Sintered NdFeB magnet

The most powerful rare earth magnets available, sintered NdFeB is produced by powder metallurgical process with chemical composition of Nd2Fe14B, which are hard, brittle and easily corrode, involving the sintering of compacts under vacuum. Poorest corrosion resistance of all commercial magnetic material. Grinding and slicing possible; very reactive with moisture and oxygen; coating may be applied depending on the expected environment. The sintered NdFeB magnet has high remanence, high coercive force, high-energy product and high ratio between performance value and product cost. It may be easily formed into various sizes. The intrinsic coercive force is over 30,000 Oe. Neodymium iron boron magnets lose -0.09 ~ -0.13% of Br/°C. Their working stability is under 80°C for low Hci. Neodymium magnets and above 200°C for high Hci Neodymium iron boron. The highest (BH)max reaches up to 51MGOe. The choice of Strip casting and HDDR technology in our factory allows us to make high performance NdFeB over N52 possible. Surface treatments have been developed that allow the sintered NdFeB magnet to be used in most applications. The treatments include gold, nickel, zinc and tin plating and epoxy resin coating.

Features of Sintered NdFeB Magnet:

Moderate temperature stability; Extremely resistance to demagnetization. Excellent strength value. Advanced Technology. Effective surface treatment to prevent corrosion. High resistance to demagnetization; Excellent cost to performance ratio; Reasonable temperature stability; Not suitable for application which exposed in high temperature conditions.

Application of Sintered NdFeB:

Especially suitable for used in various electronic motors, engineering equipment, medical equipment, Health bandages and plasters, audio apparatus, Micro products of Auto, National defence, Security systems, Computer, Biology project, Instrument and Meter, household appliances, Magnetic separators, Magnetic resonance imaging, Specialty door catches, Filters & strainers, Sensors Speakers, Microphone / earphone, High performance motors, Brushless motor, Micromotor / servo motor, VCM(voice coil motor) Automobiles, Magnetic coupling Magnetic Chuck, Magnetic toy, Magnetic tools, Other magnetic applications.

TYPE	Remanence Br		Coercivforce bHc		Intrinsic coercive force iHc		Max. energy product (BH) max		Working Temperature
	KGs	T	KOe	KA/m	KOe	KA/m	MGOe	KJ/m³	℃
N30	10.8-11.2	1.08-1.12	9.8-10.5	780-836	≥12	≥955	28-30	223-239	≤80
N33	11.4-11.7	1.14-1.17	10.5-11.0	836-876	≥12	≥955	31-33	247-263	≤80
N35	11.7-12.1	1.17-1.21	10.8-11.5	860-915	≥12	≥955	33-35	263-279	≤80
N36	11.9-12.2	1.19-1.22	10.8-11.5	860-915	≥12	≥955	34-36	271-287	≤80
N38	12.2-12.6	1.22-1.26	10.8-11.5	860-915	≥12	≥955	36-38	287-303	≤80
N40	12.6-12.9	1.26-1.29	10.5-11.0	836-876	≥12	≥955	38-40	303-318	≤80
N42	12.9-13.2	1.29-1.32	10.5-11.0	836-876	≥12	≥955	40-42	318-334	≤80
N43	13.0-13.3	1.30-1.33	10.5-11.0	836-876	≥12	≥955	41-43	326-342	≤80
N45	13.3-13.7	1.33-1.37	10.5-11.0	836-876	≥12	≥965	43-45	342-358	≤80
N48	13.8~14.2	1.38~1.42	≥10.5	≥835	≥12	≥955	46~49	366~390	≤80
N50	13.8~14.5	1.38~1.45	≥10.5	≥835	≥11	≥955	47~51	374~406	≤80
N52	14.3~14.8	1.43~1.48	≥10.8	≥860	≥11	≥876	50~53	398~422	≤80
N27M	10.2-10.6	1.02-1.06	9.6-10.1	764-804	≥15	≥1194	25-27	199-215	≤100

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N30M	10.8-11.2	1.08-1.12	10.1-10.6	804-844	≥15	≥1194	28-30	223-239	≤100
N33M	11.4-11.7	1.14-1.17	10.5-11.0	844-884	≥15	≥1194	31-33	247-263	≤100
N35M	11.7-12.1	1.17-1.21	10.8-11.5	860-915	≥15	≥1114	33-35	263-279	≤100
N36M	11.9-12.2	1.19-1.22	11.1-11.6	884-923	≥15	≥1194	34-36	271-287	≤100
N38M	12.2-12.6	1.22-1.26	10.8-11.5	860-915	≥14	≥1114	36-38	287-303	≤100
N40M	12.6-12.9	1.26-1.29	10.8-11.5	860-915	≥14	≥1114	38-40	303-318	≤100
N42M	12.9-13.2	1.29-1.32	10.8-11.4	860-907	≥14	≥1114	40-42	318-334	≤100
N45M	13.3-13.7	1.33-1.37	10.8-11.4	860-907	≥17	≥1114	43-45	334-358	≤100
N48M	13.6~~14.0	1.36~1.40	≥11.8	≥939	≥14	≥1114	46~49	366~390	≤100
N50M	14.0~14.5	1.39~1.43	≥13.0	≥1033	≥14	≥1114	48~51	382~406	≤100
N27H	10.2-10.6	1.02-1.06	9.6-10.1	764-804	≥17	≥1353	25-27	199-215	≤120
N30H	10.8-11.2	1.08-1.12	10.1-10.6	804-844	≥17	≥1353	28-30	223-239	≤120
N33H	11.4-11.7	1.14-1.17	10.6-11.1	844-884	≥17	≥1353	31-33	247-263	≤120
N35H	11.7-12.1	1.17-1.21	10.8-11.5	860-915	≥17	≥1353	33-35	263-279	≤120
N36H	11.9-12.2	1.19-1.22	11.1-11.6	884-923	≥17	≥1353	34-36	271-287	≤120
N38H	12.2-12.6	1.22-1.26	11.5-12.0	915-955	≥17	≥1353	36-38	287-303	≤120
N40H	12.6-12.9	1.26-1.29	11.5-12.0	915-955	≥17	≥1353	38-40	303-318	≤120
N42H	12.9-13.2	1.29-1.32	11.5-12.0	915-955	≥17	≥1353	40-42	318-334	≤120
N45H	13.2~13.8	1.26~1.32	≥12.4	≥987	≥17	≥1353	42~46	335~366	≤120
N46H	13.4~13.8	1.34~1.38	≥12.8	≥1019	≥17	≥1353	44~47	350~374	≤120
N48H	13.6~14.2	1.36~1.42	≥12.8	≥1019	≥16	≥1274	45~48	358~382	≤120
N27SH	10.2-10.6	1.02-1.06	9.6-10.1	764-804	≥20	≥1592	25-27	199-215	≤150
N30SH	10.8-11.2	1.08-1.12	10.1-10.6	804-844	≥20	≥1592	28-30	223-239	≤150
N33SH	11.4-11.7	11.4-11.7	10.6-11.1	844-884	≥20	≥1592	31-33	247-263	≤150
N35SH	11.7-12.1	1.17-1.21	10.8-11.5	860-915	≥20	≥1595	33-35	263-279	≤150
N38SH	12.1-12.5	1.21-1.25	10.8-11.5	860-915	≥20	≥1592	36-38	287-302	≤150
N40SH	12.6-12.9	1.26-1.29	10.8-11.5	860-915	≥20	≥1592	38-40	303-318	≤150
N42SH	12.8~13.2	1.28~1.32	≥11.8	≥939	≥20	≥1672	40~43	320~343	≤150
N45SH	13.2~13.8	1.32~1.38	≥12.6	≥1003	≥20	≥1592	43~46	342~366	≤150
N25UH	9.8-10.2	0.98-1.02	9.2-9.6	732-764	≥25	≥1990	23-25	183-199	≤180
N28UH	10.4-10.8	1.04-1.08	9.8-10.2	780-812	≥25	≥1990	26-28	207-223	≤180
N30UH	10.8-11.2	1.08-1.12	10.1-10.6	804-844	≥25	≥1990	28-30	223-239	≤180
N35UH	11.7-12.1	1.17-1.21	10.5-11.2	836-890	≥25	≥1989	33-35	263-278	≤180
N38UH	12.1-12.5	1.21-1.25	≥11.4	≥907	≥25	≥1990	36-39	287-310	≤180
N40UH	12.5-12.8	1.25-1.28	≥11.4	≥907	≥25	≥1990	38-41	302-326	≤180
N25EH	9.8-10.2	0.98-1.02	9.2-9.6	732-764	≥30	≥2387	23-25	183-199	≤200
N28EH	10.4-10.8	1.04-1.08	9.8-10.2	780-812	≥30	≥2387	26-28	207-223	≤200
N30EH	10.8-11.2	1.08-1.12	10.1-10.6	804-844	≥30	≥2387	28-30	223-239	≤200
N35EH	11.7-12.1	1.17-1.21	≥10.2	≥812	≥30	≥2388	33-36	263-287	≤200
N38EH	12.1-12.5	1.21-1.25	≥11.4	≥907	≥30	≥2388	36-39	287-310	≤200
N30AH	10.8~11.3	1.08~1.13	≥10.2	≥812	≥35	≥2785	28~32	223~255	≤220

N33AH	11.2~11.7	1.12~1.17	≥10.2	≥812	≥35	≥2785	31~34	247~271	≤220

Other Physical Properties (NdFeB)

Temp.Coeff.of Br	-0.11%/℃	**Temp.Coeff.of iHc**	-0.60%/℃
Density	7.4~7.6g/cm^3	**Electrical resistivity**	144μΩ/cm
Vickers Hardness	600/Hv	**Flexural Strength**	25kg/mm
Tensile Strength	8.0kg/mm^2	**Coeff.of Thermal Expansion**	4×10^{-6}%/℃
Specific Heat	0.12kCal/(kg.℃)	**Thermal Conductivity**	7.7w/(m℃)
Yound's Modulus	1.6×10^{11}N/m^2	**Rigidity**	0.64N/m^2
Poisson's Ratio	0.24	**Compressibility**	9.8×10^{-12}m^2/N
Curie Temperature	310~340℃		