Sintered Radial Neodymium Iron Boron

Grade Characteristics

Grade	Type of Material	Isotropic/Anisotropic
N35	Sintered NdFeB	Anisotropic
N38	Sintered NdFeB	Anisotropic
N40	Sintered NdFeB	Anisotropic
N42	Sintered NdFeB	Anisotropic
N35H	Sintered NdFeB	Anisotropic
N38H	Sintered NdFeB	Anisotropic
N40H	Sintered NdFeB	Anisotropic
N42H	Sintered NdFeB	Anisotropic
N35SH	Sintered NdFeB	Anisotropic

Grade	Type of Material	Isotropic/Anisotropic
N38SH	Sintered NdFeB	Anisotropic
N40SH	Sintered NdFeB	Anisotropic
N33UH	Sintered NdFeB	Anisotropic
N35UH	Sintered NdFeB	Anisotropic
HP40H		Anisotropic
HP35SH		Anisotropic
HP33UH		Anisotropic

Magnetic Characteristics

Grade	Br	Br	Hcb	Hcb	Hcj	Hcj	Bhmax	Bhmax
	mT	KGs	Gauss	KA/m	KOe	Oersteds	KOe	KA/m
N35	1.18-1.23	11.8-12.3	868	10.9	12	955	263-287	33-36
N38	1.23-1.26	12.3-12.6	899	11.3	12	955	287-311	36-39
N40	1.26-1.29	12.6-12.9	907	11.4	12	955	302-327	38-41
N42	1.29-1.33	12.9-13.3	915	11.5	12	955	318-342	40-43
N35H	1.18-1.23	11.8-12.3	868	10.9	17	1353	263-287	33-36
N38H	1.23-1.26	12.3-12.6	899	11.3	17	1353	287-311	36-39
N40H	1.26-1.29	12.6-12.9	923	11.6	17	1353	302-327	38-41
N42H	1.29-1.33	12.9-13.3	955	12.0	17	1353	318-342	40-43
N35SH	1.18-1.23	11.8-12.3	876	11.0	20	1592	263-287	33-36
N38SH	1.23-1.26	12.3-12.6	907	11.4	20	1592	287-311	36-39
N40SH	1.26-1.29	12.6-12.9	939	11.6	20	1592	302-326	38-41
N33UH	1.14-1.18	11.4-11.8	852	10.7	25	1989	247-271	31-34

Grade	Br	Br	Hcb	Hcb	Hcj	Hcj	Bhmax	Bhmax
	mT	KGs	Gauss	KA/m	KOe	Oersteds	KOe	KA/m
N35UH	1.18-1.23	11.8-12.3	860	10.8	25	1989	263-287	33-36
HP40H	1.26-1.29	12.6-12.9	923	11.6	17	1353	302-327	38-41
HP35SH	1.18-1.23	11.8-12.3	876	11.0	20	1592	263-287	33-36
HP33UH	1.14-1.18	11.4-11.8	852	10.7	25	1989	247-271	31-34

MSDS

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/Component(s):

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	test
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
Praseodymium	0-5%	74410-10-1	Not Established	N/A

Section 3 - Physical Characteristics

Vapor Pressure: (mm Hg.) N/A
Vapor Density: (air = 1) N/A
Specific Gravity: 7.1 - 7.6
Melting Point: Above 1000 Degrees C (1832 Degrees F)
Evaporation Rate: N/A
Odor: No Odor
Solubility in Water: Not Soluble

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 Hazards(s): Dry powders of neodymium magnets will oxidize, smolder, and burn rapidly in the presences 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 Degrees Celsius.
Incompatibility (Materials to Avoid): Fine powders are incompatible with air, oxygen, halogentated hydrocarbons with strong oxidizers

Section 6 - Health Hazard Data

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

Emergency and First Aid Procedures:

Procedure For	Procedure
Skin	Brush off powders and wash well with soap and water.
Eyes	Flush with water until clear.

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 of 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: Potective 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.