

**N45 Grade Sintered Neodymium-Iron-Boron Magnets**

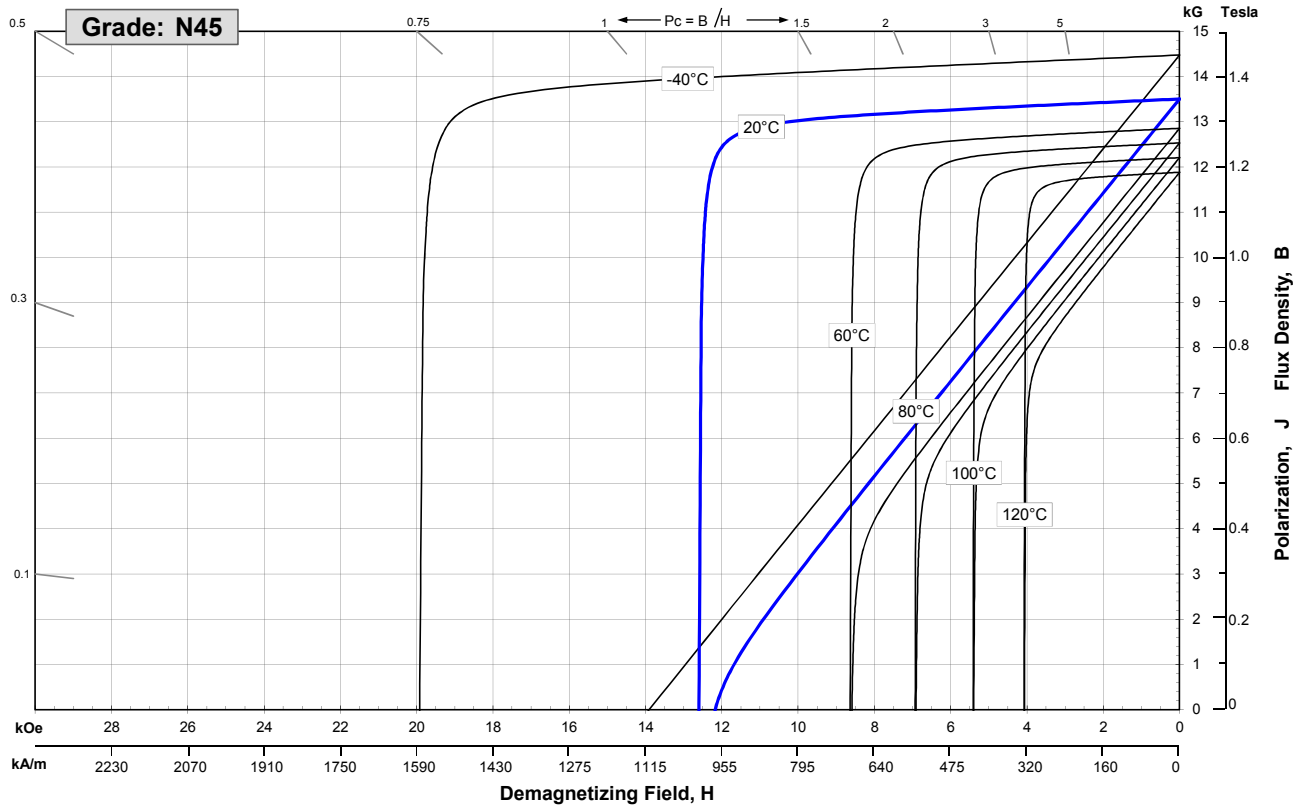
These are also referred to as "Neo" or NdFeB magnets. They offer a combination of high magnetic output at moderate cost. Please contact ALB for additional grade information and recommendations for protective coating. Assemblies using these magnets can also be provided.

Characteristic	Units	Magnetic Properties		
		min.	nominal	max.
<b>Br</b> , Residual Induction	Gauss	13,200	13,500	13,800
	mT	1320	1350	1380
<b>H<sub>cB</sub></b> , Coercivity	Oersteds	10,800	12,000	13,200
	kA/m	860	955	1050
<b>H<sub>cJ</sub></b> , Intrinsic Coercivity	Oersteds	12,000		
	kA/m	955		
<b>BH<sub>max</sub></b> , Maximum Energy Product	MGOe	42	44	46
	kJ/m <sup>3</sup>	334	350	366

Characteristic	Units	C // C ⊥	
		C //	C ⊥
<b>Thermal Properties</b>			
Reversible Temperature Coefficients <sup>(1)</sup>			
of Induction, α(Br)	%/°C	-0.120	
of Coercivity, α(H <sub>cj</sub> )	%/°C	-0.750	
Coefficient of Thermal Expansion <sup>(2)</sup>	ΔL/L per °C×10 <sup>-6</sup>	7.5	-0.1
Thermal Conductivity	W / (m • K)	7.6	
Specific Heat <sup>(3)</sup>	J / (kg • K)	460	
Curie Temperature, T <sub>c</sub>	°C	310	
<b>Other Properties</b>			
Flexural Strength	psi	41,300	
	MPa	285	
Density	g/cm <sup>3</sup>	7.5	
Hardness, Vickers	Hv	620	
Electrical Resistivity, ρ	μΩ • cm	180	

Notes: (1) Coefficients measured between 20 and 80 °C  
(2) Between 20 and 200 °C  
(3) Between 20 and 140 °C

**Demagnetisation Curves**



1 kA/m = 12.566 Oe 1 kOe = 79.577 kA/m

Notes: The material data and demagnetization curves shown above represent typical properties that may vary due to product shape and size. Magnets can be supplied thermally stabilized or magnetically calibrated to customer specifications. Additional grades are available. Please contact the factory for information.

