

# Safety Data Sheet (1907/2006/EC)

**Material:** TIN TETRACHLORIDE

Version: 6.4 (GB)

Date of print: 01.10.2020

Date of last alteration: 24.08.2020

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

### 1.1 Product identifier

**Commercial product name:** TIN TETRACHLORIDE  
**Product identifier:** tin tetrachloride  
**CAS No.:** 7646-78-8  
**EC-No.:** 231-588-9  
**Index-No.:** 050-001-00-5  
**REACH registration number:** 01-2119474678-20-0000

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

Use of substance / preparation:  
Industrial.

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

**Manufacturer/distributor:** Vinnolit GmbH & Co. KG  
**Street/POB-No.:** Carl-Zeiss-Ring 25  
**Postal code/city:** 85737 Ismaning  
**Country:** Germany  
**Telephone:** +49 89 96-103-0  
**Telefax:** +49 89 96-103-103  
**Information about the Safety Data Sheet:** Telephone +49 8679 7-5680  
 eMail sdb@vinnolit.com

### 1.4 Emergency telephone number

**Emergency Information (German):** Plant fire brigade +49 8677 83-2222  
**Emergency Information (internat.):** National Response Center +49 621 60-43333

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008:

Hazard class	Hazard category	Route of exposure	H-Code
Specific target organ toxicity - single exposure	Category 3		H335
Serious eye damage/eye irritation	Category 1		H318
Long-term (chronic) aquatic hazard	Category 3		H412
Skin corrosion/irritation	Category 1B		H314

### 2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008:

Pictogram(s):



Signal Word: Danger

H-Code	Hazard Statements
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.
H335	May cause respiratory irritation.

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P-Code	Precautionary Statements
P280	Wear protective gloves/protective clothing/eye protection.
P273	Avoid release to the environment.
P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER/ doctor.
P501	Dispose of contents/container to waste disposal.

Hazard ingredients (labelling):

tin tetrachloride

EC-No.: 231-588-9

### 2.3 Other hazards

No data available.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

#### 3.1.1 Chemical characteristics

CAS No.: 7646-78-8

metal salt

#### 3.1.2 Hazardous ingredients

Type	CAS No.	EC-No. REACH no.	Substance	Content %	Classification according to Regulation (EC) No. 1272/2008*	Comment
INHA	7646-78-8	231-588-9	tin tetrachloride	<=100	Eye Dam. 1; H318 Skin Corr. 1B; H314 Aquatic Chronic 3; H412	[1]

Type: INHA: ingredient, VERU: impurity

[1] = Hazardous or environmentally harmful substance; [2] = substance with a Community workplace exposure limit; [3] = PBT substance; [4] = vPvB substance

\*Classification codes are explained in section 16.

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57) in amounts above  $\geq 0.1\%$ .

### 3.2 Mixtures

not applicable

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General information:

Take persons to a safe place. Observe self-protection for first aid. Always seek medical advice in the event of contact with this substance.

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**After contact with the eyes:**

Rinse immediately with plenty of water for 10-15 minutes. Keep eyelids well open to rinse the whole eye surface and eyelids with water. Seek medical advice immediately and clearly identify substance. Continue to bathe eyes during transport to medical practitioner.

**After contact with the skin:**

Remove contaminated clothes at once. Wipe off excess material with cloth or paper. Wash off with plenty of water or water and soap immediately for 10-15 minutes. In serious cases, use emergency shower immediately. Seek medical advice immediately and clearly identify substance.

**After inhalation:**

Keep the patient calm. If unconscious place in stable sideways position. Protect against loss of body heat. If breathing stops, administer artificial respiration. Seek medical advice immediately and clearly identify substance.

**After swallowing:**

If conscious, give several small portions of water to drink. Do not induce vomiting. Seek medical advice immediately and clearly identify substance.

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

Any relevant information can be found in other parts of this section.

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

After inhalation: treat as early as possible using cortisone spray. Medical checks necessary up to a latency period of at least 24 hours. In the event of 1st degree burns use corticoid-externa. In the case of 2nd degree burns, use symptomatic treatment. Further toxicology information in section 11 must be observed.

### SECTION 5: Firefighting measures

**5.1 Extinguishing media**

**Suitable extinguishing media:**

extinguishing powder , carbon dioxide .

**Extinguishing media which must not be used for safety reasons:**

water , foam .

**5.2 Special hazards arising from the substance or mixture**

Hazardous combustion products: hydrogen chloride .

**5.3 Advice for firefighters**

**Special protective equipment for fire fighting:**

Use respiratory protection independent of recirculated air.

### SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Wear personal protection equipment (see section 8). Avoid contact with eyes and skin.

**6.2 Environmental precautions**

Prevent material from entering sewers or surface waters.

**6.3 Methods and material for containment and cleaning up**

Absorb with a liquid binding material such as diatomaceous earth and dispose of according to local/state/federal regulations. Use neutralising agent.

**6.4 Reference to other sections**

Relevant information in other sections has to be considered. This applies in particular for information given on personal protective equipment (section 8) and on disposal (section 13).

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

**Precautions for safe handling:**

Ensure adequate ventilation.

**Precautions against fire and explosion:**

No special precautions against fire and explosion required.

#### 7.2 Conditions for safe storage, including any incompatibilities

**Conditions for storage rooms and vessels:**

Do not store in containers made of aluminum or other light metals.

**Advice for storage of incompatible materials:**

not applicable

**Further information for storage:**

Keep container tightly closed and store in a cool, well ventilated place. Protect against moisture.

#### 7.3 Specific end use(s)

No data available.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

**Maximum airborne concentrations at the workplace:**

CAS No.	Substance	Type	mg/m <sup>3</sup>	ppm	Dust fract.	Fibre/m <sup>3</sup>
7647-01-0	Hydrogen chloride	TLV GB	2,0	1,0		
7647-01-0	Hydrogen chloride	EU	8,0	5,0		

- hydrogen chloride (CAS no. 7647-01-1): the short-time exposure value of the EU threshold is 15 mg/m<sup>3</sup> (= 10 ppm).

#### 8.2 Exposure controls

##### 8.2.1 Exposure in the work place limited and controlled

**General protection and hygiene measures:**

Avoid contact with eyes and skin. Do not breathe vapours. Wash hands at the end of work and before eating. Application of skin cream recommended to ensure optimum protection of skin.

**Personal protection equipment:**

**Respiratory protection**

Observe the equipment manufacturer's information and wear time limits for respirators.

If handled uncovered, use respiratory protective equipment.

Recommended Filter type: Gas filter type E (sulfur dioxide and other acidic gases and vapors), according to acknowledged standards such as EN 14387

For long or intense exposure, or for mist, spray or aerosol exposure, use respiratory protective equipment. Wear a self-contained, positive-pressure respirator with full facepiece and a protection factor (APF) of 2000, according to acknowledged standards such as EN 137, EN 14593 or EN 14594.

**Eye protection**

protective goggles .

**Hand protection**

Use of protective gloves is recommended when handling the material.

Recommended glove types: Protective gloves made of nitrile rubber  
thickness of the material: 0,5 mm

Wearing time: 8 h

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Breakthrough time: 480 min

### Skin protection

acid-proof protective clothing , rubber apron . Where there is risk of splashing: full protective suit .

### 8.2.2 Exposure to the environment limited and controlled

Observe local waste water bye-laws for organo tin and tin compounds. Prevent material from entering surface waters and soil. Normally neutralisation is required before waste water is introduced into purification plants. Do not introduce large amounts into purification plants.

### 8.3 Further information for system design and engineering measures

No special measures required.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Property:	Value:	Method:
<b>Appearance</b>		
Physical state .....	liquid	
Colour.....	colourless	
<b>Odour</b>		
Odour .....	pungent	
<b>Odour limit</b>		
Odour limit.....	no data available	
<b>pH-Value</b>		
pH-Value .....	0,2 at 20 °C (60 g/l H <sub>2</sub> O)	
<b>Melting point/freezing point</b>		
Melting point / melting range .....	-35,8 °C	
<b>Initial boiling point and boiling range</b>		
Boiling point / boiling range .....	111 °C at 1013 hPa	
<b>Flash point</b>		
Flash point.....	not applicable	
<b>Evaporation rate</b>		
Evaporation rate .....	no data available	
<b>Upper/lower flammability or explosive limits</b>		
Lower explosion limit (LEL) .....	not applicable	
<b>Vapour pressure</b>		
Vapour pressure.....	106 hPa / 50 °C	
Vapour pressure.....	20,7 hPa / 20 °C	
<b>Solubility(ies)</b>		
Water solubility / miscibility.....		
<b>Vapour density</b>		
Relative gas/vapour density .....	No data known.	
<b>Relative Density</b>		
Relative Density .....	2,23 (20 °C)	
	(Water / 4 °C = 1,00)	
Density .....	2,23 g/cm <sup>3</sup> (20 °C)	
<b>Partition coefficient: n-octanol/water</b>		
Partition coefficient: n-octanol/water.....	No data known.	
<b>Auto-ignition temperature</b>		
Ignition temperature .....	not applicable	
<b>Viscosity</b>		
Viscosity (dynamic) .....	0,9 mPa.s at 25 °C	
<b>Molecular mass</b>		
Molecular mass .....	no data available	

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### 9.2 Other information

Solubility in water: Hydrolytic decomposition occurs. Explosion Limits: Not potentially explosive in accordance with European Commission Regulation (EC) No. 440/2008. The color may change during storage.

## SECTION 10: Stability and reactivity

### 10.1 – 10.3 Reactivity; Chemical stability; Possibility of hazardous reactions

No decomposition if used in accordance with instructions.

Relevant information can possibly be found in other parts of this section.

### 10.4 Conditions to avoid

None known.

### 10.5 Incompatible materials

Reacts with: alcohols , metals , water . The reaction takes place with the formation of hydrogen chloride. Reacts violently with: alkali/alkaline earth metals .

### 10.6 Hazardous decomposition products

hydrogen chloride .

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### 11.1.1 Acute toxicity

##### Product details:

Route of exposure	Result/Effect	Species/Test system	Source
by inhalation (vapour)	LC50: 1,4 mg/l; 4 h	Rat	literature

#### 11.1.2 Skin corrosion/irritation

##### Product details:

Result/Effect	Species/Test system	Source
Corrosive	Rabbit	Expert judgement

#### 11.1.3 Serious eye damage / eye irritation

##### Product details:

Result/Effect	Species/Test system	Source
Corrosive	Rabbit	Expert judgement

#### 11.1.4 Respiratory or skin sensitization

##### Assessment:

For this endpoint no toxicological test data is available for the whole product.

#### 11.1.5 Germ cell mutagenicity

##### Assessment:

For this endpoint no toxicological test data is available for the whole product.

##### Product details:

Result/Effect	Species/Test system	Source
negative	mutation assay (in vitro) bacterial cells	test report OECD 471

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### 11.1.6 Carcinogenicity

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 11.1.7 Reproductive toxicity

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 11.1.8 Specific target organ toxicity (single exposure)

**Assessment:**

Irritating to respiratory system.

### 11.1.9 Specific target organ toxicity (repeated exposure)

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

### 11.1.10 Aspiration hazard

**Assessment:**

For this endpoint no toxicological test data is available for the whole product.

## SECTION 12: Ecological information

### 12.1 Toxicity

**Assessment:**

Harmful effect through pH-shift.

**Product details:**

Result/Effect	Species/Test system	Source
LC50: > 1000 mg/l (nominal)	static zebra fish (Danio rerio) (96 h)	test report OECD 203
EC50: > 100 mg/l (nominal)	static Daphnia magna (48 h)	test report OECD 202
ErC50: > 100 mg/l (nominal)	static Pseudokirchneriella subcapitata (72 h)	test report OECD 201
NOEC: < 1 mg/l (nominal)	static Pseudokirchneriella subcapitata (72 h)	test report OECD 201

### 12.2 Persistence and degradability

**Assessment:**

Hydrolytically instable. Contact with water liberates hydrochloric acid and tin dioxide.

### 12.3 Bioaccumulative potential

**Assessment:**

No data known.

### 12.4 Mobility in soil

**Assessment:**

No data known.

### 12.5 Results of PBT and vPvB assessment

No data available.

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### 12.6 Other adverse effects

none known

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### 13.1.1 Material

Recommendation:

Dispose of according to regulations by incineration in a special waste incinerator. Observe local/state/federal regulations.

#### 13.1.2 Uncleaned packaging

Recommendation:

Uncontaminated containers should be recycled. Uncleaned packaging should be treated with the same precautions as the material.

#### 13.1.3 Waste Disposal Legislation Ref.No.(EC)

It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

## SECTION 14: Transport information

### 14.1 – 14.4 UN number; UN proper shipping name; Transport hazard class(es); Packing group

#### Road ADR:

Valuation .....: Dangerous Goods  
 14.1 UN no .....: 1827  
 14.2 Proper Shipping Name .....: Zinntetrachlorid, wasserfrei  
 14.2 Proper Shipping Name (national) ....: STANNIC CHLORIDE, ANHYDROUS  
 14.3 Class .....: 8  
 14.4 Packaging Group .....: II

#### Railway RID:

Valuation .....: Dangerous Goods  
 14.1 UN no .....: 1827  
 14.2 Proper Shipping Name .....: Zinntetrachlorid, wasserfrei  
 14.2 Proper Shipping Name (national) ....: STANNIC CHLORIDE, ANHYDROUS  
 14.3 Class .....: 8  
 14.4 Packaging Group .....: II

#### Transport by sea IMDG-Code:

Valuation .....: Dangerous Goods  
 14.1 UN no .....: 1827  
 14.2 Proper Shipping Name .....: Stannic chloride, anhydrous  
 14.3 Class .....: 8  
 14.4 Packaging Group .....: II

#### Air transport ICAO-TI/IATA-DGR:

Valuation .....: Dangerous Goods  
 14.1 UN no .....: 1827  
 14.2 Proper Shipping Name .....: Stannic chloride, anhydrous  
 14.3 Class .....: 8  
 14.4 Packaging Group .....: II

### 14.5 Environmental hazards

Hazardous to the environment: no  
 Marine Pollutant (IMDG): no



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### 14.6 Special precautions for user

Relevant information in other sections has to be considered.

### 14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

Bulk transport in tankers is not intended.

## SECTION 15: Regulatory information

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

National and local regulations must be observed.

For information on labelling please refer to section 2 of this document.

#### Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances (Seveso III):

Not applicable

#### Relevant regulations:

SI 2002/1689: CHIP Regulations 2002

SI 2002/2677: COSHH Regulations 2002

SI 1999/3242: Management of Health & Safety at Work Regulations 1999

Health & Safety at Work Act 1974

SI 1993/1643: Environmental Protection Act 1993 & Subsidiary Regulations.

Other national and local measures relating to the workplace, pollution control, environmental protection and waste control.

#### Other specifications, restrictions and prohibitions:

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals: Not applicable

### 15.2 Chemical safety assessment

A chemical safety assessment according to (EC) regulation 1907/2006 (REACH) has not been carried out for this product.

### 15.3 Details of international registration status

Relevant information about individual substance inventories, where available, is given below.

Japan.....	: <b>ENCS</b> (Handbook of Existing and New Chemical Substances): This product is listed in, or complies with, the substance inventory.
Australia .....	: <b>AICS</b> (Australian Inventory of Chemical Substances): This product is listed in, or complies with, the substance inventory.
China .....	: <b>IECSC</b> (Inventory of Existing Chemical Substances in China): This product is listed in, or complies with, the substance inventory.
Canada.....	: <b>DSL</b> (Domestic Substance List): This product is listed in, or complies with, the substance inventory.
Philippines .....	: <b>PICCS</b> (Philippine Inventory of Chemicals and Chemical Substances): This product is listed in, or complies with, the substance inventory.
United States of America (USA).....	: <b>TSCA</b> (Toxic Substance Control Act Chemical Substance Inventory): All components of this product are listed as active or are in compliance with the substance inventory.
Taiwan.....	: <b>TCSI</b> (Taiwan Chemical Substance Inventory): This product is listed in, or complies with, the substance inventory. General note: The Taiwanese chemicals regulation requires a phase 1 registration for TCSI-listed or TCSI-compliant substances if imports to Taiwan or manufacturing in Taiwan exceed the trigger quantity of 100 kg/a (for mixtures to be calculated per each ingredient). It is the duty of the importing/manufacturing legal entity to take care of this obligation.

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European Economic Area (EEA) .....: **REACH** (Regulation (EC) No 1907/2006):  
This product is only intended and registered for uses as a transported isolated intermediate according to (EC) regulation 1907/2006, article 18.  
For uses which are not in compliance with the use as intermediate, downstream users should proceed in compliance with the requirements of Art. 37 to 39 of (EC) regulation 1907/2006 (REACH).  
General note: the registration obligations for substances imported into the EEA or manufactured within the EEA by the supplier mentioned in section 1 are fulfilled by the said supplier. The registration obligations for substances imported into the EEA by customers or other downstream users must be fulfilled by the latter.

South Korea (Republic of Korea).....: **AREC** (Act on Registration and Evaluation of Chemicals; "K-REACH"):  
Please approach your regular WACKER contact for more detailed information.

### SECTION 16: Other information

#### 16.1 Material

The details in this document are based on the state of our knowledge at the time of revision. They do not constitute an assurance of the described product properties in terms of statutory warranty requirements.

The providing of this document to a recipient does not relieve the recipient of his or her responsibility toward compliance with all laws and stipulations applicable to the product. This applies in particular to the further sale or distribution of the product or substances or items containing the product, in other jurisdictions and with regard to the protection of third-party intellectual property rights. If the described product is processed or mixed with other substances or materials, the details stated in this document cannot be conferred to the resultant new product unless this has been expressly mentioned. If the product is repackaged, the recipient is obligated to additionally provide the required safety-related information.

#### 16.2 Further information:

Commas appearing in numerical data denote a decimal point. Vertical lines in the left-hand margin indicate changes compared with the previous version. This version supersedes all previous versions.

Explanation of the GHS classification code:

Eye Dam. 1; H318.....: Serious eye damage/eye irritation Category 1; Causes serious eye damage.

Skin Corr. 1B; H314 ...: Skin corrosion/irritation Category 1B; Causes severe skin burns and eye damage.

Aquatic Chronic 3; H412 Long-term (chronic) aquatic hazard Category 3; Harmful to aquatic life with long lasting effects.

.....:

**- End of Safety Data Sheet -**