## NeoForm® Bonded Nd-Fe-B Magnets

Charts/graphs reference typical magnet performance.

Grade	Max Energy Product	Residual Induction	Min Intrinsic Coercivity	Coercivity	Max Operating Temp	Curie Temp	Coefficient Induction 20-150°C
	BH <sub>max</sub>	Br	H <sub>ci</sub>	H <sub>c</sub>	T <sub>max</sub>	T <sub>c</sub>	α
	MGOe	kG	kOe	kOe	°C	°C	%/°C
BN0406	4	3.0-4.0	6	3.0-4.0	160	300	-0.11
BN0607	6	4.0-5.0	7	3.0-4.0	160	300	-0.11
BN0707	7.5	5.0-6.0	7	4.0-5.0	160	300	-0.11
BN0908	9	6.0-6.8	8	4.5-5.5	160	300	-0.11
BN0908	9	6.0-6.8	8	5.0-6.0	160	350	-0.11
BN0913	9	6.0-6.6	13	5.0-6.0	180	350	-0.10
BN0910	9.5	6.2-6.8	10	5.0-6.0	180	350	-0.10
BN1008	10.5	6.8-7.3	8	5.0-6.0	160	350	-0.10
BN1108	11	7.0-7.5	8	5.5-6.5	160	350	-0.10
BN1209	12	7.2-7.7	9	5.5-6.5	160	350	-0.10
BN1210	12	7.4-8.0	9.5	5.5-6.5	160	350	-0.10
BN1206	12	7.6-8.1	6	5.0-6.0	150	320	-0.12

Properties	CGS	SI
Density	6.0 g/cm3	6000 kg/m3

NeoForm® bonded Neodymium magnets are made of the powerful Nd-Fe-B material mixed into an epoxy binder. The mix is approximately 97 vol% magnet material to 3 vol% epoxy. The manufacturing process involves combining Nd-Fe-B powder with an epoxy binder and compressing the mixture in a press and curing the part in an oven. Since the material is formed by compression bonding, the dimensions typically vary .002" or better for a given run.

NeoForm material is isotropic, so it can be magnetized through any direction, including multi-polar arrangements. Because the material is in an epoxy binder, it can be machined on a mill or lathe. However, the material will not support a thread, so holes cannot be tapped. NeoForm® material is often used to substantially reduce the size of designs that used ceramic magnet materials. Significant size reductions can be achieved because NeoForm® material is approximately 3 times stronger than ceramic magnet material. In addition, since NeoForm® material is isotropic, it can be magnetized multi-polar, such as a N-S-N-S pattern on the outer diameter of a ring.