



Cambridge Isotope Laboratories, Inc.
50 Frontage Road
Andover, MA 01810

Number:
Issue Date

CRLM-3324
04/25/11

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MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Description CHROMIUM-53 METAL (53Cr)

Cambridge Isotope Laboratories, Inc.
50 Frontage Rd
ANDOVER, MA 01810
USA

E-mail cilsales@isotope.com
Web Site www.isotope.com

Phone Numbers

Emergency Contact Chemtrec
Emergency Phone 1-800-424-9300 (24 hours)

Customer Service 1-800-322-1174 (8:30-5:30 EST)
Phone
Transportation 1-202-483-7616 (24 hours)

2 HAZARDS IDENTIFICATION

OSHA Hazards

Target Organ Effect

Target Organs

Liver, Kidney

GHS Label Information

Signal Word Warning

Hazards Identification

Environment

Hazard Statement(s)

Very toxic to aquatic life.

Precautionary Statement(s)

Avoid release to the environment.

HMIS Ratings

Chronic Health *
Physical 0



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Flammability 0
Health 0

NFPA Codes

Fire 0
Health 0
Reactivity 0

Potential Health Effects

Eyes Contact may cause eye irritation.
Ingestion May be harmful if swallowed.
Inhalation May be harmful if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.

3 COMPOSITION / INFORMATION ON INGREDIENTS

Composition / Information on Ingredients

Chemical Formula Cr
Molecular Weight 50.09
CAS No. 7440-47-3 (unlabeled)
EC No. 231-157-5

4 FIRST AID MEASURES

First Aid Measures

Eyes Flush eyes with water as a precaution.
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Skin Wash with soap and plenty of water. Consult a physician.

Additional Information Move out of dangerous area. Consult a physician and show this safety data sheet.

5 FIRE FIGHTING MEASURE

Fire Fighting Measures

Extinguishing Media Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.



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Fire Fighting Equipment Wear self contained breathing apparatus for fire fighting if necessary.

6 ACCIDENTAL RELEASE MEASURES

Accidental Release Measures

Personal Precautions Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental Precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and materials for containment and cleanup Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7 HANDLING AND STORAGE

Precautions for Safe Handling

Handling Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Conditions for Safe Storage

Storage Store at room temperature away from light and moisture.

8 EXPOSURE CONTROL / PERSONAL PROTECTION

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

CHEMICAL NAME	TWA	OSHA PEL	ACGIH TLV
CHROMIUM		1 mg/M ³	0.5 mg/M ³

Personal Protection

Eyes - Face Wear safety glasses with side shields (or goggles) and a face shield.

Skin Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Respiratory When appropriate, use NIOSH/CEN approved respirator.

Protective Clothing Wear suitable protective clothing and gloves.



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Work Hygienic Practices Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9 PHYSICAL AND CHEMICAL PROPERTIES

Physical and Chemical Properties (Unlabeled Compound)

Form	Chips
Color	Light grey
pH	No data available
Melting Point	1,857 °C (3,375 °F) - lit
Boiling Point	2,672 °C (4,842 °F) - lit
Flashpoint	Not applicable
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Solubility in Water	Insoluble
Auto Ignition Temperature	No data available

10 STABILITY AND REACTIVITY

Stability and Reactivity

Chemical Stability	Stable if stored under recommended conditions.
Conditions to Avoid	Not available
Hazardous decomposition products	Formed under fire conditions: Chromium oxides
Materials to avoid	Strong acids, Strong oxidizing agents

11 TOXICOLOGICAL INFORMATION

Acute Toxicity

Serious Damage/Eye Irritation	No data available
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Skin Corrosion/Irritation	No data available
Inhalation	No data available
Respiratory or Skin Sensitization	Not available
Germ Cell Mutagenicity	Not available
Carcinogenicity	Carcinogenicity - rabbit - Implant Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Musculoskeletal: Tumors. Carcinogenicity - rat - Implant Tumorigenic: Equivocal tumorigenic agent by RTECS criteria. Blood: Lymphomas including Hodgkin's disease. Tumorigenic: Tumors at site or application. This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
IARC	No component of this product present at levels greater than or equal to 0.1% is identifiable as probable, possible, or confirmed human carcinogen by IARC.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identifiable as a carcinogen or potential carcinogen by ACGIH.
NTP	*** - STATEMENT 942 ***
OSHA	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.
Reproductive Toxicity	Not available
Specific Target Organ Toxicity	
Single Exposure	No data available
Repeated Exposure	No data available
Signs and Symptoms of Exposure	The chemical, physical, and toxicological properties have not been thoroughly investigated.
Other Information	
RTECS	GB4200000

12 ECOLOGICAL INFORMATION

Toxicity



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Toxicity to Fish LC50	Cyprinus carpio (Carp) - 14.3 mg/l - 96 h
Toxicity to Daphnia and Other Aquatic Invertebrates EC50	Daphnia magna (Water flea) - 0.07 mg/l - 48 h
Longterm Aquatic Hazard NOEC	Pimephales promelas (fathead minnow) - 12 mg/l - 7 d
Persistence and Degradability	Not available
Bioaccumulative Potential	Oncorhynchus mykiss (rainbow trout) - 30 d Bioconcentration factor: 1.03 - 1.22
Mobility in Soil	Not available
PBT and vPvB Assessment	Not available
Other Adverse Effects	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic organisms.

13 DISPOSAL CONSIDERATIONS

Disposal Considerations

Product Disposal Waste materials should be disposed of under conditions which meet Federal, State, and Local environmental control regulations.

14 TRANSPORT INFORMATION

Transportation Information-DOT/IATA/IMDG

Special Shipping Notes Not dangerous goods.

15 REGULATORY INFORMATION

Regulatory Information

Target Organ Effect



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SARA

Sara 302 No chemicals in this material are subject to the reporting requirements.
Component
Sara 313 Yes
Component

SARA 311/312 Hazards

Chronic (Y/N) Y

STATE REGULATIONS

Massachusetts Yes
Right to Know
Pennsylvania Right Yes
to Know

California This product does not contain any chemicals known to State of California to cause cancer, birth
Proposition 65 defects, or any other reproductive harm.

Canada

DSL Status All components are on the Canadian DSL list.

EU

Hazard Irritant

Safety Statements

For waste disposal purposes, this product is not known to be defined or designated as hazardous by current provisions of the Federal (EPA) resource Conservation and Recovery Act (RCRA, 40CFR261).
After contact with skin, wash immediately with plenty of ... (to be specified by the manufacturer).
Wear suitable protective clothing.

Risk Statements

Irritating to eyes, respiratory system and skin.
May cause sensitisation by skin contact.

16 OTHER INFORMATION

Additional MSDS This product is not radioactive. The data given for this product are those of the corresponding
Information unlabeled compound, unless specifically indicated otherwise. Health and safety data for labeled
 compounds are generally not available, but are assumed to be similar or identical to the
 corresponding unlabeled compound.

Approved On 04/25/11
Version Number 2