



Spacemagnets Europe GmbH

N-40UH

Sintered NdFeB-Magnets

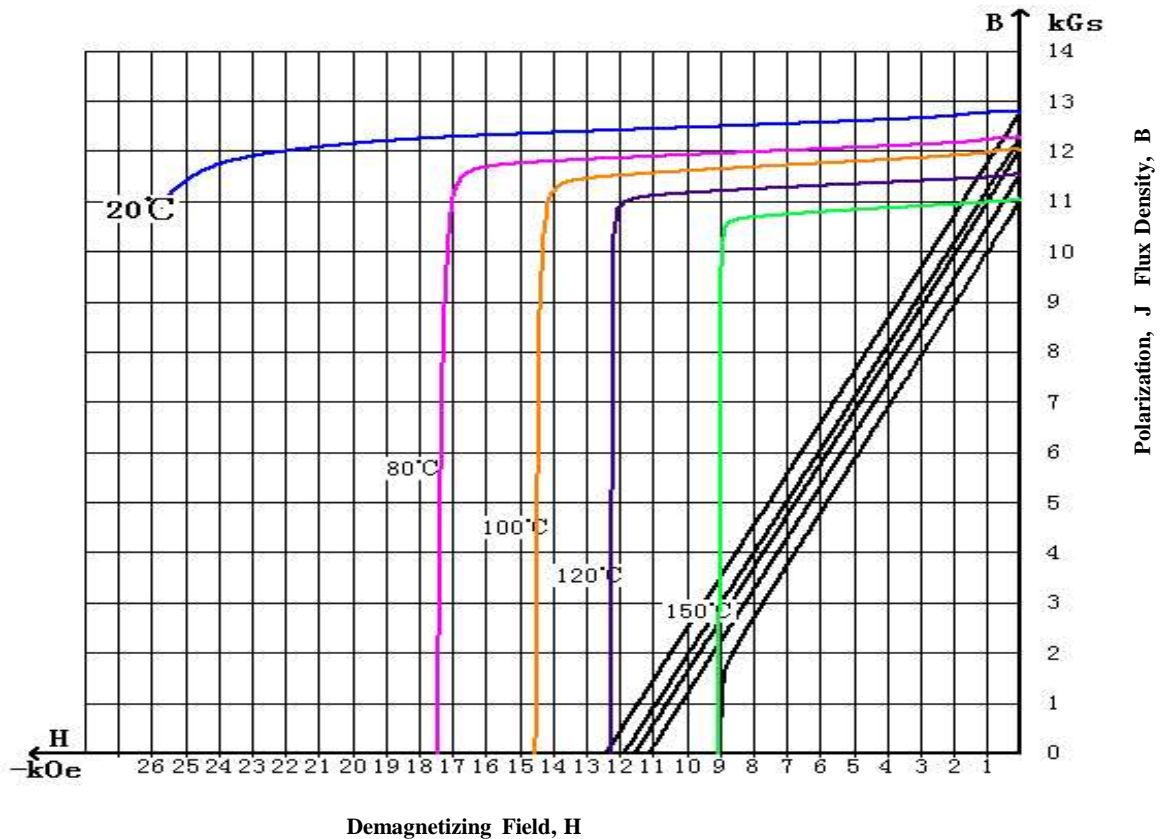
A neodymium magnet (also known as NdFeB, NIB or Neo magnet), the most widely used type of rare-earth magnet, is a permanent magnet made from an alloy of neodymium, iron and boron to form the Nd₂Fe₁₄B tetragonal crystalline structure. NdFeB-magnets are the strongest type of permanent magnet commercially available.

| Magnetic Properties | Characteristic | Unit | Min | Nominal | Max |
|-------------------------------------|------------------------------|-------------------|-------|---------|-------|
| | Br Residual Induction | | Gauss | 12500 | 12650 |
| | | mT | 1250 | 1265 | 1280 |
| Hcb Coercivity | | Oersteds | 11800 | | |
| | | KA/M | 939 | | |
| Hcj Intrinsic Coercivity | | Oersteds | 25000 | | |
| | | KA/M | 1990 | | |
| BHmax Maximum Energy Product | | MGOe | 38 | 39.5 | 41 |
| | | KJ/M ³ | 302 | 314 | 326 |

| Thermal Properties | Characteristic | Unit | C// | C⊥ |
|---|--|--------------------------------|-----|--------|
| | Reversible Temperature Coefficients ⁽¹⁾ | | | |
| Of Induction, α (Br) | | %/°C | | -0.12 |
| Of Coercivity, β (Hcj) | | %/°C | | -0.605 |
| Coefficient of Thermal Expansion ⁽²⁾ | | ΔL/L per °C x 10 ⁻⁶ | 7.5 | -0.1 |
| Thermal Conductivity | | W/m.K | | 7.6 |
| Specific Heat | | J/kg.K | | 410 |
| Curie Temperature, Tc | | °C | | 310 |
| Other Properties | Flexural Strength | psi | | 41300 |
| | | Mpa | | 285 |
| | Density | g/cm ³ | | 7.6 |
| | Hardness, Vickers | Hv | | 620 |
| | Electrical Resistivity | μΩ.cm | | 180 |

Notes: (1) Coefficients measured between 20 and 150 °C
 (2) Between 20 and 150 °C (3) Between 20 and 140 °C

Material: N-40UH



1KA/M = 12.566 Oe 1Koe = 79.577 KA/M 10KGs = 1 Tesla

Notes: The material data and demagnetization curves shown above represent typical properties that may vary due to product shape and size. Demagnetization curves show nominal Br and minimum Hcj. Magnets can be supplied thermal stabilized or magnetically calibrated to customer specifications. Additional grades are available, Please contact the factory for information.