

TETRACHLOROSILANE**0574**

March 2002

CAS No: 10026-04-7
 RTECS No: VW0525000
 UN No: 1818
 EC No: 014-002-00-4

Silicon tetrachloride
 Silicon chloride
 SiCl_4
 Molecular mass: 169.89

TYPES OF HAZARD/ EXPOSURE	ACUTE HAZARDS/SYMPTOMS	PREVENTION	FIRST AID/FIRE FIGHTING
FIRE	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.		NO water. In case of fire in the surroundings: powder, carbon dioxide.
EXPLOSION			In case of fire: cool drums, etc., by spraying with water but avoid contact of the substance with water.

EXPOSURE		STRICT HYGIENE!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Cough. Sore throat. Burning sensation. Laboured breathing. Shortness of breath. Symptoms may be delayed (see Notes).	Ventilation, local exhaust, or breathing protection.	Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer for medical attention. See Notes.
Skin	Redness. Pain. Blisters. Skin burns.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention. Wear protective gloves when administering first aid.
Eyes	Redness. Pain. Severe deep burns.	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.
Ingestion	Burning sensation. Abdominal pain. Shock or collapse.	Do not eat, drink, or smoke during work.	Rinse mouth. Do NOT induce vomiting. Give nothing to drink. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Ventilation. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in dry sand or inert absorbent and remove to safe place. (Extra personal protection: chemical protection suit including self-contained breathing apparatus.)	Xi Symbol R: 14-36/37/38 S: (2-)7/8-26 UN Hazard Class: 8 UN Pack Group: II Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-80S1818 NFPA Code: H3; F0; R2; W	Keep under inert gas. Separated from food and feedstuffs and incompatible materials. See Chemical Dangers. Dry. Well closed. Keep in a well-ventilated room.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS, CLEAR, FUMING LIQUID, WITH PUNGENT ODOUR.

Physical dangers

The vapour is heavier than air.

Chemical dangers

The substance decomposes on heating producing toxic and corrosive fumes including hydrogen chloride. Reacts violently with water, strong oxidants, strong acids, alcohols, bases ketones, aldehydes to produce hydrogen chloride (see ICSC 0163). Attacks many metals in presence of water.

Occupational exposure limits

TLV not established.

Routes of exposure

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

Inhalation risk

No indication can be given about the rate in which a harmful concentration in the air is reached on evaporation of this substance at 20°C.

Effects of short-term exposure

The substance and the vapour are corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of its vapour may cause lung oedema (see Notes). Inhalation of its vapour may cause asthma-like reactions. The effects may be delayed. Exposure may result in death. Medical observation is indicated.

PHYSICAL PROPERTIES

Boiling point: 57°C
Melting point: -68°C
Relative density (water = 1): 1.48
Solubility in water: reaction

Vapour pressure, kPa at 20°C: 26
Relative vapour density (air = 1): 5.9
Relative density of the vapour/air-mixture at 20°C (air = 1): 2.2

ENVIRONMENTAL DATA

NOTES

Reacts violently with fire extinguishing agents such as water. 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. Toxicological properties are inferred from those of Methylchlorosilane (ICSC 0297).

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