

Super Conductor Materials, Inc.

391 Spook Rock Industrial Park, Suffern, NY 10901 · 845.368.0240 · Fax 845.368.0250 · www.scm-inc.com

Chemtrec: (800) 424-9300
Poison Center: (800) 562-8236
Revision Date: January 8th, 2019

SAFETY DATA SHEET

Identity: Neodymium

Formula: Nd

SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular Weight: 144.24

CAS #	OSHA PEL	ACGIH TLV	%
7440-00-8	N/E	N/E	0.0-100.0%

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 3074.00°C

Vapor Pressure: N/A

Melting Point: 1021.00°C

Specific Gravity: (water=1): 7.00 gm/cc

Evaporation Rate: N/A

Flash Point: NA

Solubility in water: Decomposes

Vapor Density: N/A

Appearance and odor: Gray pieces, no odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown

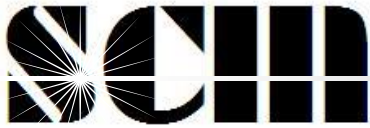
Explosive Limits: LEL: NA UEL: NA

Extinguishing Media:

Use suitable extinguishing media for surrounding materials and type of fire. Fire fighters must wear full face self-contained breathing apparatus. Fumes from fire are hazardous.

Special Fire Fighting Procedures:

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.



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Unusual Fire and Exploration Hazards:

Reacts violently with air, halogens, nitrogen phosphorous above 400°C.

Contact with strong acids may evolve hydrogen gas.

SECTION V - REACTIVITY DATA

Stability: Unstable

Conditions to Avoid (stability): Air and moisture.

Incompatibility: Air, moisture, halogens, acids, phosphorus and nitrogen and oxidizing agents.

Hazardous Decomposition or Byproducts: Hydrogen gas and oxides of neodymium

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes Skin? Yes Eyes? Yes Ingestion? Yes Other? No

Neodymium is considered a rare earth metal. These metals are moderately to highly toxic. The symptoms of toxicity of the rare earth elements include writhing, ataxia, labored respiration, walking on the toes with arched back and sedation. The rare earth elements exhibit low toxicity by ingestion exposure. However, the intraperitoneal route is highly toxic while the subcutaneous route is poison to moderately toxic. The production of skin and lung granulomas after exposure to them requires extensive protection to prevent such exposure. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause writhing, loss of muscle coordination, labored respiration, sedation, hypotension and cardiovascular failure.

Ingestion: May cause nausea, vomiting, diarrhea, abdominal burning and cramp-like pain.

Skin: May cause redness, itching and burning.

Eye: May cause redness, itching, burning and watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: May cause irritation to the respiratory tract and mucous membrane. Dusts may cause asthma attacks and lung damage such as lung granulomas. Large doses may cause immediate defecation, writhing, loss of muscle coordination, labored respiration, sedation, hypotension and cardiovascular failure.

Chronic: Prolonged or repeated inhalation may cause writhing, loss of muscle coordination, labored respiration, sedation, hypotension and cardiovascular failure.

Ingestion:

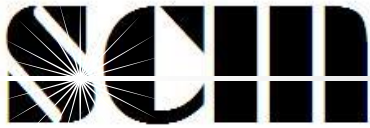
Acute: Low toxicity by ingestion due to poor absorption. May cause gastrointestinal irritation.

Chronic: May affect the coagulation rate of the blood.

Skin:

Acute: May cause irritation, rashes and skin granulomas.

Chronic: May cause dermatitis, sensitivity to heat, itching and skin lesions.



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Eye:

Acute: May cause irritation.

Chronic: No chronic health effects recorded.

Target Organ: May affect the respiratory system, blood and skin.

Carcinogenicity: NTP? No IARC Monographs? No OSHA Regulated? No

Medical Conditions Aggravated by Exposure: Pre-existing respiratory disorder

Emergency and First Aid Procedures:

Inhalation: Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention.

Ingestion: Give 1-2 glasses of milk or water and induce vomiting if victim is conscious, keep warm and quiet; seek medical attention.

Skin: Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist.

Eye: Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention if symptoms persist.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to be taken in case material is released or spilled:

Wear appropriate respiratory and protective equipment specified in section VIII-Control Measures. Isolate spill area, provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust. Use non-sparking tools.

Waste disposal method:

Dispose of in accordance with state, local, and federal regulations.

Hazard Label Information:

Store in cool, dry area and in tightly sealed container. Wash thoroughly after handling.

Precautions: Neodymium metal is air and moisture sensitive. Handle in an inert gas such as argon and store under oil.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH/MSHA approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

Ventilation:

Local Exhaust: To maintain concentration at low levels

Special: Handle in a controlled process

Mechanical (General): Not recommended

Other: Handle in an inert gas such as argon



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Work/Hygienic/Maintenance Practices:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established