



宁波韵升
NINGBO YUNSHENG

Magnetic Characteristics and Physical Properties of Compression Molded NdFeB

Grade		BNP-2	BNP-3	BNP-4	BNP-5	BNP-6	BNP-7	BNP-8	BNP-8A	BNP-9L	BNP-9	BNP-9H	BNP-10H	BNP-10	BNP-11	BNP-12D	BNP-12L	BNP-13L
Magnetic properties	Residual Induction Br																	
	mT	300-400	400-510	460-520	470-550	550-650	550-650	620-670	620-680	670-730	650-700	650-700	650-710	670-720	680-740	720-770	730-770	780-830
	kGs	3.0-4.0	4.0-5.1	4.6-5.2	4.7-5.5	5.5-6.5	5.5-6.5	6.2-6.7	6.2-6.8	6.7-7.3	6.5-7.0	6.5-7.0	6.5-7.1	6.7-7.2	6.8-7.4	7.2-7.7	7.3-7.7	7.8-8.3
Coercivity Hcb	kA/m	160-240	216-280	224-288	240-360	320-376	320-408	400-456	400-480	360-416	416-456	432-488	432-480	424-480	400-480	440-520	368-432	400-480
	kOe	2.0-3.0	2.7-3.5	2.8-3.6	3.0-4.5	4.0-4.7	4.0-5.1	5.0-5.7	5.0-6.0	4.5-5.2	5.2-5.7	5.4-6.1	5.4-6.0	5.3-6.0	5.0-6.0	5.5-6.5	4.6-5.4	5.0-6.0
Intrinsic Coercivity Hcj	kA/m	440-600	504-680	504-680	520-680	600-720	560-680	640-800	1040-1280	520-640	680-800	920-1040	784-960	640-800	640-800	720-880	520-640	480-640
	kOe	5.5-7.5	6.3-8.5	6.3-8.5	6.5-8.5	7.5-9.0	7.0-8.5	8.0-10.0	13.0-16.0	6.5-8.0	8.5-10.0	11.5-13.0	9.8-12.0	8.0-10.0	8.0-10.0	9.0-11.0	6.5-8.0	6.0-8.0
Max. Energy Product (BH)max	kJ/m ³	19-26	24-32	30-35	37-44	44-52	52-64	64-76	65-73	68-75	68-76	71-80	74-82	76-84	80-88	88-96	80-88	88-104
	MG0e	2.4-3.3	3.0-4.0	3.8-4.4	4.7-5.5	5.5-6.5	6.5-8.0	8.0-9.5	8.2-9.2	8.6-9.4	8.5-9.5	8.9-10.0	9.3-10.3	9.5-10.5	10.0-11.0	11.0-12.0	10.0-11.0	11.0-13.0
Density ρ	g/cm ³	5.6-6.0	5.6-6.0	5.6-6.0	5.6-6.0	5.6-6.0	5.6-6.0	5.8-6.2	5.8-6.1	5.8-6.1	5.8-6.2	5.8-6.1	5.8-6.1	5.8-6.2	6.0-6.2	6.1-6.3	6.0-6.3	6.1-6.4
Recoil Permeability μr		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Tem. Coeff. of Br	%/°C	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.11	-0.10	-0.12	-0.11	-0.10	-0.10	-0.10	-0.10	-0.10	-0.12	-0.12
Curie Tem. Tc	°C	300	300	300	300	300	300	300	350	320	350	350	350	350	350	350	320	320
Max. Operating Tem. Tw	°C	160	160	160	160	160	160	160	180	120	160	180	180	160	160	160	120	120

*Notes:

1. The data in these tables are obtained from standard test pieces;
2. These values may vary depending on the magnet's shape and dimensions. It is recommended that the figures be verified in actual products.

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Magnetic Characteristics and Physical Properties of Injection Molded NdFeB

Grade		BNI-3	BNI-4	BNI-5	BNI-6	BNI-7	BNP-5SR (PPS)	BNI-6SR (PPS)	
Magnetic properties	Residual Induction								
	Br	mT	350-450	400-500	450-550	500-600	550-650	450-550	500-600
		kGs	3.5-4.5	4.0-5.0	4.5-5.5	5.0-6.0	5.5-6.5	4.5-5.5	5.0-6.0
Coercivity	Hcb	kA/m	200-280	240-320	304-360	328-384	344-400	320-400	320-400
		kOe	2.5-3.5	3.0-4.0	3.8-4.5	4.1-4.8	4.3-5.0	4.0-5.0	4.0-5.0
Intrinsic Coercivity	Hcj	kA/m	400-460	560-720	640-800	640-800	640-800	880-1120	880-1120
		kOe	5.0-8.0	7.0-9.0	8.0-10.0	8.0-10.0	8.0-10.0	11.0-14.0	11.0-14.0
Max. Energy Product	(BH)max	kJ/m ³	20-28	28-36	36-44	44-52	52-60	36-44	44-52
		MGOe	2.5-3.5	3.5-4.5	4.5-5.5	5.5-6.5	6.5-7.5	4.5-5.5	5.5-6.5
Density ρ		g/cm ³	4.5-5.0	4.5-5.0	4.5-5.1	4.7-5.2	4.7-5.3	4.8-5.3	4.9-5.4
Recoil Permeability			1.2	1.2	1.2	1.2	1.2	1.2	1.2
Tem. Coeff. of Br		%/°C	-0.11	-0.11	-0.11	-0.11	-0.12	-0.11	-0.11
Max. Operating Tem.		°C	120	120	120	120	120	180	180
Notes	The Tw of PA6 can reach 150°C								

*Notes:

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Magnetic Characteristics of Anisotropic Injection Molded Magnet

Material		NdFeB		SmCo			Ferrite	NdFeB + SmFeN
Binder		PA12 (PA6)		PA12 (PA6)		PPS	PA12 (PA6)	PA12
Grade		ANI-12	ANI-15	YS-7	YS-9	YS-6 (PPS)	AFI-2	ANI-18
Residual Induction Br	mT	700-800	780-850	570-600	620-650	500-550	270-310	850-900
	kGs	7.0-8.0	7.8-8.5	5.7-6.0	6.2-6.5	5.0-5.5	2.7-3.1	8.5-9.0
Coercivity Hcb	kA/m	445-500	530-575	330-370	380-415	325-345	175-205	540-905
	kOe	5.6-6.3	6.7-7.2	4.1-4.6	4.8-5.2	4.1-4.3	2.2-2.6	6.8-11.4
Intrinsic Coercivity Hcj	kA/m	915-995	1155-1235	675-875	675-875	675-875	205-245	915-995
	kOe	11.5-12.5	14.5-15.5	8.5-11.0	8.5-11.0	8.5-11.0	2.6-3.1	11.5-12.5
Max. Energy Product (BH)max	kJ/m ³	92-100	116-124	52-60	68-76	44-52	14.7-18.7	131-140
	MG0e	11.5-12.5	14.5-15.5	6.5-7.5	8.5-9.5	5.5-6.5	1.8-2.3	16.5-17.5
Density ρ	g/cm ³	4.9-5.3	4.9-5.3	5.0-6.2	5.0-6.2	5.0-6.2	3.6-4.0	5.0-5.6
Recoil Permeability μr		1.1	1.1	1.1	1.1	1.1	1.1	1.1
Tem. Coeff. of Br	%/°C	-0.13	-0.13	-0.04	-0.04	-0.04	-0.19	-0.09
Max. Operating Tem. Tw	°C	100	120	120	120	180	120	120

*Notes:

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