

TITANIUM TETRACHLORIDE

1230
April 2004

CAS No: 7550-45-0
RTECS No: XR1925000
UN No: 1838
EC No: 022-001-00-5

Titanium chloride
Tetrachlorotitanium
Titanic chloride
TiCl₄
Molecular mass: 189.7

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.		In case of fire in the surroundings: NO hydrous agents, NO water.
EXPLOSION			In case of fire: cool drums, etc., by spraying with water but avoid contact of the substance with water.

EXPOSURE		AVOID ALL CONTACT!	IN ALL CASES CONSULT A DOCTOR!
Inhalation	Sore throat. Cough. Burning sensation. Shortness of breath. Laboured breathing. 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.
Skin	Pain. Redness. Serious skin burns.	Protective gloves. Protective clothing.	Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.
Eyes	Pain. Redness. 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. Refer for medical attention.

SPILLAGE DISPOSAL	PACKAGING & LABELLING
Evacuate danger area! Consult an expert! Ventilation. Do NOT use water. First contain spillage before cleaning up. Collect leaking and spilled liquid in sealable acid resistant containers as far as possible. Absorb remaining liquid in dry sand or inert absorbent and remove to safe place. Personal protection: complete protective clothing including self-contained breathing apparatus. Do NOT let this chemical enter the environment.	C Symbol R: 14-34 S: (1/2-)7/8-26-36/37/39-45 UN Hazard Class: 8 UN Pack Group: II Do not transport with food and feedstuffs.

EMERGENCY RESPONSE	STORAGE
Transport Emergency Card: TEC (R)-80S1838 or 80GC1-II-X NFPA Code: H3; F0; R2; W	Separated from food and feedstuffs. Dry. Well closed.

IMPORTANT DATA

Physical State; Appearance

COLOURLESS TO LIGHT YELLOW LIQUID, WITH PUNGENT ODOUR.

Chemical dangers

The substance decomposes on heating producing toxic fumes including hydrogen chloride. Reacts violently with water to produce heat and corrosive fumes including hydrogen chloride (see ICSC0163). On contact with air it emits hydrochloric acid. Attacks many metals in presence of water.

Occupational exposure limits

TLV not established.
MAK 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 is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation of vapour may cause lung oedema (see Notes). The effects may be delayed. Medical observation is indicated.

Effects of long-term or repeated exposure

The substance may have effects on the lungs and respiratory tract, resulting in impaired functions.

PHYSICAL PROPERTIES

Boiling point: 136.4°C
Melting point: -24.1°C
Relative density (water = 1): 1.7

Solubility in water: reaction
Vapour pressure, kPa at 21.3°C: 1.3
Relative vapour density (air = 1): 6.5

ENVIRONMENTAL DATA

It is strongly advised that this substance does not enter the environment.

NOTES

Reacts violently with fire extinguishing agents such as water.
Depending on the degree of exposure, periodic medical examination is suggested.
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 decomposition products of this substance may cause effects on the environment.

ADDITIONAL INFORMATION

LEGAL NOTICE

Neither the EC nor the IPCS nor any person acting on behalf of the EC or the IPCS is responsible