

# SAFETY DATA SHEET

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## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Titanium(II) Chloride

**Product Code:** TI2-CL-04

**CAS Number:** 10049-06-6

**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)

Pyrophoric liquids

(Category 1), H250

Skin corrosion(Category 1B), H314

Serious eye damage(Category 1), H318

GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H250 Catches fire spontaneously if exposed to air.

H314 Causes severe skin burns and eye damage.

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. -No smoking.

P222 Do not allow contact with air.

P231 Handle under inert gas.  
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.  
P302 + P334 IF ON SKIN: Immerse in cool water/ wrap in wet bandages.  
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.  
P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
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 or doctor/ physician.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P363 Wash contaminated clothing before reuse.  
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.  
P405 Store locked up.  
P422 Store contents under inert gas.  
P501 Dispose of contents/ container to an approved waste disposal plant.  
Hazards not otherwise classified (HNOC) or not covered by GHS  
Reacts violently with water.

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## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances  
Formula:  $\text{Cl}_2\text{Ti}$   
Molecular weight: 118.77 g/mol  
CAS-No.: 10049-06-6  
EC-No.: 233-164-9  
Hazardous components  
Component  
Classification  
Concentration  
Titanium dichloride  
Pyr. Liq. 1; Skin Corr. 1B; Eye Dam. 1; H250, H314  
 $\leq 100\%$

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## 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. 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

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## **SECTION 5. FIREFIGHTING MEASURES**

Extinguishing media

Suitable extinguishing media

Dry powder

Special hazards arising from the substance or mixture

Hydrogen chloride gas, Titanium/titanium oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

No data available

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing Vapors, 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

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water.

Reference to other sections

For disposal see section 13.

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## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling

Avoid inhalation of Vapor or mist.

Keep away from sources of ignition - No smoking.

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.

Air sensitive.

Reacts violently with water.

Handle and store under inert gas.

Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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.

Protective gloves against thermal risks

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril®

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril®

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic 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 multi-purpose 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.

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## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Form: powder

Color: black

Odor: No data available

Odor 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: N/A

Evaporation rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor pressure: No data available

Vapor density: No data available

Relative density: No data available

Water solubility: No data available

Partition coefficient: n-octanol/water: No data available

Auto-ignition temperature: The substance or mixture is pyrophoric with the category 1.

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

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## 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 oxidizing agents Water, Strong oxidizing agents

Hazardous decomposition products

Other decomposition products-No data available

In the event of fire: see section 5

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## 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.  
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.  
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 identified as a carcinogen or potential carcinogen by OSHA.  
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  
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., 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

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## **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

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

Waste treatment methods  
Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.  
Offer surplus and non-recyclable solutions to a licensed disposal company.  
Contact a licensed professional waste disposal service to dispose of this material.  
Contaminated packaging  
Dispose of as unused product.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT (US)  
UN number: 3200  
Class: 4.2  
Packing group: I  
Proper shipping name: Pyrophoric solid, inorganic, n.o.s. (Titanium dichloride)  
Poison Inhalation Hazard: No  
IMDG  
UN number: 3200  
Class: 4.2  
Packing group: I  
EMS-No: F-G, S-M  
Proper shipping name: PYROPHORIC SOLID, INORGANIC, N.O.S. (Titanium dichloride)  
IATA  
UN number: 3200  
Class: 4.2  
Proper shipping name: Pyrophoric solid, inorganic, n.o.s.(Titanium dichloride)  
IATA Passenger: Not permitted for transport  
IATA Cargo: Not permitted for transport

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## **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  
Reactivity Hazard, Acute Health Hazard  
Massachusetts Right To Know Components  
No components are subject to the Massachusetts Right to Know Act.  
Pennsylvania Right To Know Components  
Titanium dichloride  
CAS-No. 10049-06-6  
Revision Date  
New Jersey Right To Know Components  
Titanium dichloride  
CAS-No. 10049-06-6  
Revision Date  
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.

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## 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 handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.