



GARDENA, CA  
NEW BRUNSWICK, NJ

# Material Safety Data Sheet

NFPA	HMS	Personal Protective Equipment						
	<table border="1"> <tr> <td></td> <td style="text-align: center;">2</td> </tr> <tr> <td>Fire Hazard</td> <td style="text-align: center;">0</td> </tr> <tr> <td>Reactivity</td> <td style="text-align: center;">0</td> </tr> </table>		2	Fire Hazard	0	Reactivity	0	 See Section 15.
	2							
Fire Hazard	0							
Reactivity	0							

## Section 1. Chemical Product and Company Identification

Page Number: 1

Common Name/ Trade Name	<b>Chromium oxide</b>		
Manufacturer	ProChem, Inc. 826 Roosevelt Rd Rockford, IL 61109	CAS#	1308-38-9
Commercial Name(s)	Not available.	RTECS	GB6475000
Synonym	Chromium Oxide greens; Chromium Oxide Green Powder; Chromium Sesquioxide; Green Chromium (III) Oxide powder; C.I. Pigment Green 17; C.I. Number 77288; Dichromium trioxide	TSCA	TSCA 8(b) inventory: Chromium oxide
Chemical Name	Chromium Oxide	CI#	Not available.
Chemical Family	Not available.	<b>IN CASE OF EMERGENCY</b> <b>CHEMTREC (24hr) 800-424-9300</b>  <b>815-398-1788</b>	
Chemical Formula	Cr2O3		
Supplier			

## Section 2. Composition and Information on Ingredients

Name	CAS #	Exposure Limits			% by Weight
		TWA (mg/m <sup>3</sup> )	STEL (mg/m <sup>3</sup> )	CEIL (mg/m <sup>3</sup> )	
1) Chromium oxide	1308-38-9				100

Toxicological Data on Ingredients      **Chromium oxide**  
 LD50: Not available.  
 LC50: Not available.

## Section 3. Hazards Identification

Potential Acute Health Effects      Hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation.

<b>Potential Chronic Health Effects</b>	<p>Hazardous in case of inhalation. Slightly hazardous in case of skin contact (sensitizer). <b>CARCINOGENIC EFFECTS:</b> A4 (Not classifiable for human) by ACGIH, 3 (Not classifiable for human.) by IARC. <b>MUTAGENIC EFFECTS:</b> Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. <b>TERATOGENIC EFFECTS:</b> Not available. <b>DEVELOPMENTAL TOXICITY:</b> Not available. The substance may be toxic to upper respiratory tract, skin. Repeated or prolonged exposure to the substance can produce target organs damage.</p>
---	--

#### Section 4. First Aid Measures

<b>Eye Contact</b>	Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.
<b>Skin Contact</b>	In case of contact, immediately flush skin with plenty of water. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention.
<b>Serious Skin Contact</b>	Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek medical attention.
<b>Inhalation</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<b>Serious Inhalation</b>	Not available.
<b>Ingestion</b>	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.
<b>Serious Ingestion</b>	Not available.

#### Section 5. Fire and Explosion Data

<b>Flammability of the Product</b>	Non-flammable.
<b>Auto-Ignition Temperature</b>	Not applicable.
<b>Flash Points</b>	Not applicable.
<b>Flammable Limits</b>	Not applicable.
<b>Products of Combustion</b>	A small amount (less than 0.1% as Cr) of reversion to hexavalent chromium may occur if this product is exposed to elevated temperatures.
<b>Fire Hazards in Presence of Various Substances</b>	Not applicable.
<b>Explosion Hazards in Presence of Various Substances</b>	Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available.
<b>Fire Fighting Media and Instructions</b>	Not applicable.
<b>Special Remarks on Fire Hazards</b>	Chlorine trifluoride reacts violently with Chromium oxide producing flame.
<b>Special Remarks on Explosion Hazards</b>	Contact between glycerol and Chromium oxide may produce explosion.

**Section 6. Accidental Release Measures**

Small Spill	Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill	Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

**Section 7. Handling and Storage**

Precautions	Keep locked up.. Do not breathe dust. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If you feel unwell, seek medical attention and show the label when possible. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents.
Storage	Hygroscopic. Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

**Section 8. Exposure Controls/Personal Protection**

Engineering Controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
Personal Protection	Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill	Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.
Exposure Limits	TWA: 0.5 (mg(Cr)/m <sup>3</sup> ) from ACGIH (TLV) [United States]  Consult local authorities for acceptable exposure limits.

**Section 9. Physical and Chemical Properties**

Physical state and appearance	Solid. (Crystalline solid. Powdered solid.)	Odor	Odorless.
Molecular Weight	151.99 g/mole	Taste	Not available.
pH (1% soln/water)	Not applicable.	Color	Green. (Dark.)
Boiling Point	4000°C (7232°F)		
Melting Point	2435°C (4415°F)		
Critical Temperature	Not available.		
Specific Gravity	5.21 (Water = 1)		
Vapor Pressure	Not applicable.		
Vapor Density	Not available.		
Volatility	Not available.		
Odor Threshold	Not available.		
Water/Oil Dist. Coeff.	Not available.		
Ionicity (in Water)	Not available.		
Dispersion Properties	Not available.		
Solubility	Insoluble in cold water, acetone, and alcohol. Slightly soluble in acids, and alkalis.		

**Section 10. Stability and Reactivity Data**

Stability	The product is stable.
Instability Temperature	Not available.
Conditions of Instability	Incompatible materials
Incompatibility with various substances	Reactive with oxidizing agents.
Corrosivity	Non-corrosive in presence of glass.
Special Remarks on Reactivity	<p>Hygroscopic.  Turns brown on heating, but reverts to green color on cooling.  Can react with molten alkali at very high temperatures under oxidizing conditions.  May react with Chlorine trifluoride, lithium, nitroalkanes, oxygen difluoride, rubidium acetylide, and other strong oxidizers.  A vigorous reaction occurs between oxygen difluoride and chromium oxide.  Chromium (III) compounds are reduced to Chromium (II) compounds by hypophosphites, concentrated perchloric acid, sodium bismuthate, permanganate, electrolysis, reducing metals such as zinc, magnesium and aluminum in acid solution.  In basic solution, Cr(III) is readily oxidized to CrO<sub>4</sub>(-2) by hypochlorite, hypobromite, peroxide, and oxygen under pressure at high temperature.  Chromium oxide and rubidium acetylide react exothermically.</p>
Special Remarks on Corrosivity	Not available.
Polymerization	Will not occur.

**Section 11. Toxicological Information**

Routes of Entry	Inhalation. Ingestion.
Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	<p><b>CARCINOGENIC EFFECTS:</b> A4 (Not classifiable for human or animal.) by ACGIH, 3 (Not classifiable for human.) by IARC.  <b>MUTAGENIC EFFECTS:</b> Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast.  May cause damage to the following organs: upper respiratory tract, skin.</p>
Other Toxic Effects on Humans	Hazardous in case of skin contact (irritant), of ingestion, of inhalation.
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	May cause cancer (tumorigenic) based on animal data.
Special Remarks on other Toxic Effects on Humans	<p>Acute Potential Health Effects:  Skin: May cause skin irritation.  Eyes: May cause eye irritation.  Inhalation: May cause respiratory tract irritation.  Ingestion: May cause gastrointestinal tract irritation.  Chronic Potential Health Effects:  Skin: May cause sensitization dermatitis  Inhalation: Contains trivalent chromium compound. As noted by ACGHI, in their publication, "Documentation of Threshold Limit Values" repeated and prolonged exposures may cause delayed effects involving the respiratory system such as chronic bronchitis, pneumoconiosis.</p>


**Section 12. Ecological Information**

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Products of Biodegradation	Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation	The product itself and its products of degradation are not toxic.
Special Remarks on the Products of Biodegradation	Not available.

**Section 13. Disposal Considerations**

Waste Disposal	Waste must be disposed of in accordance with federal, state and local environmental control regulations.
----------------	--

**Section 14. Transport Information**

DOT Classification	Not a DOT controlled material (United States).
Identification	Not applicable.
Special Provisions for Transport	Not applicable.
DOT (Pictograms)	


**Section 15. Other Regulatory Information and Pictograms**

Federal and State Regulations	Massachusetts RTK: Chromium oxide New Jersey: Chromium oxide TSCA 8(b) inventory: Chromium oxide SARA 313 toxic chemical notification and release reporting: Chromium oxide CERCLA: Hazardous substances.: Chromium oxide
-------------------------------	---

California Proposition 65 Warnings	
------------------------------------	--

Other Regulations	OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.
-------------------	---

Other Classifications	WHMIS (Canada)	Not controlled under WHMIS (Canada).	
	DSCL (EEC)	R36/38- Irritating to eyes and skin. R40- Possible risks of irreversible effects.	S2- Keep out of the reach of children. S36/37- Wear suitable protective clothing and gloves. S46- If swallowed, seek medical advice immediately and show this container or label.

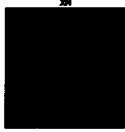
HMIS (U.S.A.)	<table border="1"> <tr><td style="background-color: black; color: white;">Fire Hazard</td><td style="text-align: center;">2</td></tr> <tr><td style="background-color: black; color: white;">Reactivity</td><td style="text-align: center;">0</td></tr> <tr><td style="background-color: black; color: white;">Personal Protection</td><td style="text-align: center;">E</td></tr> </table>	Fire Hazard	2	Reactivity	0	Personal Protection	E	National Fire Protection Association (U.S.A.)	Health		Flammability
	Fire Hazard	2									
Reactivity	0										
Personal Protection	E										
	Reactivity										

Specific hazard

**WHMIS (Canada)  
(Pictograms)**



**DSCL (Europe)  
(Pictograms)**



**TDG (Canada)  
(Pictograms)**



**ADR (Europe)  
(Pictograms)**



**Protective Equipment**



Gloves.



Lab coat.



Dust respirator. Be sure to use an approved/certified respirator or equivalent.



Splash goggles.

**Section 16. Other Information**

References Not available.

Other Special Considerations Not available.

**Notice to Reader**

## **Chromium oxide**

**Page Number: 7**

*All chemicals may pose unknown hazards and should be used with caution. This Material Safety Data Sheet (MSDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this MSDS is based on technical data judged to be reliable, ProChem Chemicals, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.*