

**SAFETY DATA SHEET**

according to Regulation (EC) No. 1907/2006

Version 3.1 Revision Date 13.05.2010

Print Date 28.06.2010

GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

Product name : Carbon tetrachloride

Product Number : 289116

Brand : Aldrich

Company : Sigma-Aldrich (Shanghai) Trading Co.,Ltd  
22A-B Century Ba-Shi Building,  
398 Huai Hai Zhong Road  
200020 SHANGHAI  
CHINA

Telephone : +862161415566

Fax : +862161415567

Emergency Phone # : +8615921213336

E-mail address : china@sial.com

**2. HAZARDS IDENTIFICATION****Classification of the substance or mixture**

According to Regulation (EC) No1272/2008

Carcinogenicity (Category 2)

Acute toxicity (Category 3)

Acute toxicity (Category 3)

Acute toxicity (Category 3)

Specific target organ toxicity - repeated exposure (Category 1)

Chronic aquatic toxicity (Category 3)

Hazardous to the ozone layer

According to European Directive 67/548/EEC as amended.

Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of serious damage to health by prolonged exposure through inhalation. Limited evidence of a carcinogenic effect. Dangerous for the ozone layer. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Label elements**

Pictogram



Signal word

Danger

Hazard statement(s)

H372

Causes damage to organs through prolonged or repeated exposure.

H301

Toxic if swallowed.

H311

Toxic in contact with skin.

H331

Toxic if inhaled.

H351

Suspected of causing cancer.

H412

Harmful to aquatic life with long lasting effects.

EUH059

Hazardous to the ozone layer.

Precautionary statement(s)

P261

Avoid breathing dust/fume/gas/mist/vapours/spray.

P273

Avoid release to the environment.

P280

Wear protective gloves/protective clothing.

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P311	Call a POISON CENTER or doctor/physician.
P501	Dispose of contents/container to an approved waste disposal plant.
Hazard symbol(s)	
T	Toxic
N	Dangerous for the environment
R-phrases(s)	
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R40	Limited evidence of a carcinogenic effect.
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R59	Dangerous for the ozone layer.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
S-phrases(s)	
S23	Do not breathe gas/fumes/vapour/spray.
S36/37	Wear suitable protective clothing and gloves.
S45	In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S59	Refer to manufacturer/supplier for information on recovery/recycling.
S61	Avoid release to the environment. Refer to special instructions/ Safety data sheets.

#### Other hazards

Rapidly absorbed through skin.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms	: Tetrachloromethane
Formula	: CCl <sub>4</sub>
Molecular Weight	: 153,82 g/mol

CAS-No.	EC-No.	Index-No.	Classification	Concentration
<b>Tetrachloromethane</b>				
56-23-5	200-262-8	602-008-00-5	Carc. 2; Acute Tox. 3; STOT RE 1; Aquatic Chronic 3; Ozone ; H372, H301, H311, H331, H351, H412, EUH059 T, N, Carc.Cat.3, R23/24/25 - R40 - R48/23 - R59 - R52/53	-

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

---

**5. FIRE-FIGHTING MEASURES****Suitable extinguishing media**

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

**Special protective equipment for fire-fighters**

Wear self contained breathing apparatus for fire fighting if necessary.

---

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions**

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**Environmental precautions**

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

**Methods and materials for containment and cleaning up**

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

---

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.

**Conditions for safe storage**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

---

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Handle with gloves.

**Eye protection**

Face shield and safety glasses

**Skin and body protection**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form liquid

### Safety data

pH no data available  
Melting point -23 °C - lit.  
Boiling point 76 - 77 °C - lit.  
Flash point not applicable  
Ignition temperature no data available  
Lower explosion limit no data available  
Upper explosion limit no data available  
Vapour pressure 121,3 hPa at 20,0 °C  
190,7 hPa at 30,0 °C  
Density 1,594 g/cm<sup>3</sup> at 25 °C  
Water solubility no data available  
Partition coefficient:  
n-octanol/water log Pow: 2,83  
log Pow: 5

---

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

no data available

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

---

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

LD50 Oral - rat - 2.350 mg/kg

LC50 Inhalation - rat - 4 h - 8000 ppm

LD50 Dermal - rabbit - > 20.000 mg/kg

### Skin corrosion/irritation

Skin - rabbit - Mild skin irritation - 24 h

### Serious eye damage/eye irritation

Eyes - rabbit - Mild eye irritation - 24 h

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

This product is or contains a component that has been reported to be probably carcinogenic based on its IARC, OSHA, ACGIH, NTP, or EPA classification.

Limited evidence of carcinogenicity in animal studies

IARC: 2B - Group 2B: Possibly carcinogenic to humans (Tetrachloromethane)

**Reproductive toxicity**

no data available

**Specific target organ toxicity - single exposure**

no data available

**Specific target organ toxicity - repeated exposure**

Inhalation - Causes damage to organs through prolonged or repeated exposure.

**Aspiration hazard**

no data available

**Potential health effects**

<b>Inhalation</b>	Toxic if inhaled. May cause respiratory tract irritation.
<b>Ingestion</b>	Toxic if swallowed.
<b>Skin</b>	Toxic if absorbed through skin. May cause skin irritation.
<b>Eyes</b>	May cause eye irritation.

**Signs and Symptoms of Exposure**

Vomiting, Diarrhoea, Abdominal pain, Nausea, Dizziness, Headache, Damage to the eyes., Liver injury may occur., Kidney injury may occur., Exposure to and/or consumption of alcohol may increase toxic effects.

**Additional Information**

RTECS: FG4900000

---

**12. ECOLOGICAL INFORMATION**

**Toxicity**

Toxicity to fish	LC50 - Pimephales promelas (fathead minnow) - 42 mg/l - 96,0 h
	LC50 - Lepomis macrochirus (Bluegill) - 27 mg/l - 96,0 h
	NOEC - Oryzias latipes - 70 mg/l - 10,0 d
	LOEC - Pimephales promelas (fathead minnow) - 73,2 mg/l - 7,0 d
Toxicity to daphnia and other aquatic invertebrates.	EC50 - Daphnia magna (Water flea) - 530,00 mg/l - 48 h
	EC50 - Daphnia magna (Water flea) - 35,00 mg/l - 48 h

**Persistence and degradability**

no data available

**Bioaccumulative potential**

Does not bioaccumulate.

Bioaccumulation	Lepomis macrochirus (Bluegill) - 21 d Bioconcentration factor (BCF): 30
-----------------	--

**Mobility in soil**

no data available

**PBT and vPvB assessment**

no data available

**Other adverse effects**

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Dangerous for the ozone layer.  
no data available

---

### 13. DISPOSAL CONSIDERATIONS

#### Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

---

### 14. TRANSPORT INFORMATION

#### ADR/RID

UN-Number: 1846 Class: 6.1 Packing group: II  
Proper shipping name: CARBON TETRACHLORIDE

#### IMDG

UN-Number: 1846 Class: 6.1 Packing group: II EMS-No: F-A, S-A  
Proper shipping name: CARBON TETRACHLORIDE  
Marine pollutant: Marine pollutant

#### IATA

UN-Number: 1846 Class: 6.1 Packing group: II  
Proper shipping name: Carbon tetrachloride

---

### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

---

### 16. OTHER INFORMATION

#### Text of H-code(s) and R-phrase(s) mentioned in Section 3

Acute Tox.	Acute toxicity
Aquatic Chronic	Chronic aquatic toxicity
Carc.	Carcinogenicity
EUH059	Hazardous to the ozone layer.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H351	Suspected of causing cancer.
H372	Causes damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
N	Dangerous for the environment
T	Toxic
R23/24/25	Toxic by inhalation, in contact with skin and if swallowed.
R40	Limited evidence of a carcinogenic effect.
R48/23	Toxic: danger of serious damage to health by prolonged exposure through inhalation.
R52/53	Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R59	Dangerous for the ozone layer.

#### Further information

Copyright 2010 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.

---