BMSG-28H  Sm2Co17

**magnetic properties**

- **Remanence 20°C**
  - Br min: 1.030 T
  - Br nom: 1.080 T
- **Coercitivity 20°C**
  - HcB min: 677 kA/m
  - HcB nom: 812 kA/m
- **Intrinsic Coercitivity 20°C**
  - Hci min: 1990 kA/m
  - Hci nom: 2000 kA/m
- **Maximum Energy Product 20°C**
  - BH max, min: 207 kJ/m$^3$
  - BH max, nom: 220 kJ/m$^3$
- **Reversible Temperature Coefficient**
  - α Br nom: -0.035 %/°C
  - β Hcj nom: -0.250 %/°C

**material properties (typical values)**

- **Max. Operating Temperature**
  - T max: 350 °C
- **Density**
  - ρ: 8.4 g/cm$^3$
- **Permeability 20°C**
  - μr: 1.1
- **Vickers Hardness**
  - 600 - 700 HV
- **Modulus of Elasticity**
  - E: 150 - 200 kN/mm$^2$
- **Compressive Strength**
  - 800 - 900 N/mm$^2$
- **Flexural Strength**
  - 120 N/mm$^2$
- **Expansion Coefficient**
  - - $10^{-6}$/K
- **Expansion Coefficient in direction of anisotropy**
  - //: 8.0 - 10.0 $10^{-6}$/K
  - //: 10.0 - 12.0 $10^{-6}$/K
- **Specific Electric Resistance**
  - ρel: 0.75 - 0.85 µΩ m
- **Specific Heat Capacity**
  - c: 370 J/(kg K)
- **Thermal Conductivity**
  - λ: 10.0 - 13.0 W/m K

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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 coating. Please contact Bomatec regarding specific requirements for your application.

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**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.

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**Graph:**

- **polarization J, flux density B [T]**
- **demagnetization field H [kA/m]**

- **-B/(µ0*H)**

- **0.25**

- **0.5 0.75 1 1.5 2 3 4**

- **0.00 0.20 0.40 0.60 0.80 1.00 1.20 1.40**

- **-2500.0 -2000.0 -1500.0 -1000.0 -500.0 0.0**

- **0.0 0.20 0.40 0.60 0.80 1.00**

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**Temperature in [°C]:**

- 20.0
- 80.0
- 100.0
- 150.0
- 200.0
- 250.0

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