Temperature in [°C]: 20.0 100.0 120.0 150.0 180.0 200.0

### Magnetic Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Reference Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remanence 20°C</td>
<td>Br min 1.040</td>
<td>T 10.4 kG</td>
</tr>
<tr>
<td></td>
<td>Br nom 1.080</td>
<td></td>
</tr>
<tr>
<td>Coercitivity 20°C</td>
<td>HcB min 780 kA/m</td>
<td>9.8 kOe</td>
</tr>
<tr>
<td></td>
<td>HcB nom 831 kA/m</td>
<td>10.4 kOe</td>
</tr>
<tr>
<td>Intrinsic Coercitivity 20°C</td>
<td>HcJ min 2785 kA/m</td>
<td>35.0 kOe</td>
</tr>
<tr>
<td></td>
<td>HcJ nom 2790 kA/m</td>
<td>35.1 kOe</td>
</tr>
<tr>
<td>Maximum Energy Product 20°C</td>
<td>BH max, min 199 kJ/m</td>
<td>25.0 MGOe</td>
</tr>
<tr>
<td></td>
<td>BH max, nom 223 kJ/m</td>
<td>28.0 MGOe</td>
</tr>
<tr>
<td>Reversible Temperature Coefficient 1)</td>
<td>α Br nom -0.100 ~ -0.120 %/°C</td>
<td></td>
</tr>
<tr>
<td></td>
<td>β HcJ nom -0.45 ~ -0.65 %/°C</td>
<td></td>
</tr>
</tbody>
</table>

### Material Properties (Typical Values)

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Operating Temperature 2)</td>
<td>T max 220 °C</td>
</tr>
<tr>
<td>Density</td>
<td>ρ 7.55 g/cm³</td>
</tr>
<tr>
<td>Permeability 20°C</td>
<td>μr 1.05</td>
</tr>
<tr>
<td>Vickers Hardness</td>
<td>500 - 600 HV</td>
</tr>
<tr>
<td>Modulus of Elasticity</td>
<td>E 150 - 200 kN/mm²</td>
</tr>
<tr>
<td>Compressive Strength</td>
<td>1000 - 1100 N/mm²</td>
</tr>
<tr>
<td>Flexural Strength</td>
<td>250 N/mm²</td>
</tr>
<tr>
<td>Expansion Coefficient</td>
<td>- 10⁶/K</td>
</tr>
<tr>
<td>Expansion Coefficient in direction of</td>
<td>1.0 - 3.0</td>
</tr>
<tr>
<td>anisotropy</td>
<td>// 3.0 - 4.0</td>
</tr>
<tr>
<td>Specific Electric Resistance</td>
<td>pel 1.4 - 1.6 μΩ m</td>
</tr>
<tr>
<td>Specific Heat Capacity</td>
<td>c 440 J/(kg K)</td>
</tr>
<tr>
<td>Thermal Conductivity</td>
<td>λ 8.0 - 10.0 W/m K</td>
</tr>
</tbody>
</table>

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.