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N40EH

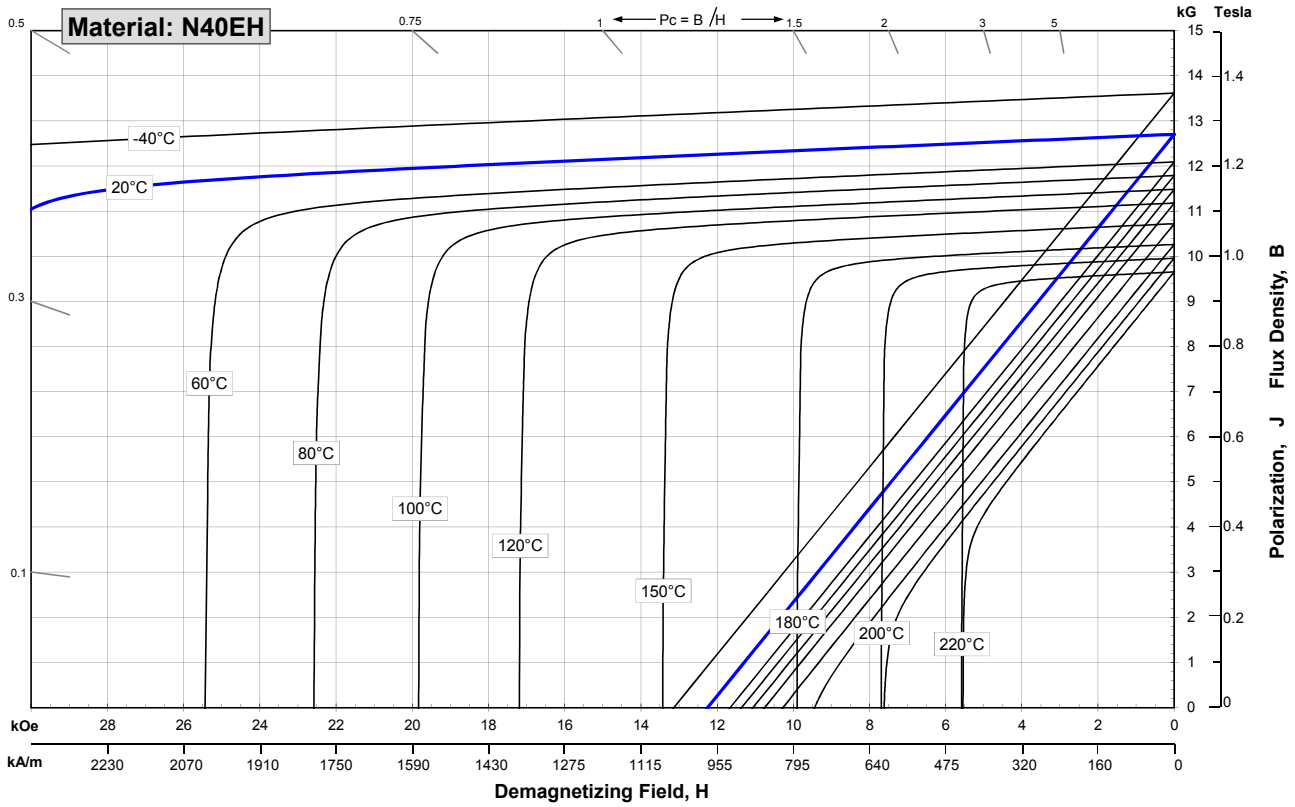
Sintered Neodymium-Iron-Boron Magnets

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

	Characteristic	Units	min.	nominal	max.
Magnetic Properties	**Br**, Residual Induction	Gauss	12,500	12,700	12,900
		mT	1250	1270	1290
	H_{cB}, Coercivity	Oersteds	11,500	11,900	12,300
		kA/m	915	947	979
	H_{cJ}, Intrinsic Coercivity	Oersteds	30,000		
		kA/m	2,388		
	BHmax, Maximum Energy Product	MGOe	38	40	41
		kJ/m^3	302	314	326

	Characteristic	Units	C //	C ⊥
Thermal Properties	Reversible Temperature Coefficients (1)			
	of Induction, α(Br)	%/ºC	-0.120	
	of Coercivity, α(Hcj)	%/ºC	-0.420	
	Coefficient of Thermal Expansion (2)	ΔL/L per ºCx10^{-6}	7.5	-0.1
	Thermal Conductivity	W / (m • K)	7.6	
	Specific Heat (3)	J / (kg • K)	460	
	Curie Temperature, Tc	ºC	310	
Other Properties	Flexural Strength	psi	41,300	
		MPa	285	
	Density	g/cm^3	7.5	
	Hardness, Vickers	Hv	620	
	Electrical Resistivity, ρ	μΩ • cm	180	

Notes: (1) Coefficients measured between 20 and 200 ºC
(2) Between 20 and 200 ºC (3) Between 20 and 140 ºC



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.