SAFETY DATA SHEET

SECTION 1. IDENTIFICATION

Product Identifier: (3N) 99.9% Titanium(III) Chloride

Product Code: TI3-CL-03

CAS Number: 7705-07-9

Relevant identified uses of the substance: Scientific research and development

Supplier details:

American Elements
10884 Weyburn Ave.
Los Angeles, CA 90024
Tel: +1 310-208-0551
Fax: +1 310-208-0351
Emergency telephone number:
+1 800-424-9300

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture
GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Corrosive to metals (Category 1), H290
Skin corrosion (Category 1B), H314
Serious eye damage (Category 1), H318
GHS Label elements, including precautionary statements
Pictogram

Signal word Danger
Hazard statement(s)
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
Precautionary statement(s)
P234 Keep only in original container.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. 
P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. 
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. 
P363 Wash contaminated clothing before reuse. 
P390 Absorb spillage to prevent material damage. 
P405 Store locked up. 
P406 Store in corrosive resistant container with a resistant inner liner. 
P501 Dispose of contents/ container to an approved waste disposal plant. 
Hazards not otherwise classified (HNOC) or not covered by GHS - none

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Titanium trichloride 
Formula : Cl3Ti 
Molecular weight : 154.23 g/mol

SECTION 4. FIRST AID MEASURES

Description of first aid measures 
General advice 
Consult a physician. Show this safety data sheet to the doctor in attendance.Move out of dangerous area. 
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. Continue rinsing eyes during transport to hospital. 
If swallowed 
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. 
Most important symptoms and effects, both acute and delayed 
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11 
Indication of any immediate medical attention and special treatment needed 
No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media 
Suitable extinguishing media 
Dry powder Dry sand 
Unsuitable extinguishing media
Do NOT use water jet.
Special hazards arising from the substance or mixture
No data available
Advice for firefighters
Wear self-contained breathing apparatus for firefighting if necessary.
Further information
No data available

SECTION 6. ACCIDENTAL RELEASE MEASURES

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.
Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
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.
Reference to other sections
For disposal see section 13.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.
For precautions see section 2.
Conditions for safe storage, including any incompatibilities
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.
Storage class (TRGS 510): 8B: Non-combustible, corrosive hazardous materials
Specific end use(s)
Apart from the uses mentioned in section 1 no other specific uses are stipulated

SECTION 8. EXPOSURE CONTROLS/PERSOANL PROTECTION

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 a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls.
If the respirator is the sole means of 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

Information on basic physical and chemical properties
Appearance Form: liquid
Odour No data available
Odour Threshold No data available
pH No data available
Melting point/freezing point
No data available
Initial boiling point and boiling range
No data available
Flash point Not applicable
Evaporation rate No data available
Flammability (solid, gas) No data available
Upper/lower flammability or explosive limits
No data available
Vapour pressure No data available
Vapour density No data available
Relative density No data available
Water solubility No data available
Partition coefficient: noctanol/water
No data available
Auto-ignition temperature
The substance or mixture is not classified as pyrophoric.
Decomposition temperature
No data available
Viscosity No data available
Explosive properties No data available
Oxidizing properties No data available
Other safety information
No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity
No data available
Chemical stability
Stable under recommended storage conditions.
Possibility of hazardous reactions
Reacts violently with water.
Conditions to avoid
Exposure to moisture
Incompatible materials
Strong bases, Strong oxidizing agents
Hazardous decomposition products
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Acute toxicity
No data available
Inhalation: No data available
Dermal: No data available
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: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA’s list of regulated carcinogens.
Reproductive toxicity
No data available
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
burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema,
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
SECTION 12. ECOLOGICAL INFORMATION

Toxicity
No data available
Persistence and degradability
No data available
Bioaccumulative potential
No data available
Mobility in soil
No data available
Results of PBT and vPvB assessment
PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Contaminated packaging
Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

DOT (US)
UN number: 3264 Class: 8 Packing group: II
Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid, Titanium trichloride)
Reportable Quantity (RQ):
Poison Inhalation Hazard: No
IMDG
UN number: 3264 Class: 8 Packing group: II EMS-No: F-A, S-B
Proper shipping name: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid, Titanium trichloride)
IATA
UN number: 3264 Class: 8 Packing group: II
Proper shipping name: Corrosive liquid, acidic, inorganic, n.o.s. (Hydrochloric acid, Titanium trichloride)

SECTION 15. REGULATORY INFORMATION

SARA 302 Components
No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components
This material does not contain any chemical components with known CAS numbers that exceed the
threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
SARA 311/312 Hazards
Acute Health Hazard
Massachusetts Right To Know Components
Hydrochloric acid
CAS-No.
7647-01-0
Revision Date
2013-02-08
Pennsylvania Right To Know Components
Water
CAS-No.
7732-18-5
Revision Date
Titanium trichloride 7705-07-9 2007-03-01
Hydrochloric acid 7647-01-0 2013-02-08
Water
CAS-No.
7732-18-5
Revision Date
Titanium trichloride 7705-07-9 2007-03-01
Hydrochloric acid 7647-01-0 2013-02-08
New Jersey Right To Know Components
Water
CAS-No.
7732-18-5
Revision Date
Titanium trichloride 7705-07-9 2007-03-01
Hydrochloric acid 7647-01-0 2013-02-08
California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth
defects, or any other reproductive harm.

16. OTHER INFORMATION

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). 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. American Elements shall not be held liable for any damage resulting from
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