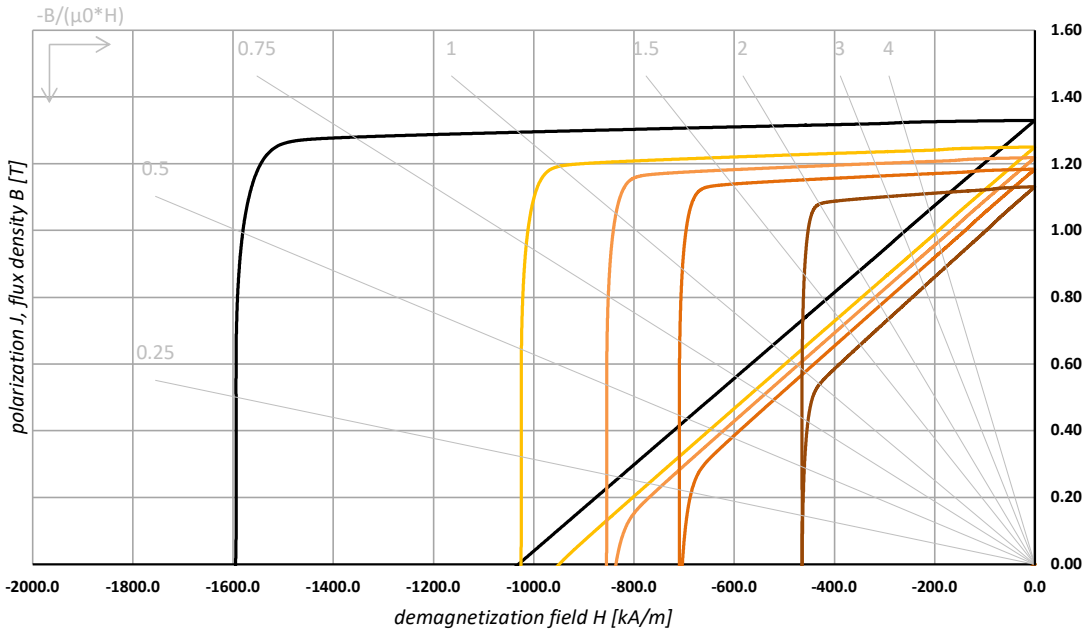
BOMATEC
MORE THAN JUST MAGNETS

BMN-42SH/ST

NdFeB sintered, corrosion & temperature stable



Temperature in [°C]: **20.0** 80.0 100.0 120.0 150.0

magnetic properties					
Remanence 20°C	Br min	1.290	T	12.9	kG
	Br nom	1.330	T	13.3	kG
Coercitivity 20°C	HcB min	976	kA/m	12.3	kOe
	HcB nom	1018	kA/m	12.8	kOe
Intrinsic Coercitivity 20°C	HcJ min	1592	kA/m	20.0	kOe
	HcJ nom	1595	kA/m	20.0	kOe
Maximum Energy Product 20°C	BH max, min	318	kJ/m^3	39.9	MGOe
	BH max, nom	334	kJ/m^3	42.0	MGOe
Reversible Temperature Coefficient [1)]	α Br nom	-0.095 ~ -0.115	%/°C		
	β HcJ nom	-0.52 ~ -0.64	%/°C		

material properties (typical values)					
Max. Operating Temperature [2)]	T max	150	°C		
Density	ρ	7.55	g/cm^3		
Permeability 20°C	μr	1.05			
Vickers Hardness		500 - 600	HV		
Modulus of Elasticity	E	150 - 200	kN/mm^2		
Copressive Strength		1000 - 1100	N/mm^2		
Flexural Strength		250	N/mm^2		
Expansion Coefficient		-	$10^{-6}/K$		
Expansion Coefficient in direction of anisotropy	⊥	-3 - 0	$10^{-6}/K$		
	//	4 - 9	$10^{-6}/K$		
Specific Electric Resistance	ρel	1.2 - 1.6	μΩ·m		
Specific Heat Capacity	c	440	J/(kg·K)		
Thermal Conductivity	λ	8.0 - 10.0	W/m·K		

1) The shown temperature coefficients are nominal reference values only . They can vary for different temperatures and don't need to be linear.

2) The maximum operating temperature is depending on the magnet shape, size and on the specific application.

Note: The above plotted graphs are idealized and represent theoretical values of the material. Shown are curves according nominal values based on uncoated material samples according to IEC 60404-5. Material and magnetic data represent typical data that may vary due to product shape, size and coating. Please contact Bomatec regarding specific requirements for your application.

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