

CHROMIUM CHLORIDE

Material Safety Data Sheet

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Effective Date: 08-30-85

PRODUCT IDENTIFICATION:

Synonyms: Chromium (III) chloride, hexahydrate (1:3:6); Chromic chloride hexahydrate; Chromium trichloride hexahydrate

Formula CAS No.: 10060-12-5 (Hydrated)

Molecular Weight: 266.48

TSCA CAS No.: 10025-73-7 (Anhydrous)

Hazardous Ingredients: Chromic chloride

Chemical Formula: $\text{CrCl}_3 \cdot 6\text{H}_2\text{O}$

PRECAUTIONARY MEASURES

DANGER! CAUSES BURNS. HARMFUL IF SWALLOWED OR INHALED.

Do not get in eyes, on skin, or on clothing.

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

EMERGENCY FIRST AID

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. In all cases call a physician.

SEE SECTION 5.

Physical Data

SECTION 1

Appearance: Greenish-black or violet crystals.

Odor: Odorless.

Solubility: Soluble in water.

Boiling Point: Dissociates above 1300 C (2372 F) Vapor Density (Air=1): No information found.

Melting Point: 1152 C (2106 F) Vapor Pressure (mm Hg): No information found.

Specific Gravity: 1.85 Evaporation Rate: No information found.

Fire and Explosion

SECTION 2

Information-----
Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Reactivity Data

SECTION 3

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Emits toxic fumes of chlorine when heated to decomposition.

Hazardous Polymerization: This substance does not polymerize.

Incompatibilities: Lithium and nitrogen.

Leak/Spill Disposal Information

SECTION 4

Ventilate area of leak or spill. Clean-up personnel require protective clothing and respiratory protection from dust. Spills: Pick up and place in a suitable container for reclamation or disposal in a method that does not generate dust. Disposal: Whatever cannot be saved for reclamation may be disposed in a RCRA approved hazardous waste facility.

Ensure compliance with local, state and federal regulations.

Health Hazard Information

SECTION 5

A. Exposure/Health Effects

Inhalation: May cause coughing, headache, dyspnea, and fever. May also cause tracheobronchial irritation and pulmonary edema.

Ingestion: Large oral doses may cause dizziness, intense thirst, oliguria or anuria, abdominal pain, vomiting, and shock. Death may occur from renal failure. Chromium compounds in the 3+ state have a lower toxicity than those in the 6+ state.

Skin Contact: Causes skin ulcerations.

Eye Contact: Causes eye damage.

Chronic Exposure: Prolonged or repeated skin exposure may cause dermatitis. Prolonged or repeated inhalation of dust may cause bleeding, ulceration, and perforation of the nasal septum, conjunctivitis, lacrimation, and acute hepatitis with jaundice.

Aggravation of Pre-existing Conditions: Persons with pre-existing kidney or skin disorders may be more susceptible to the effects of this material.

B. FIRST AID

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion: If swallowed, induce vomiting immediately by giving two

glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call physician immediately.

Skin Exposure: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician.

Eye Exposure: Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY (RTECS, 1986)

Oral rat LD50: 1790 mg/kg Mutation data references cited. Reproductive effects data cited. Carcinogenic determination: Animal/inadequate data (IARC 23, 302, 80) Trivalent chromium compounds: Inadequate evidence for carcinogenicity in short term testing (IARC Supplement 4, 1982) Hexavalent chromium compounds are listed by National Toxicology Program (NTP) and by the International Agency for Research on Cancer (IARC).

Occupational Control Measures SECTION 6

Airborne Exposure Limits: -OSHA Permissible Exposure Limit (PEL): 0.5 mg (Cr)/m3 (TWA) -ACGIH Threshold Limit Value (TLV): 0.5 mg (Cr)/m3 (TWA)

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

Personal Respirators (NIOSH Approved) If the TLV is exceeded, a dust/mist respirator with chemical goggles may be worn, in general, up to ten times the TLV. Consult respirator supplier for limitations. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

Storage and Special Information SECTION 7

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage.

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