



NdFeB Magnets

Neodymium Magnets ($\text{Nd}_2\text{Fe}_{14}\text{B}$), introduced in 1982, remain the world's most widely used rare-earth permanent magnet. High remanence, coercivity, and energy product enable smaller, stronger designs in blocks, cylinders, rings, arcs, and more — for motors, speakers, sensors, and consumer electronics.



X-MAG provides comprehensive services for magnet design and material selection tailored to your specific application.

Typical Magnetic Properties of Sintered NdFeB Magnets

Grade	Remanence		Coercivity				Max Energy Product		Temperature Coefficient		Max Working Temperature
	Br		HcB		HcJ		(BH)max		a (Br)	β (HcJ)	TwMax
	T	kGs	kA/m	kOe	kA/m	kOe	kJ/m ³	MGOe	%/ ° C	%/ ° C	° C
N35	1.17-1.22	11.7-12.2	≥868	≥10.9	≥955	≥12	263-287	33-36	-0.12	-0.6	80
N38	1.22-1.26	12.2-12.6	≥899	≥11.3	≥955	≥12	287-310	36-39	-0.12	-0.6	80
N40	1.26-1.29	12.6-12.9	≥907	≥11.4	≥955	≥12	302-326	38-41	-0.12	-0.6	80
N42	1.29-1.33	12.9-13.3	≥915	≥11.5	≥955	≥12	318-342	40-43	-0.12	-0.6	80
N45	1.33-1.37	13.3-13.7	≥915	≥11.5	≥955	≥12	342-366	43-46	-0.12	-0.6	80
N48	1.37-1.40	13.7-14.0	≥876	≥11.0	≥955	≥12	358-390	45-49	-0.12	-0.6	80
N50	1.39-1.42	13.9-14.2	≥836	≥10.5	≥955	≥12	374-406	47-51	-0.12	-0.6	80
N52	1.42-1.45	14.2-14.5	≥836	≥10.5	≥955	≥12	382-414	48-52	-0.12	-0.6	80
N54	1.44-1.47	14.4-14.7	≥796	≥10.0	≥875	≥11	398-422	50-53	-0.12	-0.6	60
N56	1.46-1.50	14.6-15.0	≥796	≥10.0	≥875	≥11	406-438	51-55	-0.12	-0.6	60
N58	1.48-1.52	14.8-15.2	≥796	≥10.0	≥875	≥11	414-446	52-56	-0.12	-0.6	60
N35M	1.17-1.22	11.7-12.2	≥868	≥10.9	≥1114	≥14	263-287	33-36	-0.11	-0.6	100
N38M	1.22-1.26	12.2-12.6	≥899	≥11.3	≥1114	≥14	287-310	36-39	-0.11	-0.6	100
N40M	1.26-1.29	12.6-12.9	≥923	≥11.6	≥1114	≥14	302-326	38-41	-0.11	-0.6	100
N42M	1.29-1.33	12.9-13.3	≥955	≥12.0	≥1114	≥14	318-342	40-43	-0.11	-0.6	100
N45M	1.33-1.37	13.3-13.7	≥995	≥12.5	≥1114	≥14	342-366	43-46	-0.11	-0.6	100
N48M	1.37-1.40	13.7-14.0	≥1035	≥13.0	≥1114	≥14	358-390	45-49	-0.11	-0.6	100
N50M	1.39-1.42	13.9-14.2	≥1035	≥13.0	≥1114	≥14	374-406	47-51	-0.11	-0.6	100

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	Br		HcB		HcJ		(BH)max		a (Br)	β (HcJ)	TwMax
	T	kGs	kA/m	kOe	kA/m	kOe	kJ/m ³	MGOe	%/ ° C	%/ ° C	° C
N52M	1.42-1.45	14.2-14.5	≥1035	≥13.0	≥1114	≥14	382-414	48-52	-0.11	-0.6	100
N54M	1.44-1.47	14.4-14.7	≥1035	≥13.0	≥1114	≥14	398-422	50-53	-0.11	-0.6	100
N56M	1.46-1.52	14.6-15.2	≥1035	≥13.0	≥1114	≥14	406-438	51-55	-0.11	-0.6	100
N35H	1.17-1.22	11.7-12.2	≥868	≥10.9	≥1353	≥17	263-287	33-36	-0.11	-0.58	120
N38H	1.22-1.26	12.2-12.6	≥899	≥11.3	≥1353	≥17	287-310	36-39	-0.11	-0.58	120
N40H	1.26-1.29	12.6-12.9	≥923	≥11.6	≥1353	≥17	302-326	38-41	-0.11	-0.58	120
N42H	1.29-1.33	12.9-13.3	≥955	≥12.0	≥1353	≥17	318-342	40-43	-0.11	-0.58	120
N45H	1.33-1.37	13.3-13.7	≥971	≥12.2	≥1353	≥17	342-366	43-46	-0.11	-0.58	120
N48H	1.37-1.40	13.7-14.0	≥995	≥12.5	≥1353	≥17	358-390	45-49	-0.11	-0.58	120
N50H	1.39-1.42	13.9-14.2	≥1035	≥13.0	≥1353	≥17	374-406	47-51	-0.11	-0.58	120
N52H	1.42-1.45	14.2-14.5	≥1035	≥13.3	≥1353	≥17	382-414	48-52	-0.11	-0.58	120
N54H	1.44-1.47	14.4-14.7	≥1035	≥13.5	≥1353	≥17	398-422	50-53	-0.11	-0.58	120
N56H	1.46-1.52	14.6-15.2	≥1035	≥13.7	≥1353	≥17	406-438	51-55	-0.11	-0.58	120
N35SH	1.17-1.22	11.7-12.2	≥876	≥11.0	≥1592	≥20	263-287	33-36	-0.11	-0.55	150
N38SH	1.22-1.26	12.2-12.6	≥907	≥11.4	≥1592	≥20	287-310	36-39	-0.11	-0.55	150
N40SH	1.26-1.29	12.6-12.9	≥939	≥11.8	≥1592	≥20	302-326	38-41	-0.11	-0.55	150
N42SH	1.29-1.33	12.9-13.3	≥955	≥12.0	≥1592	≥20	318-342	40-43	-0.11	-0.55	150

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	Br		HcB		HcJ		(BH)max		a (Br)	β (HcJ)	TwMax
	T	kGs	kA/m	kOe	kA/m	kOe	kJ/m ³	MGOe	%/ ° C	%/ ° C	° C
N45SH	1.33-1.37	13.3-13.7	≥995	≥12.5	≥1592	≥20	342-366	43-46	-0.11	-0.55	150
N48SH	1.37-1.40	13.7-14.0	≥995	≥12.5	≥1592	≥20	358-390	45-49	-0.11	-0.55	150
N50SH	1.39-1.42	13.9-14.2	≥1035	≥13.0	≥1592	≥20	374-406	47-51	-0.11	-0.55	150
N52SH	1.42-1.45	14.2-14.5	≥1035	≥13.3	≥1512	≥19	382-414	48-52	-0.11	-0.55	150
N54SH	1.44-1.47	14.4-14.7	≥1035	≥13.5	≥1592	≥20	398-422	50-53	-0.11	-0.55	150
N56SH	1.46-1.52	14.6-15.2	≥1035	≥13.7	≥1512	≥19	406-438	51-55	-0.11	-0.55	150
N35UH	1.17-1.22	11.7-12.2	≥860	≥10.8	≥1990	≥25	263-287	33-36	-0.1	-0.5	180
N38UH	1.22-1.26	12.2-12.6	≥876	≥11.0	≥1990	≥25	287-310	36-39	-0.1	-0.5	180
N40UH	1.26-1.29	12.6-12.9	≥915	≥11.5	≥1990	≥25	302-326	38-41	-0.1	-0.5	180
N42UH	1.29-1.33	12.9-13.3	≥955	≥12.0	≥1990	≥25	318-342	40-43	-0.1	-0.5	180
N45UH	1.33-1.37	13.3-13.7	≥995	≥12.5	≥1990	≥25	342-366	43-46	-0.1	-0.5	180
N48UH	1.37-1.40	13.7-14.0	≥995	≥12.5	≥1910	≥24	358-390	45-49	-0.1	-0.5	180
N50UH	1.39-1.42	13.9-14.2	≥1035	≥13.0	≥1990	≥25	374-406	47-51	-0.1	-0.5	180
N52UH	1.42-1.45	14.2-14.5	≥1058	≥13.3	≥1990	≥25	382-414	48-52	-0.1	-0.5	180
N54UH	1.44-1.47	14.4-14.7	≥1075	≥13.5	≥1910	≥24	398-422	50-53	-0.1	-0.5	180
N35EH	1.17-1.22	11.7-12.2	≥860	≥10.8	≥2388	≥30	263-287	33-36	-0.1	-0.5	200
N38EH	1.22-1.26	12.2-12.6	≥876	≥11.0	≥2388	≥30	287-310	36-39	-0.1	-0.5	200

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	Br		HcB		HcJ		(BH)max		a (Br)	β (HcJ)	TwMax
	T	kGs	kA/m	kOe	kA/m	kOe	kJ/m ³	MGOe	%/ ° C	%/ ° C	° C
N40EH	1.26-1.29	12.6-12.9	≥915	≥11.5	≥2388	≥30	302-326	38-41	-0.1	-0.5	200
N42EH	1.29-1.33	12.9-13.3	≥955	≥12.0	≥2388	≥30	318-342	40-43	-0.1	-0.5	200
N45EH	1.33-1.37	13.3-13.7	≥995	≥12.5	≥2308	≥29	342-366	43-46	-0.1	-0.5	200
N48EH	1.37-1.40	13.7-14.0	≥995	≥12.5	≥2388	≥30	358-390	45-49	-0.1	-0.5	200
N50EH	1.39-1.42	13.9-14.2	≥1035	≥13.0	≥2388	≥29	374-406	47-51	-0.1	-0.5	200
N35AH	1.17-1.22	11.7-12.2	≥860	≥10.8	≥2786	≥35	263-287	33-36	-0.1	-0.5	220
N38AH	1.22-1.26	12.2-12.6	≥876	≥11.0	≥2786	≥35	287-310	36-39	-0.1	-0.5	220
N40AH	1.26-1.29	12.6-12.9	≥915	≥11.5	≥2706	≥34	302-326	38-41	-0.1	-0.5	220
N42AH	1.29-1.33	12.9-13.3	≥955	≥12.0	≥2786	≥35	318-342	40-43	-0.1	-0.5	220
N45AH	1.33-1.37	13.3-13.7	≥995	≥12.5	≥2706	≥34	342-366	43-46	-0.1	-0.5	220