

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT NAME

Product Name: Sintered Neodymium Iron Boron (NdFeB) Permanent Magnet

SECTION 2 - HAZARDOUS INGREDIENTS

Chemical Name: Sintered Neodymium Iron Boron (NdFeB) Permanent Magnet

Material or Component	Weight %	CAS No.	ACGUH TLV (mg/m ³)	Notes
Neodymium	≈ 33%	7440-00-8	Not established	
Iron	≈ 65%	7439-89-6	10 (oxide)	
Boron	≈ 1.3%	7440-42-8	10	
Nickel	0.01-0.4%	7440-02-0	1 (dust) / 0.1 (fume)	Plating
Copper	0.01-0.2%	7440-50-8	1 (dust) / 0.2 (fume)	Plating
Dysprosium	0-4%	7429-91-6	Not established	May be used in high-temp grades
Cobalt	0-5%	7440-48-4	0.02	May be used in high-temp grades

SECTION 3 - PHYSICAL CHARACTERISTICS

Boiling Point: N/A
Vapor Pressure: (mm Hg.) N/A
Vapor Density: (air = 1) N/A
Specific Gravity: 7.4
Melting Point: Above 1000°C (1832°F)
Evaporation Rate: N/A
Odor: No odor
Solubility in Water: Not soluble
Appearance: Silver-gray metal

SECTION 4—FIRE AND EXPLOSION HAZARD DATA

Flash Point: N/A
FLAMMABLE LIMITS: N/A
LEL: N/A
UEL: N/A
Extinguishing Media: Dry chemicals without Oxygen Compounds or sand
Special Fire Fighting Procedures: Do not use Halon agents or water on smoldering, burning powder.

Unusual Fire and Explosion Hazard(s):

Dry powders of neodymium magnets will oxidize, smolder, and burn rapidly in the presence of air or oxygen. Maintain powders in water slurry or in inert atmospheres of nitrogen or argon to prevent spontaneous combustion. Magnets may spark on impact. Handle carefully in explosive atmospheres.

SECTION 5 - REACTIVITY DATA

Stability: Stable
Conditions to Avoid: Avoid exposure of powdered magnet material to air, oxygen or halogenated hydrocarbons, and to elevated temperatures above 150°C.
Incompatibility (Materials to Avoid): Fine powders are incompatible with air, oxygen, halogenated hydrocarbons and strong oxidizers.

SECTION 6 - HEALTH HAZARD DATA

Health Hazards (Acute & Chronic): Prolonged skin contact may cause irritation or allergic dermatitis.

Emergency and First Aid Procedures:

Skin: Brush off powders and wash well with soap and water.
Eyes: Flush with running water for 15 minutes.

SECTION 7- PRECAUTIONS FOR SAFE HANDLING AND USE

Spill Procedure: Sweep up dust and store in water slurry or sealed containers utilizing inert atmosphere such as argon or nitrogen to prevent spontaneous combustion.

Waste Disposal Method: Dispose in accordance with federal, state, and local regulations.

SECTION 8 - CONTROL MEASURES

Respiratory Protection: Use NIOSH approved respirator when TLV is exceeded.
Eye Protection: Use safety glasses or goggles when handling magnets.
Skin Protection: Protective gloves are recommended when handling magnetized part or parts which may have sharp edges.
Ventilation: Use wet machining/grinding processes and adequate local ventilation to reduce dust levels.
Work / Hygienic Practices: Use personal protection equipment when required. Use good personal hygiene practices. Keep magnetized parts away from mechanical/electrical instruments which may be damaged by high magnetic fields.

WARNING

RARE EARTH MAGNETS ARE EXTREMELY POWERFUL!

They have very strong magnetic forces which make them attract to other magnets and other ferromagnetic materials such as iron or steel.

HANDLE WITH EXTREME CAUTION!

The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. ALB Materials Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.