

# MATERIAL SAFETY DATA SHEET

## HMIS INFORMATION:

Health: 1  
Flammability: 1  
Physical Hazard: 0

## LANSKO COLORS

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## Section 1. PRODUCT IDENTIFICATION

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PRODUCT NAME: 304 CHROMIUM OXIDE GREEN  
VERSION DATE: 9/12/2007  
CAS NUMBER: 1308-38-9  
C.I. Pigment #: 77288

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## Section 2. COMPOSITION

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Ingredient	CAS No	Percent	Hazardous
Chromium (III) Oxide Green	1308-38-9	>98	Yes

This material contains SARA 313 listed substances. See Section 15 for further details.

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## Section 3. HAZARDS IDENTIFICATION

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**Emergency Overview** – Odorless, nonflammable green powder which can cause skin, eye and respiratory irritation. May have adverse effects if ingested. Long-term exposure may adversely affect the lungs. Avoid breathing dusts.

Contact Rating: 2 - Moderate  
Lab Protective Equip: Safety glasses

### Potential Health Effects

#### **Inhalation:**

Inhalation of dusts may irritate the nose, throat and upper respiratory tract. In severe cases, remove to fresh air immediately. Call physician.

#### **Ingestion:**

May cause nausea, vomiting and diarrhea.

#### **Skin Contact:**

Contact may cause irritation and erythema. Repeated contact may cause dermatitis.

**Eye Contact:**

The more common hazards are local irritation or abrasion. Contact with dusts may cause conjunctivitis.

**Chronic Exposure:**

Long term exposure to trivalent chromium compounds may cause damage to the lungs and respiratory tract.

**Aggravation of Pre-existing Conditions:**

May exacerbate pre-existing lung and skin conditions.

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## Section 4. FIRST AID MEASURES

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**Inhalation:**

Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.. Get medical attention immediately.

**Ingestion:**

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**Skin Contact:**

Remove contaminated clothing and shoes. Immediately flush skin with plenty of soap and water. Thoroughly clean contaminated clothing and shoes before reuse. If irritation persists, seek medical attention.

**Eye Contact:**

Immediately flush eyes with plenty of lukewarm water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

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## Section 5. FIRE FIGHTING MEASURES

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**Fire:**

Not considered to be a fire hazard. Fire conditions may, however, produce small amounts of hexavalent chromium and other oxidation products.

**Explosion:**

Not considered to be an explosion hazard. Sealed containers may rupture when heated.

**Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire. Do not allow water runoff to enter sewers or waterways. Carbon dioxide, water spray or foam are all suitable.

**Fire Fighting Equipment**

Firefighters should wear full protective clothing and NIOSH/MSHA-approved full facepiece self-contained breathing apparatus (SCBA) operated in the pressure demand or other positive pressure mode.

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## Section 6. ACCIDENTAL RELEASE MEASURES

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Ventilate area of leak or spill. Wear appropriate PPE as specified in Section 8.

Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal. US Regulations (CERCLA) require reporting spills and releases to soil, water and air in excess of reportable quantities.

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## Section 7. HANDLING AND STORAGE

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Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from incompatible substances. Wear special protective equipment (Sec. 8) for maintenance break-in or where exposures may exceed established exposure levels. Wash hands, face, forearms and neck when exiting restricted areas. Shower and change to clean garments at the end of the day. Avoid cross-contamination of street clothes. Wash hands before eating and do not eat, drink, or smoke in workplace. Observe all warnings and precautions listed for the product.

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## Section 8. EXPOSURE CONTROLS

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**For Chromium:**

- **ACGIH Threshold Limit Value (TLV):**

As Cr6+: 0.5 mg/m<sup>3</sup> TWA

- **OSHA Permissible Exposure Limit (PEL):**

As Cr6+: 0.005 mg/m<sup>3</sup> TWA

- **OSHA Action Level:**

As Cr6+: 0.0025 mg/m<sup>3</sup> 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.

**Personal Respirators (NIOSH/MSHA Approved):**

If the exposure limit is exceeded, a half-face high efficiency dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator.

**Skin Protection:**

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

**Eye Protection:**

Use safety glasses or chemical safety goggles and/or full-face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

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## Section 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance:</b>	Green powder	<b>Vapor Density (Air=1):</b>	Not applicable
<b>Odor:</b>	Odorless	<b>Melting Point:</b>	2266°C
<b>Solubility:</b>	Insoluble	<b>Vapor Pressure (mm Hg):</b>	Not applicable
<b>Specific Gravity:</b>	~ 5.10	<b>% Volatiles by volume:</b>	Not applicable
<b>pH:</b>	No information	<b>Evaporation Rate (BuAc=1):</b>	Not applicable
<b>Boiling Point:</b>	4000°C		

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## Section 10. STABILITY AND REACTIVITY

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**Stability:** Stable under ordinary conditions of use and storage.

**Hazardous Decomposition Products:**

A small amount of (less than 0.1% as Cr) may convert to hexavalent chromium if this product is exposed to elevated temperatures.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:**

Chromic oxide may react with molten alkali at high temperatures under oxidizing conditions. May react with lithium, nitroalkanes, dirubidium acetylide, oxygen difluoride and other strong oxidizers. Reaction with chlorine trifluoride produces flame. Contact between glycerol and chromic oxide may produce an explosion.

**Conditions to Avoid:** Incompatibles.

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## Section 11. TOXICOLOGICAL INFORMATION

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Trivalent chromium has relatively low toxicity due to poor cell membrane permeability and noncorrosivity.

**Oral Toxicity:** Chromic Oxide has no established oral toxicity.

**Chronic:** Preliminary study of 300 workers exposed for 20-25 years to Cr (III) as chromic oxide and chromic sulfate showed no differences from controls in respiratory illness and clinical blood studies. Chromic oxide fed to rats in dosages up to 5% for two years produced no treatment related effects (NOEL).

### Cancer Lists

Ingredient	NTP Carcinogen		
	Known	Anticipated	IARC Category
None			No (*)

(\*) IARC considers chromium (III) compounds unclassifiable as to carcinogenicity to humans (Group 3).

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## Section 12. ECOLOGICAL INFORMATION

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### Environmental Fate:

Chromic acid is generally removed from the atmosphere through wet and dry deposition. Chromic oxide particles <20  $\mu\text{m}$  aerodynamic diameter may remain airborne for long periods and may be transported long distances. Chromic oxide is not expected to be transported from the troposphere to the stratosphere. Chromic oxide is expected to remain unchanged following release into the soil. The predominant form of chromium in soil probably is as insoluble chromic oxide.

**Environmental Toxicity:** Bioaccumulation of chromium from soil to above ground parts of plants is unlikely. There is no indication of biomagnification of chromium along the terrestrial food chain (soil-plant-animal).

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## Section 13. DISPOSAL CONSIDERATIONS

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Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Product does not exceed the RCRA extraction procedure limit of 5 ppm for total soluble chromium as shipped. This material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. (See 40 CFR Part 262). Chemical processing of this product (particularly at elevated temperatures) can cause chemical reactions which produce substances which will exceed the RCRA limit. Wastes from this product should be tested to determine the proper waste classification. Incineration is not recommended as some trivalent chromium may convert to the Hexavalent form.

Recycle, reclaim and dispose of contents and container in accordance to state and local and federal regulations.

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## Section 14. TRANSPORTATION INFORMATION

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### Domestic (Land, D.O.T.)

Proper Shipping Name: Not regulated

### International (Water, I.M.O.)

Proper Shipping Name: Not regulated

### International (Air, I.C.A.O.)

Proper Shipping Name: Not regulated

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## Section 15. REGULATORY INFORMATION

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### Chemical Inventory Status

Ingredient	TSCA	EC	Japan	Australia	Korea	Canada		Phil.
						DSL	NDSL	
Chromium (III) Oxide Green	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

## Federal, State & International Regulations

Ingredient	SARA 302		SARA 313		CERCLA	RCRA 261.33	TSCA 8(d)
	RQ	TPQ	List	Chemical Category			
Chromium (III) Oxide Green	No	No	Yes	Chromium compound	Yes	No	No

### WARNING:

**California Proposition 65:** THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER OR OTHER REPRODUCTIVE HARM.

Chromic Oxide is covered under Proposition 65 for hexavalent chromium.

Appropriate warnings should be given.

<b>Chemical Weapons Convention</b>	No	<b>Fire:</b>	No
<b>TSCA 12 (b)</b>	No	<b>Pressure:</b>	No
<b>CDTA:</b>	No	<b>Reactivity:</b>	No
<b>SARA 311/312:</b>	<b>Acute</b> Yes	<b>Australian Hazchem Code:</b>	NA
	<b>Chronic</b> Yes		

### WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

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## Section 16. OTHER

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### NFPA Ratings:

Health:	1
Flammability:	0
Reactivity:	0

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## DISCLAIMER OF LIABILITY

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Lansco Colors provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. Lansco Colors disclaims all liability and assumes no legal responsibility for damages resulting from use of or reliance upon the information contained herein.