

Grade	Remanence		Normal coercivity		ntinsic coercivity	Energy deasity		Temperature coefficient				Max. operating temp. °C
	Br		Hcb		Hcj	BH(max)		20~100°C		20~150°C		
	mT		kA/m		kA/m(min)	kJ/m3		% / °C				
	min	typ	min	typ	20°C	min	typ	Tc(Br) typ	Tc(Hcj) typ	Tc(Br) typ	Tc(Hcj) typ	
N35	1170	1220	871	925	955	263	279	0.12	0.78			80
N38	1220	1260	900	925	955	279	303	0.12	0.78			80
N40	1260	1300	908	925	955	303	318	0.12	0.78			80
N42	1300	1330	908	925	955	318	334	0.12	0.78			80
N45	1330	1370	908	925	955	334	358	0.12	0.78			80
N48	1370	1410	908	925	955	358	382	0.12	0.78			80
N50	1410	1440	830	860	875	382	398	0.12	0.78			70
N52	1430	1460	830	860	875	398	414	0.12	0.78			70
N33M	1140	1170	848	887	1114	239	263	0.12	0.72			100
N35M	1170	1220	871	925	1114	263	279	0.12	0.72			100
N38M	1220	1260	908	955	1114	279	303	0.12	0.72			100
N40M	1260	1300	938	986	1114	303	318	0.12	0.72			100
N42M	1300	1330	967	1008	1114	318	334	0.12	0.72			100
N45M	1330	1370	990	1039	1114	334	358	0.12	0.72			100
N48M	1370	1410	1019	1069	1114	358	382	0.12	0.72			100
N50M	1410	1440	1019	1069	1080	382	398	0.12	0.72			90
N52M	1430	1460	1019	1069	1080	398	414	0.12	0.72			90
N30H	1080	1120	807	853	1353	223	239	0.12	0.66	0.12	0.6	120
N33H	1140	1170	852	891	1353	239	263	0.12	0.66	0.12	0.6	120
N35H	1170	1220	875	930	1353	263	279	0.12	0.66	0.12	0.6	120
N38H	1220	1260	912	960	1353	279	303	0.12	0.66	0.12	0.6	120
N40H	1260	1300	942	990	1353	303	318	0.12	0.66	0.12	0.6	120
N42H	1300	1330	972	1013	1353	318	334	0.12	0.66	0.12	0.6	120
N44H	1330	1360	994	1036	1353	334	350	0.12	0.66	0.12	0.6	120
N46H	1360	1380	1017	1051	1353	350	366	0.12	0.66	0.12	0.6	120
N48H	1370	1410	1024	1074	1353	366	382	0.12	0.66	0.12	0.6	120
N50H	1410	1440	1054	1097	1353	382	398	0.12	0.66	0.12	0.6	120
N30SH	1080	1120	811	857	1592	223	239	0.115	0.62	0.12	0.56	150
N33SH	1140	1170	856	896	1592	239	263	0.115	0.62	0.12	0.56	150
N35SH	1170	1220	879	934	1592	263	279	0.115	0.62	0.12	0.56	150
N38SH	1220	1260	916	965	1592	279	303	0.115	0.62	0.12	0.56	150
N40SH	1260	1300	946	995	1592	303	318	0.115	0.62	0.12	0.56	150
N42SH	1300	1330	976	1018	1592	318	334	0.115	0.62	0.12	0.56	150
N44SH	1330	1360	999	1041	1592	334	350	0.115	0.62	0.12	0.56	150
N46SH	1360	1380	1022	1056	1592	350	366	0.115	0.62	0.12	0.56	150
N28UH	1040	1080	785	831	1989	199	223	0.11	0.58	0.115	0.52	180
N30UH	1080	1120	815	862	1989	223	239	0.11	0.58	0.115	0.52	180
N33UH	1140	1170	860	900	1989	239	263	0.11	0.58	0.115	0.52	180
N35UH	1170	1220	883	938	1989	263	279	0.11	0.58	0.115	0.52	180
N38UH	1220	1260	921	969	1989	279	303	0.11	0.58	0.115	0.52	180
N40UH	1260	1300	951	1000	1989	303	318	0.11	0.58	0.115	0.52	180
N42UH	1300	1330	981	1023	1989	318	334	0.11	0.58	0.115	0.52	180
N28EH	1040	1080	785	831	2387	199	223	0.105	0.54	0.11	0.48	200
N30EH	1080	1120	815	862	2387	223	239	0.105	0.54	0.11	0.48	200
N33EH	1140	1170	860	900	2387	239	263	0.105	0.54	0.11	0.48	200
N35EH	1170	1220	883	938	2387	263	279	0.105	0.54	0.11	0.48	200
N38EH	1220	1260	921	969	2387	279	303	0.105	0.54	0.11	0.48	200
N28AH	1040	1080	785	831	2787	199	223	0.105	0.5	0.11	0.45	220
N30AH	1080	1120	815	862	2787	223	239	0.105	0.5	0.11	220	220
N33AH	1140	1170	860	900	2787	239	263	0.105	0.5	0.11	220	220
N25BH	980	1020	740	785	3000	183	199	0.105	0.5	0.11	240	240

Remark 1)The max working temperature is only for reference, is depended on the circuit the magnet is operating in.
2)Customers are recommended to consult us on application involving temperature near to max working temperature.
3)When $B/\mu \cdot H=1$, The magnet is operated at mentioned max working temperature, The irreversible losses less than 5% is guaranteed.
4)Max. value is only for reference

Grade	Remanence		Normal coercivity		Intrinsic coercivity					Energy density		Temperature coefficient				Max. operating temp. °C	
	Br		Hcb		Hcj					BH(max)		20~100°C		20~150°C			
	mT		kA/m		kA/m(min)					kJ/m3		%°C					
	min	typ	min	typ	20°C	80°C	100°C	120°C	150°C	min	typ	Tc(Br) typ	Tc(Hcj) typ	Tc(Br) typ	Tc(Hcj) typ		
N35/S	1170	1220	871	925	955						263	279	0.12	0.78			80
N38/S	1220	1260	900	925	955						279	303	0.12	0.78			80
N40/S	1260	1300	908	925	955						303	318	0.12	0.78			80
N42/S	1300	1330	908	925	955						318	334	0.12	0.78			80
N45/S	1330	1370	908	925	955						334	358	0.12	0.78			80
N48/S	1370	1410	908	925	955						358	382	0.12	0.78			80
N50/S	1410	1440	830	860	875						382	398	0.12	0.78			70
N52/S	1430	1460	830	860	875						398	414	0.12	0.78			70
N33M/S	1140	1170	848	887	1114						239	263	0.12	0.72			100
N35M/S	1170	1220	871	925	1114						263	279	0.12	0.72			100
N38M/S	1220	1260	908	955	1114						279	303	0.12	0.72			100
N40M/S	1260	1300	938	986	1114						303	318	0.12	0.72			100
N42M/S	1300	1330	967	1008	1114						318	334	0.12	0.72			100
N45M/S	1330	1370	990	1039	1114						334	358	0.12	0.72			100
N48M/S	1370	1410	1019	1069	1114						358	382	0.12	0.72			100
N50M/S	1410	1440	1019	1069	1080						382	398	0.12	0.72			90
N52M/S	1430	1460	1019	1069	1080						398	414	0.12	0.72			90
N30H/S	1080	1120	807	853	1353				420		223	239	0.12	0.66	0.12	0.6	120
N33H/S	1140	1170	852	891	1353				420		239	263	0.12	0.66	0.12	0.6	120
N35H/S	1170	1220	875	930	1353				420		263	279	0.12	0.66	0.12	0.6	120
N38H/S	1220	1260	912	960	1353				420		279	303	0.12	0.66	0.12	0.6	120
N40H/S	1260	1300	942	990	1353				420		303	318	0.12	0.66	0.12	0.6	120
N42H/S	1300	1330	972	1013	1353				420		318	334	0.12	0.66	0.12	0.6	120
N44H/S	1330	1360	994	1036	1353				420		334	350	0.12	0.66	0.12	0.6	120
N46H/S	1360	1380	1017	1051	1353				420		350	366	0.12	0.66	0.12	0.6	120
N48H/S	1370	1410	1024	1074	1353				420		366	382	0.12	0.66	0.12	0.6	120
N50H/S	1410	1440	1054	1097	1353				420		382	398	0.12	0.66	0.12	0.6	120
N30SH/S	1080	1120	811	857	1592				420		223	239	0.115	0.62	0.12	0.56	150
N33SH/S	1140	1170	856	896	1592				420		239	262	0.115	0.62	0.12	0.56	150
N35SH/S	1170	1220	879	934	1592				420		263	279	0.115	0.62	0.12	0.56	150
N38SH/S	1220	1260	916	965	1592				420		279	303	0.115	0.62	0.12	0.56	150
N40SH/S	1260	1300	946	995	1592				420		303	318	0.115	0.62	0.12	0.56	150
N42SH/S	1300	1330	976	1018	1592				420		318	334	0.115	0.62	0.12	0.56	150
N44SH/S	1330	1360	999	1041	1592				420		334	350	0.115	0.62	0.12	0.56	150
N46SH/S	1360	1380	1022	1056	1592				420		350	366	0.115	0.62	0.12	0.56	150
N28UH/S	1040	1080	785	831	1989				620		199	223	0.11	0.58	0.115	0.52	180
N30UH/S	1080	1120	815	863	1989				620		223	239	0.11	0.58	0.115	0.52	180
N33UH/S	1140	1170	860	900	1989				620		239	263	0.11	0.58	0.115	0.52	180
N35UH/S	1170	1220	883	938	1989				620		263	279	0.11	0.58	0.115	0.52	180
N38UH/S	1220	1260	921	969	1989				620		279	303	0.11	0.58	0.115	0.52	180
N40UH/S	1260	1300	951	1000	1989				620		303	318	0.11	0.58	0.115	0.52	180
N42UH/S	1300	1330	981	1023	1989				620		318	334	0.11	0.58	0.115	0.52	180
N28EH/S	1040	1080	785	831	2387				820		199	223	0.105	0.54	0.11	0.48	200
N30EH/S	1080	1120	815	862	2387				820		223	239	0.105	0.54	0.11	0.48	200
N33EH/S	1140	1170	860	900	2387				820		239	263	0.105	0.54	0.11	0.48	200
N35EH/S	1170	1220	883	938	2387				820		263	279	0.105	0.54	0.11	0.48	200
N38EH/S	1220	1260	921	969	2387				820		279	303	0.105	0.54	0.11	0.48	200
N28AH/S	1040	1080	785	831	2787				1200		199	223	0.105	0.5	0.11	0.45	220
N30AH/S	1080	1120	815	862	2787				1200		223	239	0.105	0.5	0.11	0.45	220
N33AH/S	1140	1170	860	900	2787				1200		239	263	0.105	0.5	0.11	0.45	220
N25BH/S	980	1020	740	785	3000				1400		183	199	0.105	0.5	0.11	0.45	240

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2)Customers are recommended to consult us on application involving temperature near to max working temperature.
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4)**/S, means corrosion stable material, weight loss after 7 days PCT less than 5mg/cm2
5)Max. value is only for reference

Grade	Remanence		Normal coercivity		Intrinsic coercivity				Energy density		Temperature coefficient				Max. operating temp. °C
	Br		Hcb		Hcj				BH(max)		20~100°C		20~150°C		
	mT		kA/m		kA/m(min)				kJ/m3		% / °C				
	min	typ	min	typ	20°C	100°C for °/ST	120°C for °/ST	150°C for °/ST	min	typ	Tc(Br) typ	Tc(Hcj) typ	Tc(Br) typ	Tc(Hcj) typ	
N30H/ST	1080	1120	807	853	1353		500		223	239	0.115	0.64	0.115	0.58	120
N33H/ST	1140	1170	852	891	1353		500		239	263	0.115	0.64	0.115	0.58	120
N35H/ST	1170	1220	875	930	1353		500		263	279	0.115	0.64	0.115	0.58	120
N38H/ST	1220	1260	912	960	1353		500		279	303	0.115	0.64	0.115	0.58	120
N40H/ST	1260	1300	942	990	1353		500		303	318	0.115	0.64	0.115	0.58	120
N42H/ST	1300	1330	972	1013	1353		500		318	334	0.115	0.64	0.115	0.58	120
N44H/ST	1330	1360	994	1036	1353		500		334	350	0.115	0.64	0.115	0.58	120
N46H/ST	1360	1380	1017	1051	1353		500		350	366	0.115	0.64	0.115	0.58	120
N48H/ST	1370	1410	1024	1074	1353		500		366	382	0.115	0.64	0.115	0.58	120
N50H/ST	1410	1440	1054	1097	1353		500		382	398	0.115	0.64	0.115	0.58	120
N30SH/ST	1080	1120	811	857	1592		500		223	239	0.11	0.6	0.115	0.54	150
N33SH/ST	1140	1170	856	896	1592		500		239	263	0.11	0.6	0.115	0.54	150
N35SH/ST	1170	1220	879	934	1592		500		263	279	0.11	0.6	0.115	0.54	150
N38SH/ST	1220	1260	916	965	1592		500		279	303	0.11	0.6	0.115	0.54	150
N40SH/ST	1260	1300	946	995	1592		500		303	318	0.11	0.6	0.115	0.54	150
N42SH/ST	1300	1330	976	1018	1592		500		318	334	0.11	0.6	0.115	0.54	150
N44SH/ST	1330	1360	999	1041	1592		500		334	350	0.11	0.6	0.115	0.54	150
N46SH/ST	1360	1380	1022	1056	1592		500		350	366	0.11	0.6	0.115	0.54	150
N28UH/ST	1040	1080	785	831	1989		720		199	223	0.105	0.56	0.11	0.5	180
N30UH/ST	1080	1120	815	862	1989		720		223	239	0.105	0.56	0.11	0.5	180
N33UH/ST	1140	1170	860	900	1989		720		239	263	0.105	0.56	0.11	0.5	180
N35UH/ST	1170	1220	883	938	1989		720		263	279	0.105	0.56	0.11	0.5	180
N38UH/ST	1220	1260	921	969	1989		720		279	303	0.105	0.56	0.11	0.5	180
N40UH/ST	1260	1300	951	1000	1989		720		303	318	0.105	0.56	0.11	0.5	180
N42UH/ST	1300	1330	981	1023	1989		720		318	334	0.105	0.56	0.11	0.5	180
N28EH/ST	1040	1080	785	831	2387		950		199	223	0.1	0.52	0.105	0.46	200
N30EH/ST	1080	1120	815	862	2387		950		223	239	0.1	0.52	0.105	0.46	200
N33EH/ST	1140	1170	860	900	2387		950		239	263	0.1	0.52	0.105	0.46	200
N35EH/ST	1170	1220	883	938	2387		950		263	279	0.1	0.52	0.105	0.46	200
N38EH/ST	1220	1260	921	969	2387		950		279	303	0.1	0.52	0.105	0.46	200
N28AH/ST	1040	1080	785	831	2787		1200		199	223	0.1	0.48	0.105	0.43	220
N30AH/ST	1080	1120	815	862	2787		1200		223	239	0.1	0.48	0.105	0.43	220
N33AH/ST	1140	1170	860	900	2787		1200		239	263	0.1	0.48	0.105	0.43	220
N25BH/ST	980	1020	740	785	3000		1400		183	199	0.1	0.48	0.105	0.43	240

Remark

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2)Customers are recommended to consult us on application involving temperature near to max working temperature.

3)When $B/\mu \cdot H=1$, The magnet is operated at mentioned max working temperature, The irreversible losses less than 5% is guaranteed.

4)**/S, means corrosion stable material + thermal stable material (weight loss after 7 days PCT less than 5mg/cm2 and with required Hcj vale at high temperature)

5)Max. value is only for reference

☆ Physical Properties

Temp. Coeff. Of Br.	-0.11%/°C	Temp. Coeff. Of Hc:	-0.60%/°C
Density	7.3-7.5g/cm ³	Electrical Resistivity:	114μΩ.cm
Vickers Hardness:	600Hv	Flexural Strength:	25kg/mm
Tensile Strength:	8.0kg/mm ²	Coeff. Of Thermal Expansion:	4x10-6°C
Specific Heat	0.12kCal/(kg.°C)	Thermal Conductivity:	7.7kcal/(m.h.°C)
Young's. Modulus:	1.6x10(11)N/m ²	Rigidity:	0.64N/m ²
Poisson's.Ratio	0.24	Compressibility	9.8x10-12m ² /N
Curie Temperature:	310-340°C		

☆ Types of Coatings

The coatings can be divided into two basic groups: metallic and organic. To meet special requirements and on request, double coatings of metal/metal, metal/varnish and number of special coatings are available.

* Metallic coatings

Usually, galvanic processes are used for metallic coating. We have

...Zinc coatings (blue passivated or yellow passivated)

...Nickel + Nickel coating

...Nickel + Tin coating

...Nickel + Copper + Nickel coating (available starting from June,1988)

* Organic coatings

...Nickel + Epoxy coating

...Epoxy coating

Temporary corrosion protection / Surface Passivation

To protect uncoated magnets temporarily, e.g., during transport or storage, Passivation can be made. This protects NdFeB magnets sufficiently against temporary environmental influences, such as a rise in humidity. With this special treatment, magnets can be stored under normal ambient conditions.

Passivated magnets is not suitable to be installed into system without further treatment.

☆ Production Process

