



LTS Research Laboratories, Inc.
Safety Data Sheet
Titanium (IV) Chloride

1. Product and Company Identification

Trade Name: Titanium (IV) Chloride
Chemical Formula: $TiCl_4$
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.
Street: 37 Ramland Road
City: Orangeburg
State: New York
Zip Code: 10962
Country: USA
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H314 Causes severe skin burns and eye damage

Precautionary Statements: P260: Do not breathe dust/fume/gas/mist/vapours/spray
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P405: Store locked up
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

Health: 3
Flammability: 0
Physical: 2

3. Composition

Chemical Family: Halide
Additional Names: Titanium tetrachloride

Titanium (IV) chloride ($TiCl_4$):
Percentage: 100 wt%
CAS #: 7550-45-0
EC #: 231-441-9

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist. Remove any clothing soiled by the product.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult.
Ingestion:	Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

5. Firefighting Measures

Flammability:	Non-flammable
Extinguishing Media:	Do not use water for fires – use CO ₂ , sand, extinguishing powder. Reacts violently with water.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent. Dispose of contaminated material as waste according to section 13. Ensure adequate ventilation. Do not flush with water or aqueous cleansing agents.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions:	Wash thoroughly after handling. Handle under dry, protective gas. Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace.
Storage Conditions:	Store in the dark. Store away from water/moisture. Store away from strong bases. Store away from oxidizing agents. Store under dry inert gas. This product is moisture sensitive. Protect from humidity and water. Keep container tightly sealed. Store in cool, dry conditions in well-sealed containers. Protect from exposure to light.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:	N/A
Threshold Limit Value:	N/A
Special Equipment:	None
Respiratory Protection:	Dust Respirator
Protective Gloves:	Rubber gloves
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Colorless to yellow
Form:	Liquid
Odor:	N/A
Water Solubility:	Highly reactive
Boiling Point:	136-137 °C
Melting Point:	-25 °C
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	1.726 g/cc
Molecular weight:	189.69 g/mol

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Bases, Oxidizing agents, Water/moisture/Light
Incompatible Conditions:	Bases, Oxidizing agents, Water/moisture/Light
Hazardous Decomposition Products:	Hydrogen chloride (HCl), metal oxide fume

11. Toxicological Information

Potential Health Effects:	
Eyes:	Causes serious eye damage.
Skin:	Causes severe skin burns.
Ingestion:	Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	?? mg/kg for rat by mouth
Carcinogen:	N/A

12. Ecological Information

Aquatic Toxicity:	Low
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	Do not allow material to be released to the environment without proper governmental permits. Do not allow undiluted product or large quantities to reach ground water, water course, or sewage system. Avoid transfer into the environment.

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous:

Hazardous for transportation.



Hazard Class:
Secondary Hazard Class:
Packing Group:
UN Number:
Proper Shipping Name:

6.1 Toxic substances
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PG I
UN1838
Titanium tetrachloride

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	Yes

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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