

# 三环乐喜钕铁硼磁性性能标准

## Standard for Magnetic Properties of Sanhuan Lucky NdFeB

### 常规工艺性能

### Conventional process performance

序号 No.	等级 Grade	剩磁 (Br) Remanence (Br)				矫顽力 (bH <sub>c</sub> ) Coercivity (bH <sub>c</sub> )		内禀矫顽力 (iH <sub>c</sub> ) Intrinsic coercivity (iH <sub>c</sub> )		最大磁能积 Maximum magnetic energy product (BH) <sub>max</sub>				温度系数[1/K] % (典型) Temperature coefficient [1/K]% (typical)	
		KG		T		KOe	KA/m	Koe	KA/m	MGOe		KJ/m <sup>3</sup>		20~100 °C	
		Max	Min	Max	Min	Min		Min		Max	Min	Max	Min	Tk(Js)	Tk(HcJ)
1	N35	12.4	11.8	1.24	1.18	10.8	860	12	955	38	33	302	263	-0.12	-0.7
2	N38	12.9	12.3	1.29	1.23	10.8	860	12	955	41	36	326	287	-0.12	-0.7
3	N40	13.2	12.6	1.32	1.26	10.8	860	12	955	43	38	342	302	-0.12	-0.7
4	N42	13.6	13	1.36	1.3	10.8	860	12	955	45	40	358	318	-0.12	-0.7
5	N45	13.8	13.2	1.38	1.32	10.5	836	12	955	47	42	374	334	-0.12	-0.7
6	N48	14.3	13.7	1.43	1.37	10.5	836	12	955	50	45	398	358	-0.12	-0.7
7	N50	14.4	13.9	1.44	1.39	10.5	836	12	955	51	47	406	374	-0.12	-0.7
8	N52	14.6	14.2	1.46	1.42	10.5	836	12	955	53	49	422	390	-0.12	-0.7
9	N55	14.9	14.5	1.49	1.45	10.5	836	11	875	55	51	438	406	-0.12	-0.7
10	<b>N57</b>	15.1	14.7	1.51	1.47	9	716	10	796		52	454	414	-0.12	-0.7
11	N35M	12.4	11.8	1.24	1.18	11	876	14	1114	38	33	302	263	-0.12	-0.7
12	N38M	12.9	12.3	1.29	1.23	11.5	915	14	1114	41	36	326	287	-0.12	-0.7
13	N40M	13.2	12.6	1.32	1.26	11.8	939	14	1114	43	38	342	302	-0.12	-0.7
14	N42M	13.6	13	1.36	1.3	12	955	14	1114	45	40	358	318	-0.12	-0.7
15	N45M	13.8	13.2	1.38	1.32	12.2	971	14	1114	47	42	374	334	-0.12	-0.7
16	N48M	14.3	13.7	1.43	1.37	12.5	995	14	1114	50	45	398	358	-0.12	-0.7
17	N50M	14.4	13.9	1.44	1.39	12.7	1011	14	1114	52	47	414	374	-0.12	-0.7
18	N52M	14.6	14.2	1.46	1.42	12.8	1019	14	1114	53	49	422	390	-0.12	-0.7
19	<b>N55M</b>	14.9	14.5	1.49	1.45	12.5	995	13	1035	55	51	438	406	-0.12	-0.7
20	N35H	12.4	11.8	1.24	1.18	11	876	17	1353	38	33	302	263	-0.12	-0.7
21	N38H	12.9	12.3	1.29	1.23	11.5	915	17	1353	41	36	326	287	-0.12	-0.7
22	N40H	13.2	12.6	1.32	1.26	11.8	939	17	1353	43	38	342	302	-0.12	-0.7
23	N44H	13.6	13	1.36	1.3	12.1	963	17	1353	46	41	366	326	-0.12	-0.7
24	N46H	13.9	13.3	1.39	1.33	12.5	995	17	1353	48	43	382	342	-0.12	-0.7
25	N48H	14.1	13.6	1.41	1.36	12.7	1011	16	1273	50	45	398	358	-0.12	-0.7
26	N50H	14.3	13.9	1.43	1.39	13	1035	16	1273	51	47	406	374	-0.12	-0.7
27	<b>N52H</b>	14.6	14.2	1.46	1.42	13.2	1051	16	1273	54	49	430	390	-0.12	-0.7
28	N33SH	12	11.4	1.2	1.14	10.7	852	20	1592	36	31	287	247	-0.11	-0.65
29	N35SH	12.4	11.8	1.24	1.18	11.1	884	20	1592	38	33	302	263	-0.11	-0.65
30	N38SH	12.9	12.3	1.29	1.23	11.6	923	20	1592	41	36	326	287	-0.11	-0.65
31	N40SH	13.2	12.6	1.32	1.26	11.8	939	20	1592	43	38	342	302	-0.11	-0.65
32	N42SH	13.4	12.8	1.34	1.28	12	955	20	1592	44	39	350	310	-0.11	-0.65
33	N45SH	13.7	13.2	1.37	1.32	12.4	987	20	1592	47	42	374	334	-0.11	-0.65
34	N48SH	14.1	13.6	1.41	1.36	12.7	1011	19	1512	50	45	398	358	-0.11	-0.65
35	N50SH	14.3	13.9	1.43	1.39	13	1035	19	1512	51	47	406	374	-0.11	-0.65
36	<b>N52SH</b>	14.6	14.2	1.46	1.42	13.3	1059	19	1512	53	49	422	390	-0.11	-0.65
37	N33SH-B	12	11.4	1.2	1.14	10.7	852	22	1751	36	31	287	247	-0.11	-0.65
38	N35SH-B	12.4	11.8	1.24	1.18	11.1	884	22	1751	38	33	302	263	-0.11	-0.65
39	N38SH-B	12.9	12.3	1.29	1.23	11.6	923	22	1751	41	36	326	287	-0.11	-0.65
40	N40SH-B	13.2	12.6	1.32	1.26	11.8	939	22	1751	43	38	342	302	-0.11	-0.65
41	N42SH-B	13.4	12.8	1.34	1.28	12	955	22	1751	44	39	350	310	-0.11	-0.65
42	N45SH-B	13.7	13.2	1.37	1.32	12.4	987	22	1751	47	42	374	334	-0.11	-0.65
43	N48SH-B	14	13.6	1.4	1.36	12.7	1011	22	1751	50	45	398	358	-0.11	-0.65
44	<b>N50SH-B</b>	14.3	13.9	1.43	1.39	13	1035	21	1672	52	47	414	374	-0.11	-0.65
45	N30UH	11.5	10.9	1.15	1.09	10.2	812	25	1990	33	28	263	223	-0.11	-0.6
46	N33UH	12	11.4	1.2	1.14	10.8	860	25	1990	36	31	287	247	-0.11	-0.6
47	N35UH	12.4	11.8	1.24	1.18	11.2	892	25	1990	38	33	302	263	-0.11	-0.6

48	N38UH	12.8	12.2	1.28	1.22	11.6	923	25	1990	41	36	326	287	-0.11	-0.6
49	N40UH	13.2	12.6	1.32	1.26	12	955	25	1990	43	38	342	302	-0.11	-0.6
50	N42UH	13.4	12.8	1.34	1.28	12.2	971	25	1990	44	39	350	310	-0.11	-0.6
51	N45UH	13.7	13.2	1.37	1.32	12.4	987	25	1990	47	42	374	334	-0.11	-0.6
52	N48UH	14	13.6	1.4	1.36	12.8	1019	24	1911	50	45	398	358	-0.11	-0.63
53	N30UH-B	11.5	10.9	1.15	1.09	10.2	812	27	2149	33	28	263	223	-0.11	-0.6
54	N33UH-B	12	11.4	1.2	1.14	10.8	860	27	2149	36	31	287	247	-0.11	-0.6
55	N35UH-B	12.4	11.8	1.24	1.18	11.2	892	27	2149	38	33	302	263	-0.11	-0.6
56	N38UH-B	12.8	12.2	1.28	1.22	11.6	923	27	2149	41	36	326	287	-0.11	-0.6
57	N40UH-B	13.2	12.6	1.32	1.26	12	955	27	2149	43	38	342	302	-0.11	-0.6
58	N42UH-B	13.3	12.8	1.33	1.28	12.2	971	27	2149	44	39	350	310	-0.11	-0.6
59	N45UH-B	13.6	13.2	1.36	1.32	12.4	987	27	2149	47	42	374	334	-0.11	-0.6
60	N30EH	11.5	10.9	1.15	1.09	10.3	820	30	2388	33	28	263	223	-0.11	-0.55
61	N33EH	12	11.4	1.2	1.14	10.8	860	30	2388	36	31	287	247	-0.11	-0.55
62	N35EH	12.3	11.7	1.23	1.17	11.1	884	30	2388	38	33	302	263	-0.11	-0.55
63	N38EH	12.8	12.2	1.28	1.22	11.6	923	30	2388	41	36	326	287	-0.11	-0.55
64	N40EH	13.1	12.6	1.31	1.26	12	955	30	2388	43	38	342	302	-0.11	-0.55
65	N44EH	13.4	13	1.34	1.3	12.3	979	29	2308	45	41	358	326	-0.11	-0.55
66	N45EH	13.6	13.2	1.36	1.32	12.5	995	29	2308	46	42	366	334	-0.11	-0.55
67	N30EH-B	11.5	10.9	1.15	1.09	10.2	812	32	2547	33	28	263	223	-0.11	-0.55
68	N33EH-B	12	11.4	1.2	1.14	10.8	860	32	2547	36	31	287	247	-0.11	-0.55
69	N35EH-B	12.3	11.7	1.23	1.17	11.1	884	32	2547	38	33	302	263	-0.11	-0.55
70	N38EH-B	12.8	12.2	1.28	1.22	11.6	923	32	2547	41	36	326	287	-0.11	-0.55
71	N40EH-B	13.1	12.6	1.31	1.26	12	955	32	2547	43	38	342	302	-0.11	-0.55
72	N44EH-B	13.4	13	1.34	1.3	12.3	979	32	2547	45	41	358	326	-0.11	-0.55
73	N28EHS	11.1	10.5	1.11	1.05	10	796	35	2786	31	26	247	207	-0.1	-0.5
74	N30EHS	11.5	10.9	1.15	1.09	10.3	820	35	2786	33	28	263	223	-0.1	-0.5
75	N33EHS	11.9	11.3	1.19	1.13	10.7	852	35	2786	36	31	287	247	-0.1	-0.5
76	N35EHS	12.2	11.6	1.22	1.16	11	876	35	2786	38	33	302	263	-0.1	-0.5
77	N38EHS	12.8	12.2	1.28	1.22	11.6	923	34	2706	41	36	326	287	-0.1	-0.5
78	N40EHS	13.1	12.6	1.31	1.26	12	955	34	2706	43	38	342	302	-0.1	-0.5
79	N42EHS	13.3	12.8	1.33	1.28	12.2	971	34	2706	44	39	350	310	-0.11	-0.6
80	N28EHS-B	11.1	10.5	1.11	1.05	10	796	37	2945	31	26	247	207	-0.1	-0.5
81	N30EHS-B	11.5	10.9	1.15	1.09	10.3	820	37	2945	33	28	263	223	-0.1	-0.5
82	N33EHS-B	11.9	11.3	1.19	1.13	10.7	852	37	2945	36	31	287	247	-0.1	-0.5
83	N35EHS-B	12.1	11.6	1.21	1.16	11	876	37	2945	38	33	302	263	-0.1	-0.5
84	N38EHS-B	12.4	12	1.24	1.2	11.4	907	37	2945	41	36	326	287	-0.1	-0.5
85	N28EHS-C	11.1	10.5	1.11	1.05	10	796	40	3183	31	26	247	207	-0.1	-0.5
86	N30EHS-C	11.5	10.9	1.15	1.09	10.3	820	40	3183	33	28	263	223	-0.1	-0.5
87	N33EHS-C	11.9	11.3	1.19	1.13	10.7	852	40	3183	36	31	287	247	-0.1	-0.5
88	N35EHS-C	12.1	11.6	1.21	1.16	11	876	40	3183	38	33	302	263	-0.1	-0.5
89	N28EHS-D	11.1	10.5	1.11	1.05	10	796	42	3443	31	26	247	207	-0.1	-0.5
90	N30EHS-D	11.5	10.9	1.15	1.09	10.3	820	42	3443	33	28	263	223	-0.1	-0.5
91	N33EHS-D	11.9	11.3	1.19	1.13	10.7	852	42	3443	36	31	287	247	-0.1	-0.5

## 扩散工艺性能

### Diffusion process performance

序号 No.	等级 Grade	剩磁 (Br) Remanence (Br)				矫顽力 (bHc) Coercivity (bHc)		内禀矫顽力 (iHc) Intrinsic coercivity (iHc)		最大磁能积 Maximum magnetic energy product (BH)max			
		kGs		T		kOe	kA/m	kOe	kA/m	MGOe		kJ/m <sup>3</sup>	
		Max	Min	Max	Min	Min		Min		Max	Min	Max	Min
1	G57H	15	14.7	1.50	1.47	13.9	1106	17	1353		52		414
2	G48SH	14.2	13.7	1.42	1.37	13	1035	20	1592	50	45	398	358
3	G50SH	14.4	13.9	1.44	1.39	13.2	1051	20	1592	52	47	414	374
4	G52SH	14.6	14.2	1.46	1.42	13.4	1067	20	1592	53	48	422	382

5	G55SH	14.8	14.4	1.48	1.44	13.6	1083	20	1592	55	50	438	398
6	G57SH	15	14.6	1.50	1.46	13.8	1098	19	1512		52		414
7	G48SH-B	14.2	13.7	1.42	1.37	13	1035	22	1751	50	45	398	358
8	G50SH-B	14.4	13.9	1.44	1.39	13.2	1051	22	1751	50	46	398	366
9	G52SH-B	14.5	14.1	1.45	1.41	13.4	1067	22	1751	52	47	414	374
10	G54SH-B	14.7	14.3	1.47	1.43	13.5	1075	22	1751	55	50	438	398
11	G56SH-B	14.9	14.5	1.49	1.45	13.7	1090	21	1671		51		406
12	G45UH	13.7	13.1	1.37	1.31	12.4	987	25	1990	46	41	366	326
13	G48UH	14	13.6	1.4	1.36	12.9	1027	25	1990	49	44	390	350
14	G50UH	14.4	13.9	1.44	1.39	13.2	1051	25	1990	51	46	406	366
15	G52UH	14.5	14.1	1.45	1.41	13.4	1067	25	1990	52	47	414	374
16	G54UH	14.7	14.3	1.47	1.43	13.5	1075	24	1910	55	50	438	398
17	G42UH-B	13.4	12.8	1.34	1.28	12.1	963	27	2149	44	39	350	310
18	G45UH-B	13.7	13.1	1.37	1.31	12.4	987	27	2149	47	42	374	334
19	G48UH-B	14	13.6	1.4	1.36	12.8	1019	27	2149	49	44	390	350
20	G50UH-B	14.4	13.9	1.44	1.39	13.2	1051	27	2149	51	46	406	366
21	G52UH-B	14.5	14.1	1.45	1.41	13.4	1067	26	2070	52	47	414	374
22	G40EH	13.2	12.6	1.32	1.26	12	955	30	2388	43	38	342	302
23	G44EH	13.4	12.9	1.34	1.29	12.2	971	30	2388	45	40	358	318
24	G46EH	13.8	13.4	1.38	1.34	12.7	1011	30	2388	48	43	382	342
25	G48EH	14.1	13.6	1.4	1.36	12.9	1027	30	2388	49	44	390	350
26	G50EH	14.4	13.9	1.44	1.39	13.2	1051	29	2308	51	46	406	366
27	G38EH-B	12.9	12.3	1.29	1.23	11.7	931	32	2547	41	36	326	287
28	G40EH-B	13.2	12.6	1.32	1.26	12	955	32	2547	43	38	342	302
29	G44EH-B	13.4	12.9	1.34	1.29	12.2	971	32	2547	45	40	358	318
30	G46EH-B	13.8	13.4	1.38	1.34	12.7	1011	32	2547	48	43	382	342
31	G38EHS	12.8	12.2	1.28	1.22	11.6	923	35	2786	40	35	318	279
32	G40EHS	13	12.5	1.3	1.25	12	955	35	2786	43	38	342	302
33	G44EHS	13.4	13	1.34	1.3	12.3	979	35	2786	46	41	366	326
34	G38EHS-B	12.6	12.1	1.26	1.21	11.5	915	37	2945	41	36	326	287
35	G40EHS-B	13	12.5	1.3	1.25	12	955	37	2945	43	38	342	302

◆ 扩散工艺可适用的产品： $1.5\text{ mm} \leq \text{厚度} \leq 8\text{ mm}$ 。

Products suitable for diffusion processes:  $1.5\text{ mm} \leq \text{thickness} \leq 8\text{ mm}$ .

◆ 对4mm 以上厚度的磁体，中心层  $H_{cj}$  会比标准值偏低，范围约 1.5KOe。

For magnets thicker than 4 mm, the center layer  $H_{cj}$  is lower than the standard value, in the range of about 1.5KOe.