

1. PRODUCT AND COMPANY IDENTIFICATION

Name	Chromium Oxide, Enriched in Chromium
Synonyms	Chromium (III) Oxide; Chromic Oxide; Chrome Oxide Green
Chemical Formula	Cr ₂ O ₃
Molecular Weight	151.99
CAS No.	1308-38-9
Supplier Address*	ISOFLEX USA PO Box 29475 San Francisco CA 94129 United States
Telephone	+1 415-440-4433
Fax	+1 415-563-4433
Emergency Phone Number (both supplier and manufacturer)	Infotrac/ +1 800-535-5053 *May include subsidiaries or affiliate companies/divisions
Email	iusa@isoflex.com
Website	www.isoflex.com
Preparation Information	ISOFLEX USA Product Safety +1 415-440-4433

2. HAZARDS IDENTIFICATION

Emergency Overview:

Warning! Harmful if swallowed or inhaled.
Causes irritation to skin, eyes and respiratory tract.

J.T. Baker SAF-T-DATA™ Ratings

Health Rating: 2 (Moderate); Flammability Rating: 0 (None); Reactivity Rating: 1 (Slight); Contact Rating: 2 (Moderate)

NFPA Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 2 Flammability = 0 Reactivity = 0



HMIS Ratings: (0 = Minimal; 1 = Slight; 2 = Moderate; 3 = Serious; 4 = Severe)

Health Hazard = 2 Flammability = 0 Physical Hazard = 0

HEALTH HAZARD	2
FLAMMABILITY	0
PHYSICAL HAZARD	0

Potential Health Effects:

<i>Inhalation</i>	Causes irritation to the respiratory tract. Symptoms may include coughing and/or shortness of breath.
<i>Ingestion</i>	Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.
<i>Skin Contact</i>	Causes irritation to skin. Symptoms include redness, itching and pain.
<i>Eye Contact</i>	Causes irritation, redness and pain.
<i>Chronic Exposure</i>	Prolonged or repeated skin contact may produce severe irritation or dermatitis.
<i>Aggravation of Pre-existing Conditions</i>	No information found.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name:	Chromium Oxide
CAS No.:	1308-38-9
Molecular Weight:	151.99
Chemical Formula:	Cr ₂ O ₃

4. FIRST AID MEASURES

<i>Inhalation</i>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
<i>Ingestion</i>	Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
<i>Skin Contact</i>	Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
<i>Eye Contact</i>	Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. FIREFIGHTING MEASURES

<i>Fire</i>	Not considered to be a fire hazard
<i>Explosion</i>	Not considered to be an explosion hazard
<i>Fire Extinguishing Media</i>	Use any means suitable for extinguishing surrounding fire.
<i>Special Information</i>	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure-demand or other positive-pressure mode.

6. ACCIDENTAL RELEASE MEASURES

<i>Personal Precautions:</i>	Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.
<i>Environmental Precautions:</i>	Do not let product enter drains.
<i>Methods for Cleaning Up:</i>	Pick up and place in a suitable container for reclamation or disposal in a method that does not generate dust. Do not sweep. Damp mop any residue.

7. HANDLING AND STORAGE

<i>Handling</i>	Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Use normal measures for preventive fire protection.
<i>Storage</i>	Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Do not store on wooden floors. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Airborne Exposure Limits:

OSHA Permissible Exposure Limit (PEL): for Cr(III) compounds = 0.5mg/m³ (TWA)

ACGIH Threshold Limit Value (TLV): for Cr(III) compounds = 0.5 mg/m³ (TWA), A4 - Not classifiable as a human carcinogen

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. Please refer to the ACGIH document *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved)

If the exposure limit is exceeded and engineering controls are not feasible, a half-facepiece particulate respirator (NIOSH type N95 or better filters) 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. A full-facepiece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection

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

Eye Protection

Use 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form	Crystalline solid
Color	Light to dark green
Odor	Odorless

Safety Data

Solubility	Negligible (< 0.1%)
Specific Gravity	5.10
pH	No information found
% Volatiles by Volume	0 @ 21 °C (70 °F)
Boiling Point	4000 °C (7232 °F)
Melting Point	2435 °C (4415 °F)
Vapor Density (Air=1)	Not applicable
Vapor Pressure (mm Hg)	Not applicable
Evaporation Rate (BuAc=1)	No information found

10. STABILITY AND REACTIVITY

<i>Stability</i>	Stable under ordinary conditions of use and storage
<i>Hazardous Decomposition Products</i>	No information found
<i>Hazardous Polymerization</i>	Will not occur
<i>Incompatibilities</i>	Lithium, glycerol, or strong oxidizing agents
<i>Conditions to Avoid</i>	Avoid moisture

11. TOXICOLOGICAL INFORMATION

Acute toxicity

<i>Oral LD50</i>	Rat - > 10,000 mg/kg
<i>Inhalation</i>	No data available
<i>Dermal</i>	No data available
<i>Skin Corrosion/Irritation</i>	Rabbit - Mild skin irritation
<i>Serious Eye Damage/Eye Irritation</i>	Rabbit - Mild eye irritation
<i>Respiratory or Skin Sensitization</i>	No data available
<i>Germ Cell Mutagenicity</i>	No data available
<i>Carcinogenicity</i>	This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP or EPA classification.
<i>IARC</i>	3 - Group 3: Not classifiable as to its carcinogenicity to humans (Chromium(III) oxide)
<i>NTP</i>	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
<i>OSHA</i>	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
<i>Reproductive Toxicity</i>	No data available

<i>Specific Target Organ Toxicity Single Exposure</i>	No data available
<i>Specific Target Organ Toxicity Repeated Exposure</i>	No data available
<i>Aspiration hazard</i>	No data available
<i>Additional Information</i>	RTECS: GB6475000

12. ECOLOGICAL INFORMATION

<i>Environmental Fate</i>	When released into the soil, this material is not expected to biodegrade. This material is not expected to significantly bioaccumulate.
<i>Environmental Toxicity</i>	No information found.

13. DISPOSAL CONSIDERATIONS

<i>Product</i>	Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.
<i>Container</i>	Dispose of container and unused contents in accordance with federal, state and local requirements.

14. TRANSPORT INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

15. REGULATORY INFORMATION

OSHA Hazards	No known OSHA hazards
SARA 302 Components	No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
SARA 313 Components	The following components are subject to reporting levels established by SARA Title III, Section 313: Chromium (III) oxide / CAS No. 1308-38-9 / Revision Date 1994-04-01.
SARA 311/312 Hazards	No SARA 311/312 Hazards
Massachusetts Right to Know Components	Chromium (III) oxide / CAS No. 1308-38-9 / Revision Date 1994-04-01
Pennsylvania Right to Know Components	Chromium (III) oxide / CAS No. 1308-38-9 / Revision Date 1994-04-01
New Jersey Right to Know Components	Chromium (III) oxide / CAS No. 1308-38-9 / Revision Date 1994-04-01
California Prop. 65 Components	This product does not contain any chemicals known to the State of California to cause cancer, birth defects or any other reproductive harm.

16. OTHER INFORMATION

Prepared By	ISOFLEX USA PO Box 29475 San Francisco CA 94129 United States
Issuing Date	September 15, 2014
Revision Date	August 01, 2021
Revision Number	3
Revision Note	Required review and update

ISOFLEX USA's Commonly Used Abbreviations and Acronyms*

ACGIH	American Conference of Governmental Industrial Hygienists
ADR	European Agreement Concerning the International Carriage of Dangerous Goods by Road
ALARA	As Low As Is Reasonably Achievable
AMU	Atomic Mass Unit
ANSI	American National Standards Institute
BLS	Basic Life Support
CAM	Continuous Air Monitor
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CEN	European Committee for Standardization
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CLP	Classification, Labelling and Packaging (European Union)
CPR	Controlled Products Regulations (Canada)
CWA	Clean Water Act (USA)
DAC	Derived Air Concentration (USA)
DOE	United States Department of Energy (USA)
DOT	United States Department of Transportation (USA)
DSL	Domestic Substances List (Canada)
EC50	Half Maximal Effective Concentration
EINECS	European Inventory of Existing Commercial Chemical Substances
EHS	Environmentally Hazardous Substance
ELINCS	European List of Notified Chemical Substances
EMS	Emergency Response Procedures for Ships Carrying Dangerous Goods
EPA	Environmental Protection Agency (USA)
EPCRA	Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986
GHS	Globally Harmonized System
HMIS	Hazardous Materials Identification System (USA)
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IBC	Intermediate Bulk Containers
ICAO	International Civil Aviation Organization
IDLH	Immediately Dangerous to Life or Health
IMDG	International Maritime Code for Dangerous Goods
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
LDLO	Lethal Dose Low
LOEC	Lowest-Observed-Effective Concentration
MARPOL	International Convention for the Prevention of Pollution from Ships
MSHA	Mine Safety and Health Administration (USA)
NCRP	National Council on Radiation Protection & Measurements (USA)
NDSL	Non-Domestic Substances List (Canada)
NFPA	National Fire Protection Association (USA)
NIOSH	National Institute for Occupational Safety and Health (USA)

NOEC	No Observed Effect Concentration
N.O.S.	Not Otherwise Specified
NRC	Nuclear Regulatory Commission (USA)
NTP	National Toxicology Program (USA)
OSHA	Occupational Safety and Health Administration (USA)
PBT	Persistent Bioaccumulative and Toxic Chemical
PEL	Permissible Exposure Limit
PIH	Poisonous by Inhalation Hazard
RCRA	Resource Conservation and Recovery Act (USA)
RCT	Radiation Control Technician
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Europe)
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
RTECS	Registry of Toxic Effects of Chemical Substances
SARA	Superfund Amendments and Reauthorization Act (USA)
TDG	Transportation of Dangerous Goods (Canada)
TIH	Toxic by Inhalation Hazard
TLV	Threshold Limit Value
TPQ	Threshold Planning Quantity
TSCA	Toxic Substances Control Act
TWA	Time Weighted Average
UN	United Nations (Number)
VOC	Volatile Organic Compound
vPvB	Very Persistent Very Bioaccumulative Chemical
WGK	Wassergefährdungsklassen (Germany: Water Hazard Classes)
WHMIS	Workplace Hazardous Materials Information System

*One or more of the above-listed items may not appear in this document.

General Disclaimer

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