

MATERIAL SAFETY DATA SHEET

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Emergency Phone Numbers:  
CHEMTREC: 800/424-9300  
POISON CENTER: 800/562-8236

Date of Last Revision: 06/25/97

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SECTION 1  
PRODUCT IDENTIFICATION

CHEMICAL NAME(S) AND SYNONYM(S): Chromi um                      FORMULA: Cr

CHEMICAL FAMILY: Element    CHEM ABSTRACT NO. : 7440-47-3

TSCA: Product is listed.    CAL. MOLECULAR WEIGHT: 51.99

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SECTION 2  
INGREDIENTS/SUMMARY OF HAZARDS

<u>INGREDIENT(S)</u>	<u>CAS #</u>	<u>%</u>	<u>TLV</u>
<u>OSHA PEL</u> Chromi um	7440-47-3	100.0	0.5 mg/m3 1 mg/m3

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SECTION 3  
PHYSICAL DATA

BOILING POINT (°C) :	2672	DENSITY (gm/cc):	7.20
VAPOR PRESSURE:	1	% VOLATILE BY VOLUME:	N/D
REACTION WITH WATER:	None	EVAPORATION RATE:	N/D
SOLUBILITY WITH WATER:	Insoluble	MELTING POINT (°C):	1857

APPEARANCE/ODOR: Steel-gray, lustrous metal, with cubic structure. No Odor

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SECTION 4

FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT/METHOD: N/A

AUTOIGNITION TEMP (°C): 400 C for powder

FLAMMABILITY: Flammable solid in powder form

EXTINGUISHING MEDIA: ( ) Water ( ) Foam (x) Class D Extinguisher  
( ) Dry Chemical ( ) CO(2)  
(x) Other (specify): Suitable extinguishing

agent for metal fires.

SPECIAL FIRE FIGHTING PROCEDURES: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Ignites and is potentially explosive in atmospheres of carbon dioxide. Chromium reacts violently or explosively when heated with ammonium nitrate and bromine pentafluoride. Chromium has an incandescent reaction with nitrogen oxide or sulfur dioxide. Powders prepared by evaporation of mercury from chromium amalgam may be pyrophoric.

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SECTION 5

HEALTH HAZARD DATA

TOXICITY DATA: No toxicological data available, but toxicity of the metal compounds are believed to be low. Confirmed human carcinogen with experimental tumorigenic data. Human poison by ingestion with gastrointestinal effects. (Sax, Dangerous Properties of Industrial Materials).

ROUTE(S) OF ENTRY: (x) Inhalation ( ) Eyes ( ) Skin ( ) Ingestion

EFFECTS OF OVEREXPOSURE (acute and chronic)

Confirmed human carcinogen with experimental tumorigenic data. Human poison by ingestion with gastrointestinal effects. (Sax, Dangerous Properties of Industrial Materials).

INHALATION: Acute: May cause a red, dry throat.  
Chronic: May cause histologic fibrosis of lungs, nasal and /or lung cancer.

DERMAL/EYE CONTACT: Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

INGESTION: Acute: May cause gastrointestinal disorders.  
Chronic: No chronic health effects recorded.

TARGET ORGANS: May affect the respiratory system.

OTHER (specify): Chromic acids and chromate salts constitute industrial hazards. Certain relatively insoluble Chromium (VI) compounds are carcinogenic.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Pre-existing respiratory disorders, pulmonary functions and asthma.

CARCINOGENICITY: NTP: Yes IARC MONOGRAPHS: Yes OSHA REGULATED: Yes

EMERGENCY AND FIRST AID PROCEDURES:

INGESTION: Give 1-2 glasses of milk or water and induce vomiting; seek medical attention immediately. Never induce vomiting or give anything by mouth to an unconscious person.

INHALATION: Remove victim to fresh air; keep warm and quiet; administer oxygen if breathing is difficult and seek medical attention.

SKIN: Remove contaminated clothing; brush material off skin; wash affected area with mild soap and water. Seek medical attention if irritation persists.

EYES: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 mins. Seek medical attention if irritation persists.

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SECTION 6  
REACTIVITY DATA

STABILITY: (x) Stable ( ) Unstable  
CONDITIONS CONTRIBUTING TO UNSTABILITY: None

INCOMPATIBILITY (materials to avoid): NONE  
( ) Water ( ) Combustible materials ( ) Strong bases  
( ) Reducing Agents (x) Strong oxidizing materials (x) Strong acids  
( ) Other (specify):

**HAZARDOUS DECOMPOSITION PRODUCTS:** None Recorded

**HAZARDOUS POLYMERIZATION:** ( ) May occur (x) Will not occur

**CONDITIONS TO AVOID:** Grinding, crushing, and melting may produce dust and fumes which may require control.

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**SECTION 7**

**SPILL OR LEAK PROCEDURES**

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Wear appropriate respiratory and protective equipment specified in section VIII-control measures. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a container for proper disposal. Take care not to raise dust.

Use non-sparking tools.

**WASTE DISPOSAL METHOD:** In accordance with regulations.

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**SECTION 8**

**SPECIAL PROTECTIVE INFORMATION**

**RESPIRATORY PROTECTION:** (Specify type) NIOSH/MSHA approved respirator

**VENTILATION:** LOCAL EXHAUST: Recommended, if dusty

**MECHANICAL (General):** Good ventilation

**SPECIAL:** None

**PROTECTIVE GLOVES:** Impervious gloves

**EYE PROTECTION:** ( ) Safety Glasses with Side Shields

(x) Chemical Workers Dust-Proof Goggles (under dusting conditions)

( ) Gas-Tight Goggles or Equivalent

( ) Other (specify):

**OTHER PROTECTIVE EQUIPMENT:** Maintain sink, safety shower and eyewash fountain in the work area. Wear full protective clothing at all times.

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**SECTION 9**

**SPECIAL PRECAUTIONS AND TRANSPORTATION REGULATIONS**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** Store in tightly closed containers in a cool, dry place. Wash hands and face thoroughly.

**TRANSPORTATION REQUIREMENTS:** No specific requirements.

**DOT CLASS:** Not hazardous

**UN NUMBER:**

**IMCO CLASS:**

**OTHER:**

**ND = No Data Found      NA = Not Applicable**

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**MATERIAL SAFETY DATA SHEET**

**Employers should use this information only as a supplement to other information gathered by them and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.**