

Bonded Neodymium

DATA SHEET

NdFeB

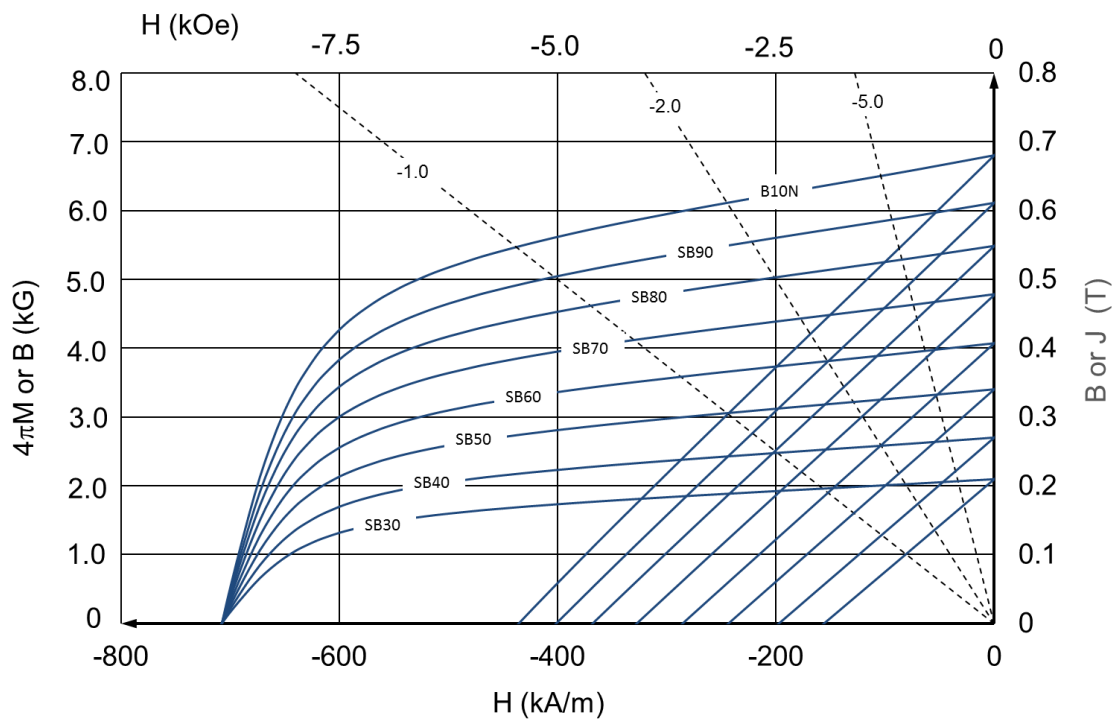
BREMAG Bonded NdFeB magnets are either compression or injection moulded to net shape and due to the high tolerances achieved, require no further machining. This data sheet covers our standard range of NdFeB Bonded magnets that are commonly used in all industries. All grades are produced to ISO9001 and ISO14001 Quality Control Standards and Certificates of Conformity, MSDS and PPAP's can be supplied on request.



Bonded Neodymium

Typical Range of Values

Material	Br		Hc (Hcb)		Hci (Hcj)		BHmax	
	mT	G	kA/m	Oe	kA/m	Oe	kJ/m ³	MGOe
B10N	680	6800	430	5400	745	9250	76	9.6
SB90	612	6120	410	5200	745	9250	65	8.2
SB80	544	5440	370	4600	745	9250	52	6.5
SB70	476	4760	330	4100	745	9250	41	5.2
SB60	408	4080	290	3600	745	9250	27	3.3
SB50	340	3400	250	3100	745	9250	22	2.8
SB40	272	2720	210	2600	745	9250	13	1.6
SB30	204	2040	170	2100	745	9250	8	0.9



Demagnetisation curves represent typical properties that will vary due to product shape, size and density. Please contact the factory for information.

Property	Unit	Typical Value
Nom. Density	g/cc	6.0
Maximum Working Temperature**	°C	150
Temperature Coefficient of Br (α)	%/°C	-0.11
Temperature Coefficient of Hci (β)	%/°C	-0.40
Curie Temperature	°C	330
Resistivity	Ω cm	4×10^{-3}
Ultimate Tensile Strength	MPa	18
Compressive Strength	MPa	105
Initial Modulus (Tension)	MPa	27400
Youngs Modulus	MPa	8100
Coefficient of Thermal Expansion	%/°C	10×10^{-6}
Recommended Saturation Field	kA/m	3000
Permeability (μ)	-	1.1

Coatings

Plastic Bonded Magnets are generally supplied uncoated as the plastic binder protects the NdFeB alloy from corrosion. However, coatings can be applied when necessary such as Black Epoxy Spray or Parylene. Please contact our sales staff for further information.

General Information

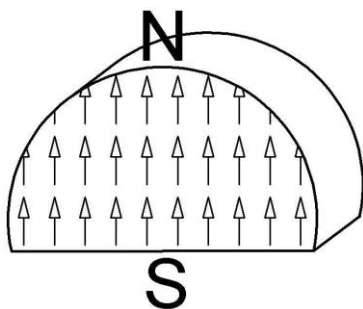
Plastic Bonded Magnets are either compression or injection moulded to net shape and due to the high tolerances achieved, require no further machining. Plastic Bonded magnets use NdFeB magnetic powder within a non-magnetic binder (usually a rubber or plastic). Being thermos-elastomers, the binders can be a limiting factor on the suitability for some applications, as they will soften with heat. The process of manufacture is best suited for high or very high volumes due to the relatively high tooling charges, but is also very cost effective, as no magnet material is wasted.

Magnetisation

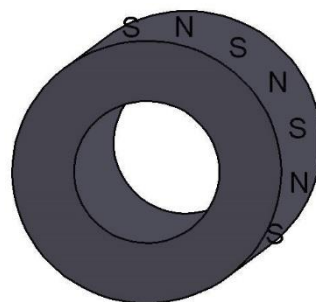
Plastic Bonded magnets are isotropic, and can therefore be magnetised afterwards in any direction. This makes them ideally suited for multipole magnetisation, either before or after assembly. Magnetising patterns are limited only by whether a magnetising coil fixture can be produced to give the required magnetising pattern.

For standard two pole magnets, a letter "A" may be used to denote the direction of magnetisation (DoM). E.g. $\text{od}5\text{mm} \times 30\text{mmA}$ is an axially magnetised rod magnet. If an arrow or multiple arrows are present on the drawing, the arrows show the direction of magnetisation together with N or S letters to define the North and South faces.

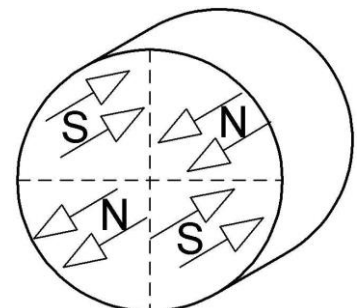
Examples of Bonded Magnets



Diametric Magnetisation



Multipole Radial Magnetisation on OD



Multipole Axial Magnetisation on end face