



SAFETY DATA SHEET

Chromium Oxide Green

1. IDENTIFICATION

Product Name Chromium Oxide Green

Product No. G4099, G5099, G6099, G6099HP, G8599, GA4090, GA5090, GA6090, M100C, GO4099R, GO7099R

Identified uses Pigment for the coloration of paints, papers, polymers, plastics or cement based construction materials

Supplier Rockwood Pigments NA, Inc.
7101 Muirkirk Road
Beltsville
MD 20705-1333
(301) 210-7800 9AM-5PM
Tim Manley

Emergency Telephone CHEMTREC: (800) 424-9300 (Rockwood Pigments contract number: 191118)

2. HAZARD(S) IDENTIFICATION

EMERGENCY OVERVIEW

Dry powder with little or no odor. Will not burn or react. Packaging material can burn or melt in fire, producing toxic smoke and fumes.

Appearance Powder, dust

Color Green.

Odor Odorless.

General Information

No specific health warnings noted.

Inhalation

Dust may irritate throat and respiratory system and cause coughing. Prolonged inhalation may be harmful.

Ingestion

No harmful effects expected in amounts likely to be ingested by accident. Possible nausea or diarrhea if large amounts ingested.

Skin Contact

No specific health warnings noted. Substance may cause slight skin irritation.

Eye Contact

Dust in the eyes will cause irritation. May cause slight irritation.

Route Of Entry

Inhalation. Skin absorption. Ingestion. Skin and/or eye contact.

Other Health Effects

IARC Not Listed. NTP Not Listed. OSHA Not Regulated. This product is a trivalent chromium compound that contains less than 100 ppm hexavalent chromium. Trivalent chromium is not specifically listed as a carcinogen by NTP, IARC or ACGIH.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CHROMIUM (III) OXIDE

> 98

CAS No.: 1308-38-9

EC No.: 215-160-9

GHS Classification

Not classified.

Composition Comments

Pigment Green 17, C.I. 77288

4. FIRST-AID MEASURES

Chromium Oxide Green

Description of first aid measures

Inhalation

No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If exposed to excessive levels of dusts or fumes, remove to fresh air and get medical attention if cough or other symptoms develop.

Ingestion

Consult a physician for specific advice. Swallowing a small amount will not cause significant harm. For larger amounts, do not induce vomiting, but give one or two glasses of water to drink and get medical attention.

Skin Contact

Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.

Eye Contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Continue to rinse for at least 15 minutes. Contact physician if irritation persists.

Most important symptoms and effects, both acute and delayed

Inhalation

Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

Ingestion

Due to the physical nature of this material it is unlikely that swallowing will occur.

Skin Contact

Prolonged contact may cause redness, irritation and dry skin.

Eye Contact

May cause temporary eye irritation.

Indication of any immediate medical attention and special treatment needed

Notes To The Physician

No specific first aid measures noted.

5. FIRE-FIGHTING MEASURES

Flammability Class

No Uniform Fire Code noted.

Extinguishing Media

The product is non-combustible. This product is not flammable. Use fire-extinguishing media appropriate for surrounding materials. Water spray, foam, dry powder or carbon dioxide.

Unusual Fire & Explosion Hazards

Fire conditions may produce small amounts of hexavalent chromium.

Special Fire Fighting Procedures

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Protective Equipment For Fire-Fighters

Use protective equipment appropriate for surrounding materials. Self contained breathing apparatus and full protective clothing must be worn in case of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions

For personal protection, see section 8.

Environmental Precautions

Avoid spreading dust or contaminated materials. Avoid discharge into drains, water courses or onto the ground. Spillages or uncontrolled discharges into watercourses must be IMMEDIATELY alerted to the Environmental Agency or other appropriate regulatory body.

Spill Clean Up Methods

Wear necessary protective equipment. Vacuum or sweep up material and place in a disposal container. Avoid generation and spreading of dust. Avoid runoff into storm sewers and ditches which lead to waterways. For waste disposal, see Section 13.

Reference to other sections

For personal protection, see section 8.

7. HANDLING AND STORAGE

Handling

Avoid inhalation of dust and contact with skin and eyes. Wash thoroughly after handling. Minimize dust generation and accumulation. For pallets wrapped in polyethylene plastic, removal may cause an electrostatic spark; removal of the wrap should not be done in the presence of flammable vapours.

Chromium Oxide Green

Storage

Store in closed original container in a dry place. Keep away from food, drink and animal feeding stuffs.

Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT	STD	TWA (8-hrs)		STEL (15 min)		Notes
CHROMIUM (III) OXIDE	ACGIH		0.5 mg/m3			
CHROMIUM (III) OXIDE	PEL		0.5 mg/m3			

ACGIH=American Conference of Governmental Industrial Hygienists.

Ingredient Comments

TLV-TWA: 0.012 mg/m3 as Cr (ACGIH 2009)

Protective Equipment



Engineering Measures

Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

Respiratory Equipment

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

Hand Protection

For prolonged or repeated skin contact use suitable protective gloves.

Eye Protection

Wear approved safety goggles.

Other Protection

Provide eyewash station and safety shower.

Hygiene Measures

No specific hygiene procedures noted, but good personal hygiene practices are always advisable, especially when working with chemicals. Wash hands at the end of each work shift and before eating, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Powder, dust
Color	Green.
Odor	Odorless.
Solubility	Insoluble in water
Initial boiling point and boiling range	
Not relevant	
Melting point (°C)	2266
Relative density	5.1 kg/m3
Bulk Density	600-1500 kg/m3
pH-Value, Diluted Solution	5 - 9 @ 10%
Solubility Value (G/100G H2O@20°C)	Insoluble
No information required.	

10. STABILITY AND REACTIVITY

Reactivity

Reaction with: molten alkali at high temperature chlorine trifluoride producing flame glycerol - may produce an explosion

Stability

Stable under normal temperature conditions and recommended use.

Chromium Oxide Green

Hazardous Polymerisation

Will not polymerise.

Conditions To Avoid

Water, moisture.

Materials To Avoid

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 with glycerol and chromic oxide may produce an explosion.

Hazardous Decomposition Products

A small amount (<0.1% as Cr) of reversion to hexavalent chromium may occur if the dry chromium (III) oxide powder is exposed to elevated temperatures.

11. TOXICOLOGICAL INFORMATION

Toxic Dose 1 - LD 50

>5000 mg/kg (oral rat)

Toxicological information

From literature surveys undertaken for Chromium (III) oxide in powder form: LD50: >5000 mg/kg (oral rat). Chromic oxide fed to rats in dosages up to 5% for 2 years produced no treatment related effects.[Ivankovic S. & Preussman R., Food Cosmet. Toxicol. 13, 347-351 (1975).] Dermal: non-irritant Rabbit skin (24 h)

Other Health Effects

IARC Not Listed. NTP Not Listed. OSHA Not Regulated. This product is a trivalent chromium compound that contains less than 100 ppm hexavalent chromium. Trivalent chromium is not specifically listed as a carcinogen by NTP, IARC or ACGIH.

Acute toxicity:

Acute Toxicity (Oral LD50)

> 5000 mg/kg

Toxicological Information on Ingredients:

CHROMIUM (III) OXIDE (CAS: 1308-38-9)

12. ECOLOGICAL INFORMATION

Ecotoxicity

From literature surveys undertaken for Chromium (III) oxide in powder form:- Aquatic toxicity (fish) = Zebra barb.: Lc0 (96 hours): >10000 mg/l Bacterial toxicity: harmless against Escherichia coli at 1000 mg/l and Pseudomonas fluorescens at >10000 mg/l. Water hazard classification: according to the present state of knowledge, this pigment slurry is not hazardous to water. Biological or Chemical Oxygen Demand: Slight.

Acute Fish Toxicity

Not considered toxic to fish.

Degradability

The product solely consists of inorganic compounds which are not biodegradable.

Bioaccumulative potential

Bioaccumulation is unlikely to be significant because of the low water solubility of this product.

Mobility:

The product is insoluble in water.

Results of PBT and vPvB assessment

This product does not contain any PBT or vPvB Substances.

Other adverse effects

None known.

13. DISPOSAL CONSIDERATIONS

Waste Management

Waste to be treated as controlled waste. Disposal in accordance with federal, state and local regulations.

Disposal Methods

Dispose of waste and residues in accordance with local authority requirements. Recover and reclaim or recycle, if practical.

14. TRANSPORT INFORMATION

General

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, DOT). Although this product is not classified as dangerous for transport, it is recommended that it should not be carried in the same vehicle as foodstuffs.

Chromium Oxide Green

DOT Proper Shipping Name None
TDG Proper Shipping Name None
DOT Hazard Class
Not regulated.
DOT Hazard Label
No DOT label requirement noted
Environmentally Hazardous Substance/Marine Pollutant
No.

Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes
Not applicable.

15. REGULATORY INFORMATION

Regulatory Status (US)

This Product is Hazardous under the OSHA Hazard Communication Standard. SECTION 313: This product contains toxic chemical subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR Part 372. Chromium compound: Chromium is designated as a hazardous air pollutant under Section 112 of the CAA. COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT, 40 CFR Part 117, Part 304:

Chromic oxide is a CERCLA hazardous substance included under the broad category of chromium compounds. No reportable quantity (RQ) has been listed for this broad class of compounds.

Regulatory References

Conforms with: Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, including amendments.

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed.

SARA 313 Emission Reporting

The following ingredients are listed.

CHROMIUM (III) OXIDE 98.50%

CAA Accidental Release Prevention

None of the ingredients are listed.

SARA (311/312) Hazard Categories

Acute Chronic

US State Regulations

State Regulations Comments

California Prop 65 Warning: This product contains chemicals known to the state of California to cause cancer (C) and birth defects or other reproductive (R) harm.

California Proposition 65 Carcinogens and Reproductive Toxins

The following ingredients are listed.

CADMIUM <5ppm; C, R

LEAD <10ppm; C, R

MERCURY <2ppm; R

NICKEL < 50ppm; Known to the State of California to cause cancer.

Massachusetts "Right To Know" List

All ingredients are listed.

Rhode Island "Right To Know" List

The following ingredients are listed.

MERCURY <2ppm

NICKEL < 50ppm

Minnesota "Right To Know" List

The following ingredients are listed.

ARSENIC <10ppm

Chromium Oxide Green

MERCURY <2ppm

New Jersey "Right To Know" List

All ingredients are listed.

Pennsylvania "Right To Know" List

The following ingredients are listed.

ARSENIC <10ppm

CADMIUM <5ppm

LEAD <10ppm

MERCURY <2ppm

NICKEL < 50ppm

International Inventories

EU - EINECS/ELINCS

The following ingredients are listed.

CHROMIUM (III) OXIDE

Canada – DSL/NDSL

The following ingredients are listed.

CHROMIUM (III) OXIDE

US - TSCA

The following ingredients are listed.

CHROMIUM (III) OXIDE

US – TSCA 12(b) Export Notification

None of the ingredients are listed.

Australia - AICS

The following ingredients are listed.

CHROMIUM (III) OXIDE

Japan – MITI

The following ingredients are listed.

CHROMIUM (III) OXIDE

Korea - KECI

The following ingredients are listed.

CHROMIUM (III) OXIDE

China - IECSC

The following ingredients are listed.

CHROMIUM (III) OXIDE

Phillippines – PICCS

The following ingredients are listed.

CHROMIUM (III) OXIDE

16. OTHER INFORMATION

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

HEALTH	*	1
FLAMMABILITY		0
PHYSICAL		0
PERSONAL PROTECTION		E

Revision Comments

Product Number list Revised

Revision Date 11 Nov 2013

Revision 3

Sds No. 17869 (MSDS_GR4)

Material Safety Data Sheet Status Approved.

Chromium Oxide Green

Disclaimer

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