



Temperature in [°C]:                      **20.0**                      **-40.0**                      **100.0**                      **150.0**                      **200.0**

| magnetic properties                              |             |        |                   |     |      |
|--|-------------|--------|-------------------|-----|------|
| Remanence 20°C                                   | Br min      | 0.380  | T                 | 3.8 | kG   |
|  | Br nom      | 0.390  | T                 | 3.9 | kG   |
| Coercivity 20°C                                  | HcB min     | 222    | kA/m              | 2.8 | kOe  |
|  | HcB nom     | 232    | kA/m              | 2.9 | kOe  |
| Intrinsic Coercivity 20°C                        | HcJ min     | 230    | kA/m              | 2.9 | kOe  |
|  | HcJ nom     | 240    | kA/m              | 3.0 | kOe  |
| Maximum Energy Product 20°C                      | BH max, min | 27.2   | kJ/m <sup>3</sup> | 3.4 | MGOe |
|  | BH max, nom | 28.6   | kJ/m <sup>3</sup> | 3.6 | MGOe |
| Reversible Temperature Coefficient <sup>1)</sup> | α Br nom    | -0.200 | %/°C              |     |      |
|  | β HcJ nom   | 0.300  | %/°C              |     |      |

| material properties (typical values)             |       |             |                     |  |  |
|--|-------|-------------|---------------------|--|--|
| Max. Operating Temperature <sup>2)</sup>         | T max | 250         | °C                  |  |  |
| Density  | ρ     | 4.95        | g/cm <sup>3</sup>   |  |  |
| Permeability 20°C                                | μr    | 1.1         |                     |  |  |
| Vickers Hardness                                 |       | 500-600     | HV                  |  |  |
| Modulus of Elasticity                            | E     | 15 - 200    | kN/mm <sup>2</sup>  |  |  |
| Copressive Strength                              |       | 600 - 700   | N/mm <sup>2</sup>   |  |  |
| Flexural Strength                                |       | 55          | N/mm <sup>2</sup>   |  |  |
| Expansion Coefficient                            |       | -           | 10 <sup>-6</sup> /K |  |  |
| Expansion Coefficient in direction of anisotropy | ⊥     | 10.0 - 11.0 | 10 <sup>-6</sup> /K |  |  |
|  | //    | 12.0 - 13.0 | 10 <sup>-6</sup> /K |  |  |
| Specific Electric Resistance                     | ρel   | 1000000000  | μΩ m                |  |  |
| Specific Heat Capacity                           | c     | 700         | J/(kg K)            |  |  |
| Thermal Conductivity                             | λ     | 4           | 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.