



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

| magnetic properties                              |             |                 |                   |      |      |
|--|-------------|-----------------|-------------------|------|------|
| Remanence 20°C                                   | Br min      | 1.370           | T                 | 13.7 | kG   |
|  | Br nom      | 1.410           | T                 | 14.1 | kG   |
| Coercivity 20°C                                  | HcB min     | 1024            | kA/m              | 12.9 | kOe  |
|  | HcB nom     | 1074            | kA/m              | 13.5 | kOe  |
| Intrinsic Coercivity 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 | 358             | kJ/m <sup>3</sup> | 45.0 | MGOe |
|  | BH max, nom | 382             | kJ/m <sup>3</sup> | 48.0 | MGOe |
| Reversible Temperature Coefficient <sup>1)</sup> | α Br nom    | -0.095 ~ -0.115 | %/°C              |      |      |
|  | β HcJ nom   | -0.52 ~ -0.64   | %/°C              |      |      |

| material properties (typical values)             |       |             |                     |  |  |
|--|-------|-------------|---------------------|--|--|
| Max. Operating Temperature <sup>2)</sup>         | T max | 150         | °C                  |  |  |
| Density  | ρ     | 7.55        | g/cm <sup>3</sup>   |  |  |
| Permeability 20°C                                | μr    | 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 | ⊥     | -3 - 0      | 10 <sup>-6</sup> /K |  |  |
|  | //    | 4 - 9       | 10 <sup>-6</sup> /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.