

# Material Safety Data Sheet

## Chromium Oxide Green

MSDS Number 427-15

### Section 1: Product and Company Information

Product Name(s) Chromium Oxide Green

Product Number(s) 427-15S

Company Natural Pigments LLC

PO Box 112

Willits, CA 95490

United States of America

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### Section 2: Composition / Information on Ingredients

Product Name Chromium Oxide Green

Synonyms Viridian

Component Name	CAS No.	% Composition	Range	OSHA PEL			
mg/m3	ACGIH TLV mg/m3	NIOSH mg/m3					
Chemical Formula		TWA	STEL	TWA	STEL	TWA	STEL
Chromium (III) Oxide							
Cr2O3							
	1308-38-9	100%	0.5	N.E.1	0.5	N.E.	N.E.
	N.E.						

1) N.E. = None Established

### Section 3: Hazards Identification

#### Inhalation

Acute Health Effects Causes irritation to the respiratory tract.

Symptoms may include coughing, shortness of breath.

Chronic Health Effects No information available

#### Aggravation of

Pre-existing Conditions Persons with respiratory function may be more susceptible to the effects of this substance.

#### Ingestion

Acute Health Effects Slightly hazardous in case of ingestion.

Chronic Health Effects No information available

#### Aggravation of

Pre-existing Conditions Medical conditions that may be aggravated by exposure: None anticipated.

#### Eye Contact

Acute Health Effects Contact with eye can produce irritation.  
Chronic Health Effects Prolonged or repeated contact may produce severe irritation.

Aggravation of

Pre-existing Conditions Medical conditions that may be aggravated by exposure: None anticipated.

Skin Contact

Acute Health Effects May cause irritation, depending on duration of contact.

Chronic Health Effects No information available

Aggravation of

Pre-existing Conditions Persons with pre-existing skin problems may be more susceptible to the effects of this substance.

Health effects described above are based on published scientific information available for review and evaluated on behalf of this product. Actual signs and symptoms experienced may vary due to conditions at the time of exposure.

Section 4: First Aid Measures

After Inhalation Remove to fresh air. If conscious, have victim clear nasal passages. Restore breathing (e.g., artificial respiration, CPR). Seek medical attention, as necessary, if symptoms develop or persist.

After Skin Contact In case of contact, wipe off excess material from skin then immediately flush skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Call a physician, if irritation occurs.

After Eye Contact Holding eyelids open, do not allow victim to rub their eyes. Gently flush eyes for 15 minutes with large quantities of water. Seek medical attention if irritation develops or persists.

After Ingestion Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention if symptoms appear.

Section 5: Fire Fighting Measures

Fire Not considered to be a fire hazard. Not flammable.

Explosion Not considered to be an explosion hazard.

Flash Points Not applicable

Auto-Ignition Not applicable

Flammable Limits Not applicable

Extinguishing Media This material is not combustible and is not anticipated to react with commercially employed extinguishing media. Use appropriate extinguishing media for surrounding fire.

**Special Fire Fighting Procedure** As part of responding to any fire, firefighters should wear full turnout gear with a positive pressure demand mode Self-Contained Breathing Apparatus (SCBA). Contain all fire suppression run-off.

**Hazardous Thermal**

**Decomposition Byproducts** These are carbon oxides (CO, CO<sub>2</sub>) and nitrogen oxides (NO, NO<sub>2</sub>...).

**Fire/Explosion Hazards** No information available

**Section 6: Accidental Release Measures**

**Spill Procedures** Protect against identified hazards through use of prescribed personal protection equipment, proper work and hygiene practices. Limit foot and vehicular traffic to minimize mechanical agitation and dispersion. Employ a vacuum, equipped with HEPA (High Efficiency Particulate Air) filter, for clean-up of the spill material. If no vacuum is available, use a broom and shovel to collect excess powder in the area. Residual material should then be cleared, utilizing the process of wet sweeping, to avoid dust generation.

**Containment Techniques** This is a solid material and will not travel far from the spill location unless mechanically agitated. Therefore, no specific containment techniques are recommended outside of restricting access to the spill location. During spill cleanup, residual wash waters should be contained and collected for proper disposal.

**Spill Response Equipment** The following equipment is recommended for spill response:

- vacuum, equipped with a HEPA filter
- broom, wet mop
- dustpan, shovel, or scoop
- bags, drums, or sacks for collection

**Note:** Non-sparking equipment may be selected, based on location specific requirements and individual work site evaluations.

**Personal Protective Equipment** Employees should utilize the following protective equipment when performing spill response activities:

- gloves (rubber or leather)
- cotton or Tyvek coveralls
- chemical/safety impact goggles
- respiratory equipment recommended in Section 8

**Section 7: Handling and Storage**

**Handling** When handling this product, all personnel are directed to:

- Wear all specified elements of PPE, as directed by this document, or under location specific requirements, whichever is more conservative.
- Avoid creating dust, where possible.

**Storage** The following information provides the appropriate and recommended methods for safe storage and maintenance of product integrity:

- Store in a cool, dry, well-ventilated area.
- Product containers (paper bags, nylon bags, drums, etc.) are prone to physical damage. Care should be taken in storage and handling in order to prevent damage.
- Avoid contact with oxidizers and chemically active metals, since violent reactions may occur.

#### Section 8: Exposure Controls / Personal Protection

**Engineering Controls** If user operations generate dusts or fumes, use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

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

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

**Eye/Face Protection** Use chemical safety goggles where dusting is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**Work Hygiene Practices** To control potential exposures, avoid creating dust. Always wear appropriate protective equipment when handling. To avoid skin contact, gloves (leather or rubber) should be worn when handling containers of this substance. Do not eat, drink, smoke or apply cosmetics while using/handling. Always wash hands and face after handling.

- Avoid direct skin contact when possible.
- Do not eat, drink, smoke, or perform other hand-to-mouth activities in product use or handling area.
- Wash thoroughly after handling this product.

#### Section 9: Physical and Chemical Properties

**Appearance** Physical State: Solid

**Color:** Green

**Form:** Powder or crystals

Odor Odorless  
 Molecular Weight No information available  
 Ph Value Not applicable.  
 Boiling Point (at 760 mm Hg) Not applicable.  
 Melting Point No information available (decomposes)  
 Flash Point Not applicable.  
 Flammability Not applicable.  
 Autoignition Temperature Not applicable.  
 Explosive Properties Not applicable.  
 Explosion Limits Not applicable.  
 Vapor Pressure (mm Hg) Not applicable.  
 Vapor Density (Air=1) Not applicable.  
 Solubility Insoluble at 20° C.  
 Specific Gravity (Water=1) 3.31  
 Viscosity Not applicable.  
 Evaporation Rate (BuAc=1) Not applicable.  
 Section 10: Stability and Reactivity  
 Stability Stable under ordinary conditions of use and storage.  
 Hazardous Decomposition Products No information available.  
 Hazardous Polymerization Will not occur.  
 Incompatibilities No information available.  
 Conditions to Avoid No information available.  
 Section 11: Toxicological Information  
 Investigated as a tumorigen, mutagen.

-----\Cancer Lists\-----

Ingredient	---NTP Carcinogen---		IARC Category
	Known	Anticipated	
Chromium (III) Oxide (1308-38-9)	No	No	3

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Section 12: Ecological Information  
 Environmental Fate Possibly hazardous short term degradation products are not likely.  
 Distribution and Persistence in the Environment No information found.  
 Bioaccumulation in

Aquatic Organisms No information found.

Permissible Concentration  
in Water No information found.

Section 13: Disposal Considerations

Physical/Chemical Properties This material is a stable solid. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options.

Recommended Disposal Method Where possible, re-blend spilled, unused, or off-specification materials with other suitable materials in support of waste minimization. Where this is not possible, dispose of material according to Federal (country-specific), state, and local requirements.

Empty Containers This product may be shipped in paper or nylon bags, steel drums, plastic or steel pails, or intermediate bulk containers. All residual material must be emptied and the containers recycled where possible. Where recycling is not possible, containers must be disposed of in accordance with Federal (country-specific), state, and local regulations. If questions exist about disposal, please contact the manufacturer for additional information.

Section 14: Transportation Information

Not regulated.

Section 15: Regulatory Information

-----\Chemical Inventory Status - Part 1\-----

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Ingredient	TSCA	EC	Japan	Australia
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Chromium (III) Oxide (1308-38-9)	Yes	Yes	Yes	Yes
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-----\Chemical Inventory Status - Part 2\-----

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Ingredient	--Canada--	Korea	DSL	NDSL	Phil.
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Chromium (III) Oxide (1308-38-9)	Yes	Yes	No	Yes
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-----\Federal, State & International Regulations - Part 1\-----  
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Ingredient	-SARA 302-		-----SARA 313-----	
	RQ	TPQ	List	Chemical Catg.
Chromium (III) Oxide (1308-38-9) Chromium com		No	No	No

-----\Federal, State & International Regulations - Part 2\-----  
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Ingredient	-RCRA-	-TSCA-	
	CERCLA	261.33	8(d)
Chromium (III) Oxide (1308-38-9)	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No  
Reactivity: No (Pure / Solid)

### Section 16: Labeling Information

Product Name Chromium Oxide Green

Ingredients Chromium Oxide, Silicate

Signal Word WARNING!

Hazard Description May be harmful if inhaled. May cause irritation to eyes and respiratory tract. Slightly toxic if ingested.

Precautions Do not get in eyes. Wash thoroughly after handling. Do not breathe dust. Keep container closed. Use only with adequate ventilation.

First Aid

Procedures If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Never give anything by mouth to an unconscious person. In all cases call a physician if symptoms develop.

Fire Instructions Select fire extinguishment media for surrounding materials.

Spill or Leak

**Procedures**      Wear appropriate protective equipment. Limit foot and vehicular traffic to minimize agitation and dispersion. Employ a vacuum (equipped with a HEPA filter), broom and shovel, and wet sweeping for spill clean-up. Avoid creating dust. Do not allow this product or run-off to reach waterways.

**Handling and**

**Storage Instructions**      Wear specified elements of personal protective equipment, as defined in the Material Safety Data Sheet (MSDS), or follow location specific instructions for handling this product. Store in a cool, dry, well-ventilated area. Specific instructions concerning directions for use and handling may be found in the MSDS or may be supplied by the manufacturer.

**Section 17: Other Information**

**HMIS Ratings**      Health: 2 (Moderate)

**Flammability:** 0 (None)

**Reactivity:** 1 (Low)

**Personal Protection:** E

**NFPA Ratings**      Health: 2 (Moderate)

**Flammability:** 0 (None)

**Reactivity:** 1 (Low)

**Date** 24 August 2007

**Disclaimer** The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide.

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Natural Pigments, LLC shall not be held liable for any damage resulting from handling or from contact with the above product.