

## Chemical Safety Data Sheet MSDS / SDS

## Tin tetrachloride

Revision Date:2023-12-02 Revision Number:1

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

**Product identifier**

Product name : Tin tetrachloride  
CBnumber : CB2381749  
CAS : 7646-78-8  
EINECS Number : 231-588-9  
Synonyms : SnCl<sub>4</sub>, Tin Tetrachloride

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

**Company Identification**

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

## SECTION 2: Hazards identification

**Classification of the substance or mixture**

Skin corrosion, Sub-category 1B  
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 3

**Label elements****Pictogram(s)**

□□□□

Signal word : Danger

**Hazard statement(s)**

H225 Highly Flammable liquid and vapour  
H304 May be fatal if swallowed and enters airways  
H314 Causes severe skin burns and eye damage  
H318 Causes serious eye damage  
H335 May cause respiratory irritation  
H336 May cause drowsiness or dizziness  
H351 Suspected of causing cancer

H373 May cause damage to organs through prolonged or repeated exposure

H402 Harmful to aquatic life

H410 Very toxic to aquatic life with long lasting effects

H412 Harmful to aquatic life with long lasting effects

#### **Precautionary statement(s)**

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P331 Do NOT induce vomiting.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off Immediately all contaminated clothing. Rinse SKIN with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continuerinsing.

P405 Store locked up.

#### **Prevention**

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash ... thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

P273 Avoid release to the environment.

#### **Response**

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P363 Wash contaminated clothing before reuse.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P316 Get emergency medical help immediately.

P321 Specific treatment (see ... on this label).

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### **Storage**

P405 Store locked up.

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards**

no data available

---

## SECTION 3: Composition/information on ingredients

### **Substance**

Product name : Tin tetrachloride

Synonyms : SnCl<sub>4</sub>, Tin Tetrachloride

CAS : 7646-78-8  
EC number : 231-588-9  
MF : Cl4Sn  
MW : 260.52

---

## SECTION 4: First aid measures

### Description of first aid measures

#### If inhaled

Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.

#### Following skin contact

Rinse skin with plenty of water or shower. Refer for medical attention .

#### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

#### Following ingestion

Do NOT induce vomiting. Refer for medical attention .

### Most important symptoms and effects, both acute and delayed

no data available

### Indication of any immediate medical attention and special treatment needed

no data available

---

## SECTION 5: Firefighting measures

### Extinguishing media

Use dry chemical, carbon dioxide or alcohol-resistant foam.

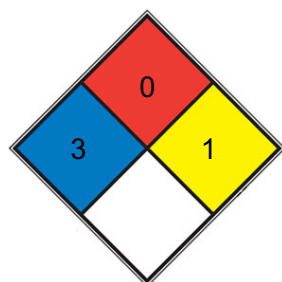
### Specific Hazards Arising from the Chemical

Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.

### Advice for firefighters

NO hydrous agents. In case of fire in the surroundings, use appropriate extinguishing media.

### NFPA 704



■ HEALTH 3 Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium](#))

[hypochlorite](#), hexafluorosilicic acid)

---

|                          |       |   |  |
|--------------------------|-------|---|--|
| <input type="checkbox"/> | FIRE  | 0 | Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride) |
| <input type="checkbox"/> | REACT | 1 | Normally stable, but can become unstable at elevated temperatures and pressures (e.g. <a href="#">propene</a> )  |
| <input type="checkbox"/> | SPEC. |   |  |
| <input type="checkbox"/> | HAZ.  |   |  |

---

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Evacuate danger area! Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Ventilation. Cautiously neutralize spilled liquid with soda ash or lime. Then store and dispose of according to local regulations.

### Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

---

## SECTION 7: Handling and storage

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

### Conditions for safe storage, including any incompatibilities

Separated from food and feedstuffs. Dry. Well closed. Keep in a well-ventilated room.

---

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

TLV: 2 mg/m<sup>3</sup>, as TWA.EU-OEL: 2 mg/m<sup>3</sup> as TWA

#### Biological limit values

no data available

## Exposure controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

## Individual protection measures

### Eye/face protection

Wear safety goggles, face shield or eye protection in combination with breathing protection.

### Skin protection

Protective gloves. Protective clothing.

### Respiratory protection

Use ventilation, local exhaust or breathing protection.

### Thermal hazards

no data available

---

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

|  |  |
|--|--|
| Physical state   | Solution   |
| Colour   | Colorless  |
| Odour  | no data available  |
| Melting point/freezing point                             | -35.8 °C. Atm. press.:1 013.3 hPa.   |
| Boiling point or initial boiling point and boiling range | 111 °C. Atm. press.:1 013.3 hPa.   |
| Flammability   | no data available  |
| Lower and upper explosion limit/flammability limit       | no data available  |
| Flash point  | -4°C   |
| Auto-ignition temperature                                | > 654 °C. Atm. press.:1 013.3 hPa.   |
| Decomposition temperature                                | no data available  |
| pH   | 0.2 (60g/l, H <sub>2</sub> O, 20°C)Hydrolysis  |
| Kinematic viscosity                                      | no data available  |
| Solubility   | Miscible with alcohol, benzene, toluene, chloroform, acetone, carbon tetrachloride, gasoline and carbon disulfide. |
| Partition coefficient n-octanol/water                    | no data available  |
| Vapour pressure  | 10 mm Hg ( 10 °C)  |
| Density and/or relative density                          | 2.226  |
| Relative vapour density                                  | 2.226  |
| Particle characteristics                                 | no data available  |

---

## SECTION 10: Stability and reactivity

**Reactivity**

no data available

**Chemical stability**

no data available

**Possibility of hazardous reactions**

The vapour is heavier than air. Reacts violently with water and moist air. This produces corrosive hydrogen chloride (see ICSC 0163). Reacts with turpentine, alcohols and amines. This generates fire and explosion hazard. Attacks many metals, some forms of plastic, rubber and coatings.

**Conditions to avoid**

no data available

**Incompatible materials**

no data available

**Hazardous decomposition products**

no data available

---

**SECTION 11: Toxicological information****Acute toxicity**

- Oral: no data available
- Inhalation: no data available
- Dermal: no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/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

### **STOT-single exposure**

The substance is corrosive to the eyes, skin and respiratory tract. Corrosive on ingestion.

### **STOT-repeated exposure**

no data available

### **Aspiration hazard**

A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C.

---

## SECTION 12: Ecological information

### **Toxicity**

Toxicity to fish: LC50 - Danio rerio (previous name: Brachydanio rerio) - > 1 000 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EL50 - Daphnia magna - > 100 mg/L - 48 h. Remarks:Loading rate.

Toxicity to algae: EL50 - Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum) - > 100 mg/L - 72 h.

Toxicity to microorganisms: no data available

### **Persistence and degradability**

no data available

### **Bioaccumulative potential**

no data available

### **Mobility in soil**

no data available

### **Other adverse effects**

no data available

---

## SECTION 13: Disposal considerations

### **Disposal methods**

#### **Product**

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

---

## SECTION 14: Transport information

### **UN Number**

ADR/RID: UN1827 (For reference only, please check.)

IMDG: UN1827 (For reference only, please check.)

IATA: UN1827 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: STANNIC CHLORIDE, ANHYDROUS (For reference only, please check.)

IMDG: STANNIC CHLORIDE, ANHYDROUS (For reference only, please check.)

IATA: STANNIC CHLORIDE, ANHYDROUS (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: 8 (For reference only, please check.)

IMDG: 8 (For reference only, please check.)

IATA: 8 (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

---

## SECTION 15: Regulatory information

### **Safety, health and environmental regulations specific for the product in question**

#### **European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

#### **EC Inventory**

Listed.

#### **United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

#### **China Catalog of Hazardous chemicals 2015**

Listed.



### **New Zealand Inventory of Chemicals (NZIoC)**

Listed.

### **PICCS**

Listed.

### **Vietnam National Chemical Inventory**

Listed.

### **IECSC**

Listed.

### **Korea Existing Chemicals List (KECL)**

Listed.

---

## SECTION 16: Other information

### **Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### **References**

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: [http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

### **Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.