

N42SH Grade Sintered Neodymium-Iron-Boron Magnets

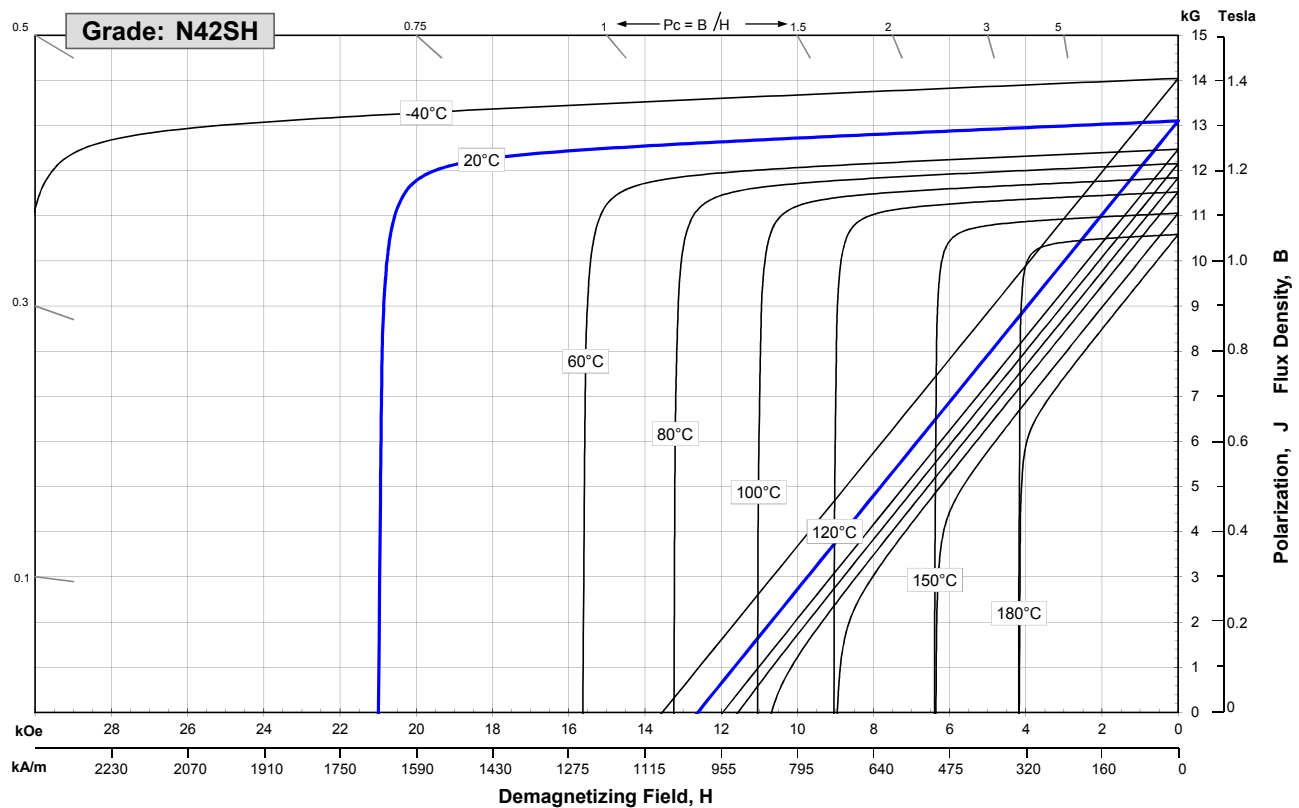
These are also referred to as "Neo" or NdFeB magnets. They offer a combination of high magnetic output at moderate cost. Please contact ALB for additional grade information and recommendations for protective coating. Assemblies using these magnets can also be provided.

Characteristic	Units	Magnetic Properties		
		min.	nominal	max.
Br , Residual Induction	Gauss	12,800	13,100	13,400
	mT	1280	1310	1340
H_{cB} , Coercivity	Oersteds	12,000	12,400	12,800
	kA/m	955	987	1019
H_{cJ} , Intrinsic Coercivity	Oersteds	20,000		
	kA/m	1,592		
BH_{max} , Maximum Energy Product	MGOe	39	42	44
	kJ/m ³	310	330	350

Characteristic	Units	Thermal Properties	
		C //	C ⊥
Reversible Temperature Coefficients ⁽¹⁾			
of Induction, α(Br)	%/°C		-0.120
of Coercivity, α(H _{cj})	%/°C		-0.535
Coefficient of Thermal Expansion ⁽²⁾	ΔL/L per °C×10 ⁻⁶	7.5	-0.1
Thermal Conductivity	W / (m · K)	7.6	
Specific Heat ⁽³⁾	J / (kg · K)	460	
Curie Temperature, T _c	°C	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 150 °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.

