

MATERIAL SAFETY DATA SHEET

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SECTION 1. PRODUCT DESCRIPTION

NEODYMIUM-IRON PERMANENT MAGNET

Nominal % Composition

Nd	B	Other Lanthanide Elements (58 thru 71)	Fe
30-36	LT 2	LT 4	BAL.

The magnet, as supplied, presents no health hazard. If the magnet is machined, abrasive ground, or magnetized, special handling procedures must be followed for safe use of the product.

SECTION 2. INGREDIENTS AND HAZARDS

CAS NO.	ELEMENT	SYMBOL	ACGIH TLV * (mg/m ³)	AIR CONTAMINATION
7440-00-8	Neodymium (Lanthanide element)	Nd	Not Established	----
7440-42-8	Boron	B	10.0	As BO ₂
1309-37-1	Iron	Fe	10.0 5.0	Total dust Respirable dust

* American Conference of Governmental Industrial Hygienists 1985-86. Threshold Limit Values (TLV) based on an 8 hour day, 40 hour week.

SECTION 3. PHYSICAL DATA

Specific gravity: 7.4
 Appearance and odor: As ground, silver-gray; as sintered, matte black; no odor
 Melting point: Above 2500°F
 Solubility: Not soluble

SECTION 4. FIRE AND EXPLOSION DATA

Dry powders of neodymium magnets will oxidize, smolder, and burn in the presence of air or oxygen. Maintain powders in water slurry or in inert atmospheres of nitrogen or argon to prevent spontaneous combustion. Burning powders should be extinguished using dry chemical or dry sand. Do not use water on smoldering, burning powder. Keep work areas clean and reduce build-up of powders and dusts. Magnets may spark on impact. Handle carefully in explosive atmospheres.

SECTION 5. REACTIVITY

Avoid exposure of powdered magnet material to air or oxygen, and to elevated temperatures above 150°C. Fine powders are incompatible with air, oxygen, halogenated hydrocarbons, and strong oxidizers.

SECTION 6. HEALTH HAZARDS

Primary route of entry: Inhalation of airborne dusts. Wet grinding or machining of product is recommended.
Powder material in eyes: Flush with running water for 15 minutes.
Prolonged skin contact may cause skin irritation or allergic dermatitis. Brush off powders and wash well with soap and water. Use good personal hygiene practices. Magnetized parts are subject to chipping, shattering, pinching on impact. Parts may spark on impact.

SECTION 7. WASTE DISPOSAL

Sweep up dusts and store in water slurry or sealed containers utilizing inert atmosphere such as argon or nitrogen to prevent spontaneous combustion. Dispose in accordance with federal, state, and local regulations.

SECTION 8. SPECIAL PROTECTION INFORMATION

Use NIOSH approved respirator when TLV is exceeded. Use safety glasses or goggles when handling magnets. Protective gloves are recommended when handling magnetized parts or parts which may have sharp edges. Use wet machining/grinding processes and adequate local ventilation to reduce dust levels.

SECTION 9. SPECIAL PRECAUTIONS AND COMMENTS

Use good manufacturing practices and good housekeeping practices that will keep generated dusts to a minimum. 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.