Strong Magnets

All Magnets

Property Table - SI

English Version
For reference only

- Remanence (Br), measure the strength of the magnetic field;
- Coercivity (Hcb / Hcj), the material's resistance to becoming demagnetized;
- Energy product (BHmax), the density of magnetic energy, which relates to the magnetic flux output per unit volume. Higher values indicate stronger magnets
- Curie temperature (Tc), the temperature at which the material loses its magnetism.

Updated on: May.20, 2014

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Sintered NdFeB - Property Table - SI unit

Grade	(range) Remanence (Br)	(min.) Intrinsic Coercivity (Hcj)	(min.) Coercivity (Hcb)	Max Energy Product (BH)max	Max Working Temperature (Tw)	Curie Temperature (Tc)
	mT	kA/m	kA/m	kJ/m^3	°C	°C
N33	1130-1170	955	836	247-270	80	310
N35	1170-1220	955	868	263-287	80	310
N38	1220-1250	955	899	287-310	80	310
N40	1250-1300	955	923	302-326	80	310
N42	1280-1330	955	923	318-342	80	310
N45	1330-1380	955	876	342-366	80	310
N48	1370-1430	955	892	366-390	80	310
N50	1390-1450	876	836	374-406	80	310
N52	1420-1470	876	836	390-422	80	310
N33M	1130-1170	1114	836	247-270	100	310
N35M	1170-1220	1114	868	263-287	100	310
N38M	1220-1250	1114	899	287-310	100	310
N40M	1250-1300	1114	923	302-326	100	310
N42M	1280-1330	1114	955	318-342	100	310
N45M	1330-1380	1114	995	342-366	100	310
N48M	1370-1430	1114	1019	358-390	100	310
N50M	1390-1450	1114	1035	374-406	100	310
N33H	1130-1170	1353	836	247-270	120	310
N35H	1170-1220	1353	868	263-287	120	310
N38H	1220-1250	1353	899	287-310	120	310
N40H	1250-1300	1353	923	302-326	120	310
N42H	1280-1330	1274	955	318-342	120	310
N45H	1330-1380	1274	963	334-358	120	310
N48H	1370-1430	1274	971	342-366	120	310
N50H	1390-1450	1274	1035	374-406	120	310
N33SH	1130-1170	1592	844	247-270	150	320
N35SH	1170-1220	1592	876	263-287	150	320
N38SH	1220-1250	1592	907	287-310	150	320
N40SH	1250-1300	1592	939	302-326	150	320
N42SH	1280-1340	1512	971	318-342	150	320
N45SH	1320-1380	1512	995	342-366	150	320
N48SH	1360-1420	1512	995	358-390	150	320
N28UH	1020-1080	1990	764	207-231	180	330
N33UH	1130-1180	1990	852	247-270	180	330
N35UH	1170-1220	1990	860	263-287	180	330
N38UH	1220-1270	1990	876	287-310	180	330
N28EH	1040-1090	2388	780	207-231	200	330
N30EH	1080-1140	2388	812	223-254	200	330
N33EH	1130-1180	2388	820	247-270	200	330
N35EH	1170-1220	2388	836	263-287	200	330
N28AH	1020-1090	2706	780	199-231	220-240	330
N30AH	1070-1130	2706	812	215-247	220-240	330
N33AH	1110-1170	2706	820	239-271	220-240	330

*for reference only

Bonded NdFeB - Property Table - SI unit

Grade	(range) Remanence (Br)	(range) Intrinsic Coercivity (Hcj)	(range) Coercivity (Hcb)	Max Energy Product (BH)max	Max Working Temperature (Tw)
	mT	kA/m	kA/m	kJ/m^3	°C
BNM-5	570-620	560-720	288-320	40-48	120-140
BNM-6	580-630	640-800	322-376	48-56	120-140
BNM-7	590-640	640-800	360-416	56-64	120-140
BNM-8	620-670	680-800	400-464	64-72	120-140
BNM-9	640-690	680-800	416-448	68-76	120-140
BNM-10	670-720	680-800	416-480	72-80	120-140
BNM-11	690-740	720-840	400-464	80-88	120-140
BNM-12	740-760	720-840	456-512	88-96	120-140
BNM-11L	700-750	520-640	400-464	80-88	120-140
BNM-12L	750-800	520-640	432-496	84-92	120-140
BNM-8SR	620-670	880-1120	400-464	64-72	140-160

*for reference only

Cast AlNiCo - Property Table - SI unit

Grade	(min.) Remanence (Br)	(min.) Coercivity (Hcb)	Max Energy Product (BH)max	Max Working Temperature (Tw)	Curie Temperature (Tc)	Remarks
	mT	kA/m	kJ/m^3	℃	℃	
LN10	600	40	10	450	760	AlNiCo3
LNG10	600	44	10	450	760	AlNiCo3
LNG12	700	44	12	450	810	AlNiCo2
LNG13	680	48	13	450	810	AlNiCo2
LNG16	800	48	16	450	810	AlNiCo4
LNG18	900	48	18	450	810	AlNiCo4
LNGT18	580	80	18	525	850	AlNiCo8
LNG37	1200	48	37	525	850	AlNiCo5
LNG40	1230	48	40	525	850	AlNiCo5
LNG44	1250	52	44	525	850	AlNiCo5
LNG48	1280	56	48	525	850	AlNiCo5DG
LNG52	1300	56	52	525	850	AlNiCo5DG
LNG56	1300	58	56	525	850	AlNiCo5-7
LNG60	1330	60	60	525	850	AlNiCo5-7
LNGT28	1000	56	28	525	850	AlNiCo6
LNGT30	1100	56	30	525	850	AlNiCo6
LNGT32	800	100	32	525	850	AlNiCo8
LNGT38	800	110	38	550	860	AlNiCo8
LNGT40	820	110	40	550	860	AlNiCo8
LNGT44	850	115	44	550	860	AlNiCo8
LNGT48	900	120	48	550	860	AlNiCoHE
LNGT60	950	110	60	550	860	AlNiCo9
LNGT72	1050	112	72	550	860	AlNiCo9
LNGT80	1080	120	80	550	860	AlNiCo9
LNGT88	1100	115	88	550	860	AlNiCo9
LNGT96	1150	118	96	550	860	AlNiCo9
LNGT36J	700	140	36	550	860	AlNiCo8HC
LNGT36J	800	140	48	550	860	AlNiCo8HC
LNGT52J	850	145	52	550	860	AlNiCo8HC

*for reference only

Sintered AlNiCo - Property Table - SI unit

Grade	(min.) Remanence (Br)	(min.) Coercivity (Hcb)	Max Energy Product (BH)max	Max Working Temperature (Tw)	Curie Temperature (Tc)	Remarks
	mT	kA/m	kJ/m^3	℃	℃	
FLN8	500	40	9.0	450	760	Alnico 3
FLNG12	700	48	12.0	450	810	Alnico 2
FLNG14	500	60	14.0	450	850	-
FLNG28	1050	46	28.0	450	850	-
FLNG34	1200	48	34.0	450	890	Alnico 5
FLNG37	1250	48	37.0	450	890	-
FLNGT18	600	90	18.0	450	860	Alnico 8
FLNGT28	1050	60	28.0	450	850	Alnico 6
FLNGT31	780	104	33.0	550	850	Alnico 8
FLNGT38	800	120	38.0	450	850	Alnico 8
FLNGT42	880	120	42.0	450	820	Alnico 8
FLNGT33J	700	140	33.0	450	850	-
FLNGT38J	730	151	38.0	550	850	Alnico 8HC

*for reference only

Ferrite - Property Table - SI unit

Grade	(range) Remanence (Br)	(range) Intrinsic Coercivity (Hcj)	(range) Coercivity (Hcb)	Max Energy Product (BH)max	Max Working Temperature (Tw)	Curie Temperature (Tc)
	mT	kA/m	kA/m	kJ/m^3	℃	℃
Y20	320-380	140-195	135-190	18.0	250	450
Y25	360-370	140-200	135-190	22.5	250	450
Y30	380-385	200-220	190-210	26.0	250	450
Y30BH	380-390	230-245	223-235	27.0	250	450
Y30H-1	380-400	235-290	230-275	27.0	250	450
Y30H-2	395-415	310-335	275-300	28.5	250	450
Y32	400-420	165-195	160-190	30.5	250	450
Y33	410-430	225-255	220-250	31.5	250	450
Y35	430-450	217-241	215-239	33.0	250	450
Y40	440-460	340-360	330-345	37.6	250	450

*for reference only

Sintered SmCo - Property Table - SI unit

Grade	(min.) Remanence (Br)	(min.) Intrinsic Coercivity (Hcj)	(min.) Coercivity (Hcb)	Max Energy Product (BH)max	Max Working Temperature (Tw)	Curie Temperature (Tc)
	mT	kA/m	kA/m	kJ/m^3	℃	℃
SmCo16	830	1430	640	128	250	750
SmCo18	880	1430	680	144	250	750
SmCo20	920	1430	700	160	250	750
SmCo22	940	1450	730	176	250	750
SmCo24	980	1450	730	192	300	750-820
SmCo26	1030	1450	760	208	300	750-820
SmCo28	1050	1450	780	224	300	750-820
SmCo30	1100	1450	810	240	300	750-820
SmCo26M	1030	1100	760	208	300	750-820
SmCo28M	1050	1100	780	224	300	750-820
SmCo30M	1100	1100	810	240	300	750-820
SmCo28L	1050	700	550	224	250	750-820
SmCo30L	1100	700	550	240	250	750-820
SmCo24H	1000	2000	720	192	350	750-820
SmCo26H	1030	2000	760	208	350	750-820
SmCo28H	1050	2000	770	224	350	750-820
SmCo30H	1080	2000	810	240	350	750-820

*SmCo 16-22, Sm:Co=1:5; the rest grades Sm:Co=2:17

*for reference only

Flexible Rubber Magnets - Property Table - SI unit

Grade	(range) Remanence (Br)	(range) Intrinsic Coercivity (Hcj)	(range) Coercivity (Hcb)	Max Energy Product (BH)max	Remark
	mT	kA/m	kA/m	kJ/m^3	
FRM-5	165 ±10	132 ±8	108 ±8	5.2 ±0.4	Isotropic
FRM-6	170 ±10	136 ±8	112 ±8	5.6 ±0.4	Isotropic
FRM-8	220 ±5	160 ±8	136 ±8	8.0 ±0.4	Semi-aniso
FRM-11	245 ±5	148 ±8	140 ±8	11.2 ±0.4	Anisotropic
FRM-12	247.5 ±2.5	224 ±8	168 ±8	12.0 ±0.4	Anisotropic

*for reference only