

Neodymium Sintered - Corrosion Stable (high PCT and HAST values)

version June 2015

Grade	Remanence Br mT		Normal coercivity Hcb kA/m		Intrinsic coercivity Hcj kA/m (min)					Energy density BH(max) kJ/m3		Temperature coefficient 20~100°C 20~150°C %°C				Max. operating temp. °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	0,60	120
N33H/S	1140	1170	852	891	1353			420			239	263	0,12	0,66	0,12	0,60	120
N35H/S	1170	1220	875	930	1353			420			263	279	0,12	0,66	0,12	0,60	120
N38H/S	1220	1260	912	960	1353			420			279	303	0,12	0,66	0,12	0,60	120
N40H/S	1260	1300	942	990	1353			420			303	318	0,12	0,66	0,12	0,60	120
N42H/S	1300	1330	972	1013	1353			420			318	334	0,12	0,66	0,12	0,60	120
N44H/S	1330	1360	994	1036	1353			420			334	350	0,12	0,66	0,12	0,60	120
N46H/S	1360	1380	1017	1051	1353			420			350	366	0,12	0,66	0,12	0,60	120
N48H/S	1370	1410	1024	1074	1353			420			366	382	0,12	0,66	0,12	0,60	120
N50H/S	1410	1440	1054	1097	1353			420			382	398	0,12	0,66	0,12	0,60	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	263	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	0,110	0,58	0,115	0,52	180
N30UH/S	1080	1120	815	862	1989			620			223	239	0,110	0,58	0,115	0,52	180
N33UH/S	1140	1170	860	900	1989			620			239	263	0,110	0,58	0,115	0,52	180
N35UH/S	1170	1220	883	938	1989			620			263	279	0,110	0,58	0,115	0,52	180
N38UH/S	1220	1260	921	969	1989			620			279	303	0,110	0,58	0,115	0,52	180
N40UH/S	1260	1300	951	1000	1989			620			303	318	0,110	0,58	0,115	0,52	180
N42UH/S	1300	1330	981	1023	1989			620			318	334	0,110	0,58	0,115	0,52	180
N28EH/S	1040	1080	785	831	2387			820			199	223	0,105	0,54	0,110	0,48	200
N30EH/S	1080	1120	815	862	2387			820			223	239	0,105	0,54	0,110	0,48	200
N33EH/S	1140	1170	860	900	2387			820			239	263	0,105	0,54	0,110	0,48	200
N35EH/S	1170	1220	883	938	2387			820			263	279	0,105	0,54	0,110	0,48	200
N38EH/S	1220	1260	921	969	2387			820			279	303	0,105	0,54	0,110	0,48	200
N28AH/S	1040	1080	785	831	2787			1200			199	223	0,105	0,50	0,110	0,45	220
N30AH/S	1080	1120	815	862	2787			1200			223	239	0,105	0,50	0,110	0,45	220
N33AH/S	1140	1170	860	900	2787			1200			239	263	0,105	0,50	0,110	0,45	220
N25BH/S	980	1020	740	785	3000			1400			183	199	0,105	0,50	0,110	0,45	240

Physical properties at room temperature (20°C)			The maximum operating temperature		
Temp.Coeff. of Br:	-0.11%/°C (20-100C)	Temp. Coeff. of iHc:	-0.60%/°C (20-100°C)	<p>The maximum operating temperature is determined by the final layout of the magnetic circuit. The estimated values refer to magnets which are operating at the working point of B/μOH=1</p> <p>Corrosion stable grades:</p> <p>Standard PCT test: P=2,0 atm, RH=100%, 120°C, after 7 × 24 hours, weight loss < 5mg/cm2</p> <p>Alternative HAST test: P=2,6 atm, RH= 95%, 130°C, after 4 × 24 hours, weight loss < 3mg/cm2</p>	
Density:	7.4-7.6g/cm³	Electrical resistivity:	144 μΩ cm		
Vickers Hardness:	570 Hv	Flexural Strength:	25kg/mm		
Tensile strength:	8.0kg/mm²	Coeff. of Thermal Expansion:	4 x 10 ⁻⁶ /°C		
Specific Heat:	0.12kCal/(kg.°C)	Thermal Conductivity:	7.7kcal/(m.h.°C)		
Young's Modulus:	1.6 x 10 ¹¹ N/m²	Rigidity:	0.64N/m²		
Poisson's Ratio:	0.24	Compressibility:	9.8 x 10 ⁻¹² m²/N		
Curie Temperature:	310-340°C				

Important notice:

Dimensions and shape of the magnet, in combination with required manufacturing processes, may cause the magnetic and physical characteristics to vary from typical values. Therefore, all data presented in this document are for general reference only and should not be relied upon to represent standard characteristics, nor are they guaranteed upon use. Bakker Magnetics reserves the right to change information in this document, including magnet performance standards, specifications, and characteristics without notice.