



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: Nickel boride

Formula: Ni₂B

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 – INGREDIENTS/SUMMARY OF HAZARDS

Molecular Weight: 128.23

CAS #	OSHA/PEL	ACGIH TLV	%
120007-01-1	1mg/m ³	1mg/m ³	0.0-100.0%

SECTION III – PHYSICAL DATA

Physical State: Solid

Boiling Point: N/A

Specific Gravity (H₂O=1): 8.50 g/cc

Melting Point: N/A

Vapor Pressure (vs. air or mmHg): N/A

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water: Decomposes

Appearance and Odor: Metallic pieces and powder, no odor

SECTION IV – FIRE AND EXPLOSION HAZARD DATA

Method Used: Flammable Solid

Explosive Limits: LEL: N/A

UEL: N/A

Extinguishing Media: Use suitable extinguishing agent for surrounding material and type of fire.

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.

Unusual Fire and Explosion Hazards: None recorded

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (instability): None

Incompatibility: None recorded



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Hazardous Decomposition or Byproducts: None recorded

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI – HEALTH HAZARDS

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

To the best of our knowledge the chemical, physical and toxicological properties of nickel boride have not been thoroughly investigated and recorded.

Nickel is a confirmed carcinogen with experimental carcinogenic, neoplastigenic, tumorigenic and teratogenic data. Poison by ingestion, intratracheal, intraperitoneal, subcutaneous and intravenous routes. An experimental teratogen. Ingestion of soluble salts causes nausea, vomiting and diarrhea. Hypersensitivity to nickel is common and can cause allergic contact dermatitis, pulmonary asthma, conjunctivitis and inflammatory reactions around nickel containing medical implants and prosthesis. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Boron compounds are very toxic and therefore considered an industrial poison. Boron is one of a group of elements, such as Pb, Mn, As, which affects the central nervous system. Boron poisoning causes depression of the circulation, persistent vomiting and diarrhea, followed by profound shock and coma. The temperature because subnormal and scarletina form rash may cover the entire body. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Exposure:

Inhalation: May cause a red, dry, sore nose and throat, coughing and shortness of breath. May also cause irritation to mucous membranes, nasal cavities, pulmonary asthma attacks and pneumonia.

Ingestion: May cause gastritis, convulsions, asphyxia, giddiness, nausea, diarrhea and vomiting. May cause gastroenteritis, nervous symptoms, depression of circulation, persistent vomiting, diarrhea, intestinal disorders shock and coma.

Skin: May cause redness, itching, swelling, burning and ulcers

Eye: May cause red, itching, and watering

Health Hazards (Acute and Chronic):

Inhalation:

Acute: May cause irritation to the upper respiratory tract, mucous membranes, nasal cavities and boron poisoning. May cause pulmonary asthma attacks.

Chronic: Prolonged or repeated inhalation may cause pneumatic.

Ingestion:

Acute: Large doses may cause boron poisoning, intestinal disorders, convulsions and asphyxia.

Chronic: May cause nickel toxicity affects the central nervous system.

Skin:

Acute: May cause irritation.

Chronic: May sensitize the skin (nickel itch). May cause allergic dermatitis, eczematous dermatitis and may be accompanied a week later with superficial skin ulcers, which may discharge and become crusted.

Eye:

Acute: May cause irritation.

Chronic: May cause conjunctivitis.

Target Organs: May affect the nasal cavity, central nervous system, respiratory system, lungs, blood and skin.

Carcinogenicity: NTP? Yes

IARC Monographs? Yes

OSHA Regulated? Yes



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Medical Conditions Aggravated by Exposure: Pre-existing respiratory disorders, pulmonary functions, asthma, and skin 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, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person

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

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. Isolate spill area, provide ventilation and extinguish sources of ignition. 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.

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.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

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

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Special: Handle in a controlled environment when in powder form.

Mechanical (General): Recommended.

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