

# TRICHLOROMETHANESULFENYL CHLORIDE

**0311**  
June 2003

CAS No: 594-42-3  
RTECS No: PB0370000  
UN No: 1670

Trichloromethanesulfenyl chloride  
Trichlormethyl sulfur chloride  
Thiocarbonyl tetrachloride  
Trichloromethyl sulfochloride  
Perchloromethyl mercaptan  
CCl<sub>3</sub>S / CCl<sub>3</sub>SCI  
Molecular mass: 185.9

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
<b>FIRE</b>	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		In case of fire in the surroundings: all extinguishing agents allowed.
<b>EXPLOSION</b>			
<b>EXPOSURE</b>		<b>STRICT HYGIENE!</b>	
<b>Inhalation</b>	Cough. Sore throat. Laboured breathing. Nausea. Vomiting. Convulsions.	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention.
<b>Skin</b>	Redness. Pain.	Protective gloves.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
<b>Eyes</b>	Redness. Pain.	Face shield, or eye protection in combination with breathing protection.	First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then take to a doctor.
<b>Ingestion</b>	Abdominal cramps. (Further see Inhalation).	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give one or two glasses of water to drink. Refer for medical attention.

## SPILLAGE DISPOSAL

Evacuate danger area! Consult an expert! Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent and remove to safe place. (Extra personal protection: chemical protection suit including self-contained breathing apparatus.)

## PACKAGING & LABELLING

**UN classification**  
UN Hazard Class: 6.1  
UN Pack Group: I

Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs. Marine pollutant.

## EMERGENCY RESPONSE

Transport Emergency Card: TEC (R)-61GT1-I

## SAFE STORAGE

Separated from food and feedstuffs. See Chemical Dangers. Well closed.

**IMPORTANT DATA****Physical State; Appearance**

YELLOW, OILY LIQUID, WITH PUNGENT ODOUR.

**Chemical dangers**

The substance decomposes on heating producing toxic and corrosive fumes including hydrogen sulfide and sulfur oxides. The substance decomposes on contact with water producing hydrogen chloride, sulfur dioxide and carbon dioxide. Reacts with bases, oxidants and reducing agents. Attacks many metals.

**Occupational exposure limits**

TLV: 0.1 ppm (ACGIH 2003).

MAK: IIb (not established but data is available) (DFG 2005).

**Routes of exposure**

The substance can be absorbed into the body by inhalation of its vapour, through the skin and by ingestion.

**Inhalation risk**

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

**Effects of short-term exposure**

The substance is severely irritating to the eyes, the skin and the respiratory tract. Inhalation of vapour at high concentrations may cause lung oedema (see Notes). Exposure above the OEL may result in death. The effects may be delayed. Medical observation is indicated.

**PHYSICAL PROPERTIES**

Boiling point: 147-148/C

Relative density (water = 1): 1.7

Solubility in water: none

Vapour pressure, kPa at 20/C: 0.4

Relative vapour density (air = 1): 6.4

**ENVIRONMENTAL DATA****NOTES**

Environmental effects from the substance have not been investigated adequately.

The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.

Immediate administration of an appropriate inhalation therapy by a doctor or a person authorized by him/her, should be considered.

The name Perchloromethyl mercaptan is also used for a compound with CAS number 75-70-7 (CCl<sub>3</sub>SH).

Card has been partially updated in January 2008: see Ingestion First Aid.

**ADDITIONAL INFORMATION****LEGAL NOTICE**

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible for the use which might be made of this information