



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

magnetic properties

| | | | | | |
|--|-------------|-----------------|-------------------|------|------|
| Remanence 20°C | Br min | 1.350 | T | 13.5 | kG |
| | Br nom | 1.380 | T | 13.8 | kG |
| Coercivity 20°C | HcB min | 1022 | kA/m | 12.8 | kOe |
| | HcB nom | 1056 | kA/m | 13.3 | 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 | 350 | kJ/m ³ | 44.0 | MGOe |
| | BH max, nom | 366 | kJ/m ³ | 46.0 | MGOe |
| Reversible Temperature Coefficient ¹⁾ | α Br nom | -0.100 ~ -0.120 | %/°C | | |
| | β HcJ nom | -0.51 ~ -0.66 | %/°C | | |

material properties (typical values)

| | | | | | |
|--|-------|-------------|---------------------|--|--|
| Max. Operating Temperature ²⁾ | T max | 180 | °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.