MATERIAL SAFETY DATA SHEET

24 HR. EMERGENCY PHONE # CHEM-TREC 1-800-424-9300

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SECTION 1 Product Identification

CHEMICAL NAME: Titanium hydride
CAS #: 7704-98-5
FORMULA: TiH2
SYNONYM: Titanium dihydride

SECTION 2 Composition and Information on Ingredients

INGREDIENT:	CAS #	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	7704-98-5	100	no data	no data

SECTION 3 Hazards Identification

EMERGENCY OVERVIEW: Inhalation of fine dust may cause irritation to respiratory system, skin and eyes.
PRIMARY ROUTES OF EXPOSURE: Ingestion, inhalation, skin and eyes.
EYE CONTACT: May cause moderate irritation to the eyes
SKIN CONTACT: May cause mild irritation to the skin
INHALATION: Inhalation of dust may cause irritating to nose, mucous membranes, and respiratory tract.
INGESTION: Reacts slowly with body fluids to produce explosive hydrogen gas.
CHRONIC HEALTH EFFECTS: (For titanium metal) Long term exposure to dust or fume may lead to blood disorders, lymphoma, Hodgkin's disease. Effects on embryo or fetus, fetotoxicity.
ACUTE HEALTH EFFECTS: Dust may be irritating to skin, eyes and respiratory tract. Ingestion can lead to gastrointestinal effects, vomiting and nausea.

SECTION 4 First Aid Measures

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.
SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.
INHALATION: Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.
INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 Firefighting Measures

FLASH POINT: not applicable
AUTO IGNITION TEMPERATURE: 225°C
EXPLOSION LIMITS: no data
EXTINGUISHING MEDIUM: Class D metal fire agent, limestone, or sand. NOT WATER.
SPECIAL FIREFIGHTING PROCEDURES: If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.
HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: If involved in a fire, burning hydride may produce irritating fumes.
UNUSUAL FIRE OR EXPLOSION HAZARDS: Flammable solid. Dust may form explosive mixtures with air. Evolves flammable hydrogen with water.

SECTION 6 Accidental Release Measures

SPILL AND LEAD PROCEDURES: Remove sources of ignition. Do not raise dust. Mix with vermiculite, sodium carbonate or other suitable dry non combustible adsorbent and sweep up.

SECTION 7 Handling and Storage

HANDLING AND STORAGE: Store material in a tightly sealed container in argon in a cool dry place. Handle in argon.

SECTION 8 Exposure Controls and Personal Protection

EYE PROTECTION: Always wear approved safety glasses w/side shields, or safety goggles, face shield when handling a chemicals substance in the laboratory.
SKIN PROTECTION: Chemical-resistant.
VENTILATION: If possible, handle the material in an efficient fume hood.
RESPIRATOR: If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

SECTION 9 Physical and Chemical Properties

COLOR AND FORM: -200 mesh gray powder
MOLECULAR WEIGHT: 49.92
MELTING POINT (DEG. C.): 225°C
BOILING POINT: no data
VAPOR PRESSURE: no data
SPECIFIC GRAVITY: 3.9
SOLUBILITY IN WATER: reacts slowly with water

SECTION 10 Stability and Reactivity

STABILITY: air and moisture stable

HAZARDOUS POLYMERIZATION: no hazardous polymerization
CONDITIONS TO AVOID: Do not allow powder to contact water or form a cloud of dust in air. Practice good housekeeping.
INCOMPATIBILITY: Strong oxidizing agents, alcohols, water, carboxylic and mineral acids, peroxides, chlorinated solvents, halogens
DECOMPOSITION PRODUCTS: Titania, hydrogen and water

SECTION 11 Toxicological Information

RTECS DATA: Inhalation (rat); TCLo:8mg/m3/26W-1.
MUTAGENIC EFFECTS: no data
TETRATOGENIC EFFECTS: no data
CARCINOGENIC EFFECTS: no data
To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 Ecological Information

ECOLOGICAL INFORMATION: No information available

SECTION 13 Disposal Considerations

DISPOSAL: Dispose of in according to local state and federal regulations.

SECTION 14 Transportation Information

Titanium hydride, Class 4.1, UN 1871, PG II

SECTION 15 Regulatory Information

TSCA: Listed in the TSCA inventory
SARA (TITLE 313): Title compound not listed

SECTION 16 Other Information

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, ProChem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.
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