



Temperature in [°C]:                    **20.0**                    **80.0**                    **100.0**                    **120.0**                    **150.0**                    **180.0**

magnetic properties					
Remanence 20°C	Br min	1.170	T	11.7	kG
	Br nom	1.220	T	12.2	kG
Coercivity 20°C	HcB min	860	kA/m	10.8	kOe
	HcB nom	938	kA/m	11.8	kOe
Intrinsic Coercivity 20°C	HcJ min	1989	kA/m	25.0	kOe
	HcJ nom	1995	kA/m	25.1	kOe
Maximum Energy Product 20°C	BH max, min	263	kJ/m <sup>3</sup>	33.0	MGOe
	BH max, nom	279	kJ/m <sup>3</sup>	35.1	MGOe
Reversible Temperature Coefficient <sup>1)</sup>	$\alpha$ Br nom	-0.100 ~ -0.120	%/°C		
	$\beta$ HcJ nom	-0.51 ~ -0.66	%/°C		

material properties (typical values)					
Max. Operating Temperature <sup>2)</sup>	T max	180	°C		
Density	$\rho$	7.55	g/cm <sup>3</sup>		
Permeability 20°C	$\mu_r$	1.05			
Vickers Hardness		500 - 600	HV		
Modulus of Elasticity	E	150 - 200	kN/mm <sup>2</sup>		
Copressive Strength		1000 - 1100	N/mm <sup>2</sup>		
Flexural Strength		250	N/mm <sup>2</sup>		
Expansion Coefficient		-	10 <sup>-6</sup> /K		
Expansion Coefficient in direction of anisotropy	$\perp$	-3 - 0	10 <sup>-6</sup> /K		
	$\parallel$	4 - 9	10 <sup>-6</sup> /K		
Specific Electric Resistance	$\rho_{el}$	1.2 - 1.6	$\mu\Omega \cdot m$		
Specific Heat Capacity	c	440	J/(kg K)		
Thermal Conductivity	$\lambda$	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.