

## SAFETY DATA SHEET

### SECTION 1 - IDENTIFICATION

Product Name: Neodymium Iron Boron (NdFeB) Permanent Magnet

Chemical Name: Neodymium Iron Boron, NdFeB

### SECTION 2 – HAZARD IDENTIFICATION

HMIS Rating [0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)]: 0

Health: 1; Flammability: 1; Instability: 0; Special Hazards: None

### SECTION 3 – COMPOSITION ON INGREDIENTS

Material or Component	Cas No.	Weight %
Neodymium	7440-00-8	33 %
Iron	7439-89-6	65 %
Boron	7440-42-8	1.3 %
Nickel	7440-02-0	0.01-0.4%
Copper	7440-50-8	0.01-0.2%
Dysprosium	7429-91-6	0-4%
Cobalt	7440-48-4	0-5%

### SECTION 4 – FIRST-AID 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 keep dust levels to minimum.

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.

### SECTION 5 – FIRE-FIGHTING MEASURES

FLAMMABLE LIMITS: N/A

Flash Point: N/A

Lower Flammability Limit (LFL): N/A

Upper Flammability Limit (UFL): 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 6 – ACCIDENTAL RELEASE MEASURES

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.

#### SECTION 7 – HANDLING AND STORAGE

WARNING - CERAMIC 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! Material is brittle and may chip if not handled with care.

#### SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Health Hazards (Acute & Chronic): No Known health hazards. Not listed as carcinogen or potential carcinogen.

Emergency and First Aid Procedures:

Primary route of entry: Inhalation of generated airborne dusts. Any long-term exposure to dusts exceeding recommended TLV levels may result in irritation to upper respiratory tract.

Skin: Brush off powders and wash well with soap and water.

Eyes: Dust in eyes may cause irritation. Flush with running water for 15 minutes.

Use good personal hygiene. Avoid ingestion of dusts by not eating, drinking or smoking in the areas where dusts are generated.

#### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point: N/A

Vapor Pressure: (mm Hg.) N/A

Vapor Density: (air = 1) N/A

Specific Gravity: (water = 1) 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

pH: Neutral

#### SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable, no known incompatibilities

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.

Fine powders or dusts generated by dry grinding or machining may lead to explosive hazard. Control dust levels by applying wet machining process, local exhaust ventilation and good housekeeping.

SECTION 11 – TOXICOLOGICAL INFORMATION

N/A

SECTION 12 – ECOLOGICAL INFORMATION

N/A

SECTION 13 – DISPOSAL CONSIDERATIONS

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

SECTION 14 – TRANSPORTATION INFORMATION

Proper Transportation Name: Class 60, Magnets

SECTION 15 – REGULATORY INFORMATION

N/A

SECTION 16 – OTHER INFORMATION

N/A

*The above information is believed to be accurate but does not implicate to be all-inclusive and shall be used only as a guide. Armstrong Magnetics, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.*