



Temperature in [°C]:                      **20.0**                      **80.0**                      **100.0**                      **150.0**                      **200.0**                      **250.0**

| magnetic properties                              |             |        |                   |      |      |
|--|-------------|--------|-------------------|------|------|
| Remanence 20°C                                   | Br min      | 0.890  | T                 | 8.9  | kG   |
|  | Br nom      | 0.910  | T                 | 9.1  | kG   |
| Coercivity 20°C                                  | HcB min     | 680    | kA/m              | 8.5  | kOe  |
|  | HcB nom     | 710    | kA/m              | 8.9  | kOe  |
| Intrinsic Coercivity 20°C                        | HcJ min     | 1830   | kA/m              | 23.0 | kOe  |
|  | HcJ nom     | 1850   | kA/m              | 23.2 | kOe  |
| Maximum Energy Product 20°C                      | BH max, min | 150    | kJ/m <sup>3</sup> | 18.8 | MGOe |
|  | BH max, nom | 158.5  | kJ/m <sup>3</sup> | 19.9 | MGOe |
| Reversible Temperature Coefficient <sup>1)</sup> | α Br nom    | -0.045 | %/°C              |      |      |
|  | β HcJ nom   | -0.280 | %/°C              |      |      |

| material properties (typical values)             |       |             |                     |  |  |
|--|-------|-------------|---------------------|--|--|
| Max. Operating Temperature <sup>2)</sup>         | T max | 250         | °C                  |  |  |
| Density  | ρ     | 8.3         | g/cm <sup>3</sup>   |  |  |
| Permeability 20°C                                | μr    | 1.05        |                     |  |  |
| Vickers Hardness                                 |       | 475         | HV                  |  |  |
| Modulus of Elasticity                            | E     | 110         | kN/mm <sup>2</sup>  |  |  |
| Compressive Strength                             |       | 1000        | N/mm <sup>2</sup>   |  |  |
| Flexural Strength                                |       | 100         | N/mm <sup>2</sup>   |  |  |
| Expansion Coefficient                            |       | -           | 10 <sup>-6</sup> /K |  |  |
| Expansion Coefficient in direction of anisotropy | ⊥     | 10-14       | 10 <sup>-6</sup> /K |  |  |
|  | //    | 4-8         | 10 <sup>-6</sup> /K |  |  |
| Specific Electric Resistance                     | ρel   | 0.4-0.7     | μΩ m                |  |  |
| Specific Heat Capacity                           | c     | 370         | J/(kg K)            |  |  |
| Thermal Conductivity                             | λ     | 10.0 - 13.0 | W/mK                |  |  |

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.

Bomatec | Hofstrasse 1 | Tel. +41 44 872 10 00 | Fax. +41 44 872 10 01 | contact@bomatec.ch | www.bomatec.com