

Material Safety Data Sheet



For use with Retrotec's Air Current Tester
Emergency Phone Number (24 hours) CHEMTREC (800-424-9300)
Outside US: 703-527-3887

SECTION 1 CHEMICAL IDENTIFICATION OF THE SUBSTANCE/PREPARATION

PRODUCT NAME: Titanium Tetrachloride
COMMON NAME OR SYNONYMS: Titanium Chloride, Titanium (IV) Chloride
SPEX CATALOG NUMBER: VIL004

Manufacturer/Supplier
SPEX CERTIPREP
203 Norcross Avenue
Metuchen, NJ 08840

SPEX CERTIPREP LTD
2 Dalston Gardens
Stanmore, Middlesex HA7 1BQ
England
Tel: (0) 20 8204 6656

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS MATERIAL	%	TLV UNITS	CAS #	EINECS	VOLUME
TiCl ₄	~100	0.5 mg/m ³	[7550-45-0]		10ml

SECTION 3 HAZARD IDENTIFICATION

Corrosive. Harmful by ingestion. May be fatal if ingested. Irritating to the eyes and skin.
Toxic by inhalation. Inhalation may cause lung damage. Water reactive.

SECTION 4 FIRST AID MEASURES

General: Remove contaminated clothing, wash thoroughly before reuse.
Eyes: Flush with water for at least 15 minutes occasionally lifting upper and lower eyelids.
Skin: Remove contaminated clothing and flush with water thoroughly. *Inhalation:* Move to fresh air. Get medical attention immediately. *Ingestion:* Get immediate medical attention immediately. If the patient is conscious, give large quantities of water. Do not induce vomiting.

SECTION 5 FIRE FIGHTING MEASURES

Flash Point: Not applicable.
Extinguishing media: Carbon Dioxide or Dry Chemical. Do not use water or foam
Special Hazards and Procedure: Contact with water may evolve flammable hydrogen gas.

Protective Equipment: Wear self-contained breathing apparatus and full protective suit.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Do not contact with water. Ventilate area. Wear protective equipment. Do not allow to enter drainage systems or water ways. Neutralize with soda ash, limestone etc. Wipe up and put into a sealed container for proper disposal. Wash spill site with water after material pick up is complete. Wear chemical resistant glasses, gloves and clothing.

SECTION 7 HANDLING & STORAGE

Ensure good ventilation/exhaustion at work place. Have an immediate availability of an eye wash in case of emergency. Store at room temperature. Keep the container tightly closed.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Wear goggles, protective apron and acid resistant gloves. Use under fume hood. In case of brief exposure, use MSHA/NIOSH approved respirator.

SECTION 9 PHYSICAL & CHEMICAL PROPERTIES

Form:	Liquid
Appearance & odor:	Transparent with acrid odor
% volatiles by vol. @ 21C:	100
Solubility:	Reacts violently with water
pH:	No information found
Melting point:	-24.1C
Boiling Point:	136C
Vapor Pressure(mm Hg):	10 @ 21C

SECTION 10 STABILITY & REACTIVITY

Stability: Stable under normal storage and use. Absorbs moisture from the air and evolves dense white fumes.
Incompatibilities: Potassium metal, hydrofluoric acid or hydrogen fluoride, water. Contact with water.
Reactivity: Reacts strongly water avoid moisture and incompatibles.
Hazardous Decomposition Products: Oxides of the contained metal and halogen, possibly also free or ionic halogen.
Hazardous Polymerization: Will not occur.

**SECTION 11
TOXICOLOGICAL INFORMATION**

May produce caustic effect on skin, mucous membranes and eyes. Swallowing will lead to a strong caustic effect on mouth and throat.

TOXICITY DATA:

Concentrated TiCl₄—RTECS#-XR1925000

Inhalation-rat LC50: 400 mg/m³

**SECTION 12
ECOLOGICAL INFORMATION**

Do not allow product to reach ground water, water bodies or sewage system.

**SECTION 13
DISPOSAL CONSIDERATIONS**

Contact local Hazardous or Chemical waste disposal agency for regulations.

**SECTION 14
TRANSPORT INFORMATION**

Air:

CLASS 8, 6.1

UN/ID # 1838

Packing Group: II

Proper Shipping Name: Titanium Tetrachloride

Ground:

CLASS 8, 6.1

UN/ID # 1838

Packing Group: II

Proper Shipping Name: Titanium Tetrachloride

**SECTION 15
REGULATORY INFORMATION**

USA:

SARA: Subject to the reporting requirements of Section 313 of SARA Title III and of 40 CFR 372.

Components of this solution are reported in EPA TSCA Inventory List.

WHMIS Classification (Canada): CLASS D

EC Guidelines:

C: Corrosive

Risk Phrases:

14 – Reacts violently with water

34 - Causes burns

Safety Phrases:

36/37/39 - Wear suitable protective clothing, gloves, and eye/face protection

26 - In case of contact with eyes, rinse immediately with plenty of water and seek

Medical attention

45 - In case of accident or if you feel unwell, seek medical advice immediately

7 – keep container tightly closed

8 – keep container dry

53 - Avoid exposure - obtain special instruction before use. Note: Restricted to Professional Users

**SECTION 16
OTHER INFORMATION**

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References:

The Sigma/Aldrich Library of Chemical Safety Data, Ed.I, (1985) Registry of Toxic Effects of Chemical Substances, 1981-82

Patty's Industrial Hygiene and Toxicology, 3

Revised Edition, Vol. 2A, 1981

Threshold Limit Values and Biological Exposure Indices for 1988-89, ACGIH

Dangerous properties of Industrial Materials by N. Irving Sax and Richard J. Lewis, Sr. (Ninth Edition)

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