TITANIUM (IV) CHLORIDE
CAS No 7550-45-0

MATERIAL SAFETY DATA SHEET
SDS/MSDS

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
Product name: Titanium (IV) Chloride
CAS-No.: 7550-45-0

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
Company: Central Drug House (P) Ltd
7/28 Varadaan House
New Delhi -110002
INDIA

Telephone: +91 11 49404040
Email: care@cdhfinechemical.com

1.4 Emergency telephone number
Emergency Phone #: +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Skin corrosion (Category 1B), H314
Carcinogenicity (Category 2), H351
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H335
Specific target organ toxicity - repeated exposure (Category 2), Liver, Blood, Central nervous system, H373

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

2.2 Label elements
Labelling according Regulation (EC) No 1272/2008
Pictogram

Signal word: Danger

Hazard statement(s)
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H373 May cause damage to organs (Liver, Blood, Central nervous system) through prolonged or repeated exposure.

Precautionary statement(s)
P261 Avoid breathing vapours.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

Supplemental Hazard information (EU)
EUH014 Reacts violently with water.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher. Reacts violently with water.
Lachrymator.

SECTION 3: Composition/information on ingredients

3.1 Mixtures
Synonyms : Titanium tetrachloride

Formula : TiCl₄
Molecular weight : 189.68 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008
Component Classification Concentration

Methylene chloride
CAS-No. 75-09-2 Skin Irrit. 2; Eye Irrit. 2; Carc. >= 80 - < 90 %
EC-No. 200-838-9 2; STOT SE 3; STOT RE 2;
Index-No. 602-004-00-3 H315, H319, H351, H336,
                  H335, H373, H373

Titanium tetrachloride
CAS-No. 7550-45-0 Acute Tox. 2; Skin Corr. 1B; >= 10 - < 20 %
EC-No. 231-444-5 STOT SE 1; STOT RE 1;
Index-No. 022-001-00-5 H330, H314, H370, H372

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

SECTION 4: First aid measures

4.1 Description of 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
Take off contaminated clothing and shoes immediately. 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
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
4.2 **Most important symptoms and effects, both acute and delayed**
The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 **Indication of any immediate medical attention and special treatment needed**
No data available

SECTION 5: Firefighting measures

5.1 **Extinguishing media**
- Suitable extinguishing media
  - Dry powder

5.2 **Special hazards arising from the substance or mixture**
- Carbon oxides, Hydrogen chloride gas, Titanium/titanium oxides

5.3 **Advice for firefighters**
- Wear self-contained breathing apparatus for firefighting if necessary.

5.4 **Further information**
No data available

SECTION 6: Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures**
- Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.
- Evacuate personnel to safe areas.
- For personal protection see section 8.

6.2 **Environmental precautions**
- Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 **Methods and materials for containment and cleaning up**
- Soak up with inert absorbent material and dispose of as hazardous waste. Do not flush with water. Keep in suitable, closed containers for disposal.

6.4 **Reference to other sections**
- For disposal see section 13.

SECTION 7: Handling and storage

7.1 **Precautions for safe handling**
- Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
- For precautions see section 2.2.

7.2 **Conditions for safe storage, including any incompatibilities**
- 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.
- Never allow product to get in contact with water during storage.
  - Handle and store under inert gas.
  - Storage class (TRGS 510): Non-combustible, acute toxic Cat. 1 and 2 / very toxic hazardous materials

7.3 **Specific end use(s)**
- Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 **Control parameters**

8.2 **Exposure controls**
- **Appropriate engineering controls**
  - Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.
Personal protective equipment

Eye/face protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection
Complete suit protecting against chemicals, Flame retardant protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineer 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).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance Form: liquid
b) Odour No data available
c) Odour Threshold No data available
d) pH No data available
e) Melting point/freezing point No data available
f) Initial boiling point and boiling range No data available
g) Flash point No data available
h) Evaporation rate No data available
i) Flammability (solid, gas) No data available
j) Upper/lower flammability or explosive limits No data available
k) Vapour pressure No data available
l) Vapour density No data available
m) Relative density 1.365 g/cm³
n) Water solubility No data available
o) Partition coefficient: n-octanol/water No data available
p) Auto-ignition temperature No data available
q) Decomposition temperature No data available
r) Viscosity No data available
s) Explosive properties No data available
t) Oxidizing properties No data available

9.2 Other safety information
No data available

SECTION 10: Stability and reactivity

10.1 Reactivity
No data available

10.2 Chemical stability
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions
Reacts violently with water.

10.4 Conditions to avoid
Do not allow water to enter container because of violent reaction.
Exposure to moisture

10.5 Incompatible materials
Strong oxidizing agents

10.6 Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas, Titanium/titanium oxides
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity
No data available

Skin corrosion/irritation
No data available

Serious eye damage/eye irritation
No data available

Respiratory or skin sensitisation
No data available

Germ cell mutagenicity
No data available

Carcinogenicity
IARC: 2A - Group 2A: Probably carcinogenic to humans (Methylene chloride)

Reproductive toxicity
No data available

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available
spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath,
Headache, Nausea, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12: Ecological information

12.1 Toxicity
No data available

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 Results of PBT and vPvB assessment
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects
No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product
Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 3289  IMDG: 3289  IATA: 3289

14.2 UN proper shipping name
ADR/RID: TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (Titanium tetrachloride, Methylene chloride)
IMDG: TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S. (Titanium tetrachloride, Methylene chloride)
IATA: Toxic liquid, corrosive, inorganic, n.o.s. (Titanium tetrachloride, Methylene chloride)

14.3 Transport hazard class(es)

14.4 Packaging group
ADR/RID: II  IMDG: II  IATA: II

14.5 Environmental hazards
ADR/RID: no  IMDG Marine pollutant: no  IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.
EUH014 Reacts violently with water.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.

Further information
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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.