



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

Number:
Issue Date

NILM-4446
03/03/11

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MATERIAL SAFETY DATA SHEET

1 CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Description NICKEL-60 METAL (60Ni)

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

Flammable solid, Target Organ Effect, Skin sensitizer, Carcinogen

Target Organs

Lungs

GHS Label Information

Signal Word Danger

Hazards Identification

Flame
Health hazard
Exclamation mark
Environment

Hazard Statement(s)

Flammable solid.
May cause an allergic skin reaction.
Suspected of causing cancer.
Causes damage to organs through prolonged or repeated exposure.



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Very toxic to aquatic life.

Precautionary Statement(s)

Keep away from heat/sparks/open flames/hot surfaces- No smoking.

Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.

Get medical advice/attention if you feel unwell.

HMIS Ratings

Chronic Health	*
Physical	3
Flammability	0
Health	2

NFPA Codes

Fire	0
Health	2
Reactivity	3

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	Ni
Molecular Weight	59.93
CAS No.	7440-02-0 (unlabeled)
EC No.	231-111-4
Index No.	028-002-01-4

4 FIRST AID MEASURES

First Aid Measures

Eyes	Flush eyes with water as a precaution.
Ingestion	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.
Inhalation	If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.



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

6 ACCIDENTAL RELEASE MEASURES

Accidental Release Measures

Personal Precautions	Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. 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	Sweep up and shovel. Keep in suitable, closed containers for disposal.

7 HANDLING AND STORAGE

Precautions for Safe Handling

Handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent build up of electrostatic charge.
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Conditions for Safe Storage

Storage	Store at room temperature away from light and moisture.
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8 EXPOSURE CONTROL / PERSONAL PROTECTION

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)



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CHEMICAL NAME		OSHA PEL	ACGIH TLV
NICKEL	TWA	1 mg/M ³	1.5 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.
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	Powder
Color	White, silver, metallic
pH	No data available
Melting Point	1,453 °C (2,647 °F) - lit
Boiling Point	2,732 °C (4,950 °F) - lit
Flashpoint	Not applicable
Flammability	The substance or mixture is a flammable solid with the subcategory 2
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Vapor Pressure	1 hPa (1 mmHg) at 1,810 °C (3,290 °F)
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	Heat, flames and sparks. Extremes of temperature and direct sunlight.



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Hazardous decomposition products Formed under fire conditions: Nickel/Nickel oxides

Materials to avoid Acids, Oxidizing agents, Sulphur compounds, Hydrogen gas, Oxygen, Methanol
Additional Information Materials to avoid: Organic solvents, Aluminum, Fluorine, Ammonia

11 TOXICOLOGICAL INFORMATION

Acute Toxicity

Serious Damage/Eye Irritation No data available

Skin Corrosion/Irritation No data available

Inhalation No data available

Respiratory or Skin Sensitization May cause allergic skin reaction.

Germ Cell Mutagenicity Not available

Carcinogenicity This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification. Limited evidence of carcinogenicity in animal studies.

IARC 2B- Group 2B: Possibly carcinogenic to humans.
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 Reasonably anticipated to be a human carcinogen.
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 Inhalation - Causes damage to organs through prolonged or repeated exposure

Signs and Symptoms of Exposure

The chemical, physical, and toxicological properties have not been thoroughly investigated.



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12 ECOLOGICAL INFORMATION

Toxicity

Toxicity to Fish LC50	Cyprinus carpio (Carp) - 1.3 mg/l - 96 h
Toxicity to Daphnia and Other Aquatic Invertebrates EC50	Daphnia magna (Water flea) - 1 mg/l - 48 h
Persistence and Degradability	Not available
Bioaccumulative Potential	Not available
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.
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14 TRANSPORT INFORMATION

Transportation Information-DOT/IATA/IMDG

UN Number	3089
Prop. Ship. Name	Metal powders, flammable, n.o.s., (Nickel, powder [particle diameter < 1 mm])
Hazard Class	4.1
Packing Group	II
Reportable Quantity (RQ) DOT US	100 lbs
Marine Pollutant	No
Poison Inhalation Hazard	No



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15 REGULATORY INFORMATION

Regulatory Information

Flammable solid, Target Organ Effect, Skin sensitizer, Carcinogen

SARA

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

Sara 313 Component Yes

SARA 311/312 Hazards

Fire (Y/N) Y

Acute (Y/N) Y

Chronic (Y/N) Y

STATE REGULATIONS

Massachusetts Right to Know Yes

Pennsylvania Right to Know Yes

New Jersey Right to Know Yes

California Proposition 65 WARNING! This product contains a chemical known by the state of California to cause cancer.

Canada

DSL Status All components are on the Canadian DSL list.

EU

Hazard Flammable. Dangerous for the environment.

Safety Statements

Keep away from sources of ignition - No smoking.

Wear suitable protective clothing and gloves.

Risk Statements

Flammable.

Limited evidence of a carcinogenic effect.

May cause sensitisation by skin contact.



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16 OTHER INFORMATION

Additional MSDS Information This product is not radioactive. The data given for this product are those of the corresponding 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 03/03/11
Version Number 1