

Material Safety Data Sheet

Chromium (III) Chloride Hexahydrate

ACC# 04960

Section 1 - Chemical Product and Company Identification

MSDS Name: Chromium (III) Chloride Hexahydrate**Catalog Numbers:** S79962, C325 500, C325-500, C325500, S76784**Synonyms:** Chromic chloride hexahydrate; Chromium chloride, hexahydrate; Chromium sesquichloride; Chromium trichloride hexahydrate; Hexaaquachromium chloride; Hexaaquachromium (III) chloride**Company Identification:**

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100**Emergency Number:** 201-796-7100**For CHEMTREC assistance, call:** 800-424-9300**For International CHEMTREC assistance, call:** 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
10060-12-5	Chromium (III) chloride hexahydrate	ca.100	unlisted

Hazard Symbols: XN**Risk Phrases:** 22 36/37/38

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: violet crystalline powder. **Warning!** May cause allergic skin reaction. May cause digestive tract irritation. Causes respiratory tract irritation. Causes eye and skin irritation and possible burns. May cause fetal effects based upon animal studies. May be harmful if swallowed. May cause liver and kidney damage.

Target Organs: Kidneys, liver.**Potential Health Effects****Eye:** May result in corneal injury. Causes eye irritation and possible burns. May cause chemical conjunctivitis.**Skin:** May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Causes skin irritation and possible burns.**Ingestion:** May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May be harmful if swallowed.**Inhalation:** Causes respiratory tract irritation. Can produce delayed pulmonary edema.**Chronic:** Prolonged or repeated skin contact may cause dermatitis. May cause liver and kidney damage. Animal studies have reported that fetal effects/abnormalities may occur when maternal

toxicity is seen. Effects may be delayed. Laboratory experiments have resulted in mutagenic effects.

Section 4 - First Aid Measures

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire. Use water spray, dry chemical, carbon dioxide, or appropriate foam.

Flash Point: Not available.

Autoignition Temperature: Not available.

Explosion Limits, Lower: Not available.

Upper: Not available.

NFPA Rating: (estimated) Health: 2; Flammability: 0; Instability: 0

Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation.

Section 7 - Handling and Storage

Handling: Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Minimize dust generation and accumulation. Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.

Storage: Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Chromium (III) chloride hexahydrate	none listed	none listed	none listed

OSHA Vacated PELs: Chromium (III) chloride hexahydrate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

Section 9 - Physical and Chemical Properties

Physical State: Crystalline powder

Appearance: violet

Odor: none reported

pH: 2.4 (0.2M solution)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Evaporation Rate: Not applicable.

Viscosity: Not applicable.

Boiling Point: Not available.

Freezing/Melting Point: 83 deg C

Decomposition Temperature: Not available.

Solubility: 58.5% @ 25°C

Specific Gravity/Density: 1.760

Molecular Formula: CrCl₃.6H₂O

Molecular Weight: 266.4354

Section 10 - Stability and Reactivity

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, dust generation, moisture, excess heat, strong oxidants.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Hydrogen chloride, irritating and toxic fumes and gases.

Hazardous Polymerization: Has not been reported.

Section 11 - Toxicological Information

RTECS#:**CAS#** 10060-12-5: GB5450000**LD50/LC50:**

CAS# 10060-12-5:

Oral, rat: LD50 = 1790 mg/kg;

Carcinogenicity:

CAS# 10060-12-5:

IARC: IARC Group 3 - not classifiable (listed as Chromium).**Epidemiology:** No information available.**Teratogenicity:** Intraperitoneal, mouse: TDLo = 134 mg/kg (female 8 day(s) after conception)
Effects on Embryo or Fetus - cytological changes (including somatic cell genetic material) and
Specific Developmental Abnormalities - Central Nervous System.**Reproductive Effects:** No information available.**Neurotoxicity:** No information available.**Mutagenicity:** Mutation Test Systems - not otherwise specified: Human Cells - not otherwise
specified = 500 mg/L.; Cytogenetic Analysis: Human, Lymphocyte = 2500 ug/L.; Cytogenetic
Analysis: Human, Leukocyte = 400 mg/L.**Other Studies:** No data available.

Section 12 - Ecological Information

No information available.

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.**RCRA U-Series:** None listed.

Section 14 - Transport Information

	US DOT	IATA	RID/ADR	IMO	Canada TDG
Shipping Name:	No information available.				No information available.
Hazard Class:					
UN Number:					
Packing Group:					

Section 15 - Regulatory Information

US FEDERAL

TSCA

CAS# 10060-12-5 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the inventory (40CFR720.3(u)(2)).

Health & Safety Reporting List

None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

SARA

CERCLA Hazardous Substances and corresponding RQs

None of the chemicals in this material have an RQ.

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 10060-12-5: acute, chronic.

Section 313

This material contains Chromium (III) chloride hexahydrate (listed as Chromium), 100%, (CAS# 10060-12-5) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 10060-12-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN

Risk Phrases:

R 22 Harmful if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.

Safety Phrases:

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 28 After contact with skin, wash immediately with...

WGK (Water Danger/Protection)

CAS# 10060-12-5: No information available.

Canada - DSL/NDSL

None of the chemicals in this product are listed on the DSL or NDSL list. **Canada - WHMIS**
This product has a WHMIS classification of D2A.

Canadian Ingredient Disclosure List

CAS# 10060-12-5 (listed as Chromium) is listed on the Canadian Ingredient Disclosure List.

Exposure Limits

CAS# 10060-12-5: OEL-RUSSIA:STEL 0.01 mg/m³ OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

Section 16 - Additional Information
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MSDS Creation Date: 6/28/1999

Revision #2 Date: 3/18/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.