 mg/m <sup>3</sup><br>Skin | IDLH: 25 mg/m <sup>3</sup><br>REL = 0.1 mg/m <sup>3</sup> (TWA) | TWA: 0.1 mg/m <sup>3</sup><br>STEL: 0.2 mg/m <sup>3</sup> |

### Legend

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH: NIOSH - National Institute for Occupational Safety and Health

### Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

### Personal Protective Equipment

#### Eye/face Protection

Tight sealing safety goggles. Face protection shield.

#### Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

#### Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

#### Recommended Filter type:

Organic gases and vapours filter. Type A. Brown. conforming to EN14387.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Appearance

#### Physical State

Liquid

#### Color

Light yellow

#### Odor

Stench

#### Odor Threshold

No information available

#### Property

#### Values

#### Remarks

#### • Method

#### Melting Point/Range

-9 °C / 15.8 °F

#### Softening Point

No data available

#### Boiling Point/Range

171 - 173 °C / 339.8 - 343.4 °F

@ 25 mmHg

#### Flash Point

> 112 °C / > 233.6 °F

**Method** - No information available

#### Flammability (liquid)

No data available

#### Flammability (solid,gas)

Not applicable

Liquid

|  |                          |                       |
|--|--------------------------|-----------------------|
| <b>Explosion Limits</b>                        | No data available        |                       |
| <b>Autoignition Temperature</b>                | 150 - °C / 302 - °F      |                       |
| <b>Decomposition Temperature</b>               | No data available        |                       |
| <b>pH</b>                                      | Not applicable           |                       |
| <b>Viscosity</b>                               | 7 mPa.s (20°C)           |                       |
| <b>Water Solubility</b>                        | 0.017 g/L (20°C)         | practically insoluble |
| <b>Solubility in other solvents</b>            | No information available |                       |
| <b>Partition Coefficient (n-octanol/water)</b> |                          |                       |
| <b>Component</b>                               | <b>log Pow</b>           |                       |
| Tributyltin chloride                           | 4.76                     |                       |
| <b>Vapor Pressure</b>                          | <0.01 mbar (20°C)        |                       |
| <b>Density / Specific Gravity</b>              | 1.200                    |                       |
| <b>Bulk Density</b>                            | Not applicable           | Liquid                |
| <b>Vapor Density</b>                           | 11.2                     | (Air = 1.0)           |
| <b>Particle characteristics</b>                | Not applicable (liquid)  |                       |
| <b>Other Information</b>                       |                          |                       |
| <b>Molecular Formula</b>                       | C12 H27 Cl Sn            |                       |
| <b>Molecular Weight</b>                        | 325.48                   |                       |

## 10. Stability and reactivity

|   |  |
|---|--|
| <b>Reactive Hazard</b>                  | None known, based on information available   |
| <b>Stability</b>                        | Stable under normal conditions.  |
| <b>Conditions to Avoid</b>              | Incompatible products. Excess heat.  |
| <b>Incompatible Materials</b>           | Strong oxidizing agents  |
| <b>Hazardous Decomposition Products</b> | Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Metal oxides, Hydrogen chloride gas |
| <b>Hazardous Polymerization</b>         | Hazardous polymerization does not occur.   |
| <b>Hazardous Reactions</b>              | None under normal processing.  |

## 11. Toxicological information

### Information on expected route of exposure

|                   |   |
|-------------------|---|
| <b>Inhalation</b> | May produce an allergic reaction.   |
| <b>Ingestion</b>  | May cause allergic reaction. May be harmful if swallowed.   |
| <b>Eyes</b>       | Avoid contact with eyes. Corrosive to the eyes and may cause severe damage including blindness. May cause irritation. Sensitization.  |
| <b>Skin</b>       | Avoid contact with skin. Skin Corrosion/Irritation. May cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. Harmful in contact with skin. |

### Toxicology data for the components

| Component            | LD50 Oral                | LD50 Dermal | LC50 Inhalation |
|----------------------|--------------------------|-------------|-----------------|
| Tributyltin chloride | LD50 = 122 mg/kg ( Rat ) | -           | -               |

**Toxicologically Synergistic Products** No information available

**(b) skin corrosion/irritation;** Category 2

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

|             |                          |
|-------------|--------------------------|
| Respiratory | No data available        |
| Skin        | No data available        |
|             | No information available |

(e) germ cell mutagenicity; No data available

(f) carcinogenicity;

The table below indicates whether each agency has listed any ingredient as a carcinogen

| Component            | CAS No    | IARC       | NTP        | ACGIH      | OSHA       | Mexico     |
|----------------------|-----------|------------|------------|------------|------------|------------|
| Tributyltin chloride | 1461-22-9 | Not listed |

(g) reproductive toxicity; Category 1B

**Reproductive Effects** Experiments have shown reproductive toxicity effects on laboratory animals.

(h) STOT-single exposure; No data available

(i) STOT-repeated exposure; Category 1

**Target Organs** Reproductive System, Blood, Central nervous system (CNS), Kidney, Liver, Urinary Tract.

(j) aspiration hazard; No data available

**Symptoms / effects,both acute and delayed** No information available.

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Endocrine Disrupting Properties** This product does not contain any known or suspected endocrine disruptors.

| Component            | EU - Endocrine Disrupters Candidate List | EU - Endocrine Disruptors - Evaluated Substances | Japan - Endocrine Disruptor Information |
|----------------------|--|--|---|
| Tributyltin chloride | Not applicable                           | High Exposure Concern                            | Not applicable                          |

## 12. Ecological information

### Ecotoxicity

The product contains following substances which are hazardous for the environment. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system.

| Component            | Freshwater Algae | Freshwater Fish                                      | Microtox   | Water Flea           |
|----------------------|------------------|--|------------|----------------------|
| Tributyltin chloride | Not listed       | LC50: 0.011-0.020 mg/L/96h<br>(Onchorhynchus mykiss) | Not listed | EC50: 0.018 mg/L/48h |

**Persistence and Degradability** May persist

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Is not likely mobile in the environment due its low water solubility.

| Component            | log Pow |
|----------------------|---------|
| Tributyltin chloride | 4.76    |

### 13. Disposal considerations

|                               |   |
|-------------------------------|---|
| <b>Waste Disposal Methods</b> | Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification. |
|-------------------------------|---|

### 14. Transport information

#### DOT

|                                |                                     |
|--------------------------------|-------------------------------------|
| <b>UN-No</b>                   | UN2788                              |
| <b>Proper Shipping Name</b>    | ORGANOTIN COMPOUNDS, LIQUID, N.O.S. |
| <b>Technical Shipping Name</b> | Tri-n-butyltin chloride             |
| <b>Hazard Class</b>            | 6.1                                 |
| <b>Packing Group</b>           | III                                 |

#### TDG

|                                |                                    |
|--------------------------------|------------------------------------|
| <b>UN-No</b>                   | UN2788                             |
| <b>Proper Shipping Name</b>    | ORGANOTIN COMPOUND, LIQUID, N.O.S. |
| <b>Technical Shipping Name</b> | Tri-n-butyltin chloride            |
| <b>Hazard Class</b>            | 6.1                                |
| <b>Packing Group</b>           | III                                |

#### IATA

|                                |                                    |
|--------------------------------|------------------------------------|
| <b>UN-No</b>                   | UN2788                             |
| <b>Proper Shipping Name</b>    | ORGANOTIN COMPOUND, LIQUID, N.O.S. |
| <b>Technical Shipping Name</b> | Tri-n-butyltin chloride            |
| <b>Hazard Class</b>            | 6.1                                |
| <b>Packing Group</b>           | III                                |

#### IMDG/IMO

|                                |                                    |
|--------------------------------|------------------------------------|
| <b>UN-No</b>                   | UN2788                             |
| <b>Proper Shipping Name</b>    | ORGANOTIN COMPOUND, LIQUID, N.O.S. |
| <b>Technical Shipping Name</b> | Tri-n-butyltin chloride            |
| <b>Hazard Class</b>            | 6.1                                |
| <b>Packing Group</b>           | III                                |

### 15. Regulatory Information

#### United States of America Inventory

| Component            | CAS No    | TSCA | TSCA Inventory notification - Active-Inactive | TSCA - EPA Regulatory Flags |
|----------------------|-----------|------|---|-----------------------------|
| Tributyltin chloride | 1461-22-9 | X    | ACTIVE  | -                           |

#### Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)** Not applicable

**TSCA 12(b) - Notices of Export** Not applicable

#### International Inventories

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

| Component            | CAS No    | DSL | NDSL | EINECS    | PICCS | ENCS | ISHL | AICS | IECSC | KECL     |
|----------------------|-----------|-----|------|-----------|-------|------|------|------|-------|----------|
| Tributyltin chloride | 1461-22-9 | X   | -    | 215-958-7 | X     | X    | X    | X    | X     | KE-34041 |

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### U.S. Federal Regulations

#### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### **SARA 311/312 Hazard Categories**

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

|   |                |
|---|----------------|
| <b>CWA (Clean Water Act)</b>                                | Not applicable |
| <b>Clean Air Act</b>  | Not applicable |
| <b>OSHA - Occupational Safety and Health Administration</b> | Not applicable |

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

#### **California Proposition 65**

This product does not contain any Proposition 65 chemicals.

#### **U.S. State Right-to-Know Regulations**

| Component            | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|----------------------|---------------|------------|--------------|----------|--------------|
| Tributyltin chloride | -             | -          | -            | -        | X            |

#### **U.S. Department of Transportation**

|                             |   |
|-----------------------------|---|
| Reportable Quantity (RQ):   | N |
| DOT Marine Pollutant        | N |
| DOT Severe Marine Pollutant | N |

#### **U.S. Department of Homeland Security**

This product does not contain any DHS chemicals.

#### Other International Regulations

|                       |                      |
|-----------------------|----------------------|
| <b>Mexico - Grade</b> | Slight risk, Grade 1 |
|-----------------------|----------------------|

#### **Authorisation/Restrictions according to EU REACH**

| Component            | CAS No    | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances   | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|----------------------|-----------|---|---|---|
| Tributyltin chloride | 1461-22-9 | -   | Use restricted. See entry 20.<br>(see link for restriction details)<br>Use restricted. See entry 30.<br>(see link for restriction | -   |

|  |  |  |   |  |
|--|--|--|---|--|
|  |  |  | details)<br>Use restricted. See entry<br>75.<br>(see link for restriction<br>details) |  |
|--|--|--|---|--|

**REACH links**

<https://echa.europa.eu/substances-restricted-under-reach>

**Safety, health and environmental regulations/legislation specific for the substance or mixture**

| Component            | CAS No    | OECD HPV       | Persistent Organic Pollutant | Ozone Depletion Potential | Restriction of Hazardous Substances (RoHS) |
|----------------------|-----------|----------------|------------------------------|---------------------------|--|
| Tributyltin chloride | 1461-22-9 | Not applicable | Not applicable               | Not applicable            | Not applicable                             |

**Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?**

Not applicable

**Other International Regulations**

| Component            | CAS No    | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification | Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements | Rotterdam Convention (PIC) | Basel Convention (Hazardous Waste) |
|----------------------|-----------|---|--|----------------------------|------------------------------------|
| Tributyltin chloride | 1461-22-9 | Not applicable  | Not applicable   | X                          | Not applicable                     |

## 16. Other Information

**Prepared By**

Product stewardship (Regulatory Affairs)  
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email - begel.sdsdesk@thermofisher.com

**Revision Date**

18-Dec-2025

**Print Date**

18-Dec-2025

**Revision Summary**

Updated to the U.S. Department of Labor's Occupational Safety and Health Administration (OSHA) which published its Final Rule in the Federal Register revising the Hazard Communication Standard (HCS/HazCom), 29 CFR 1910.1200 (2024) (HCS §1910.1200, 2024), May 20, 2024, effective July 19, 2024.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**