

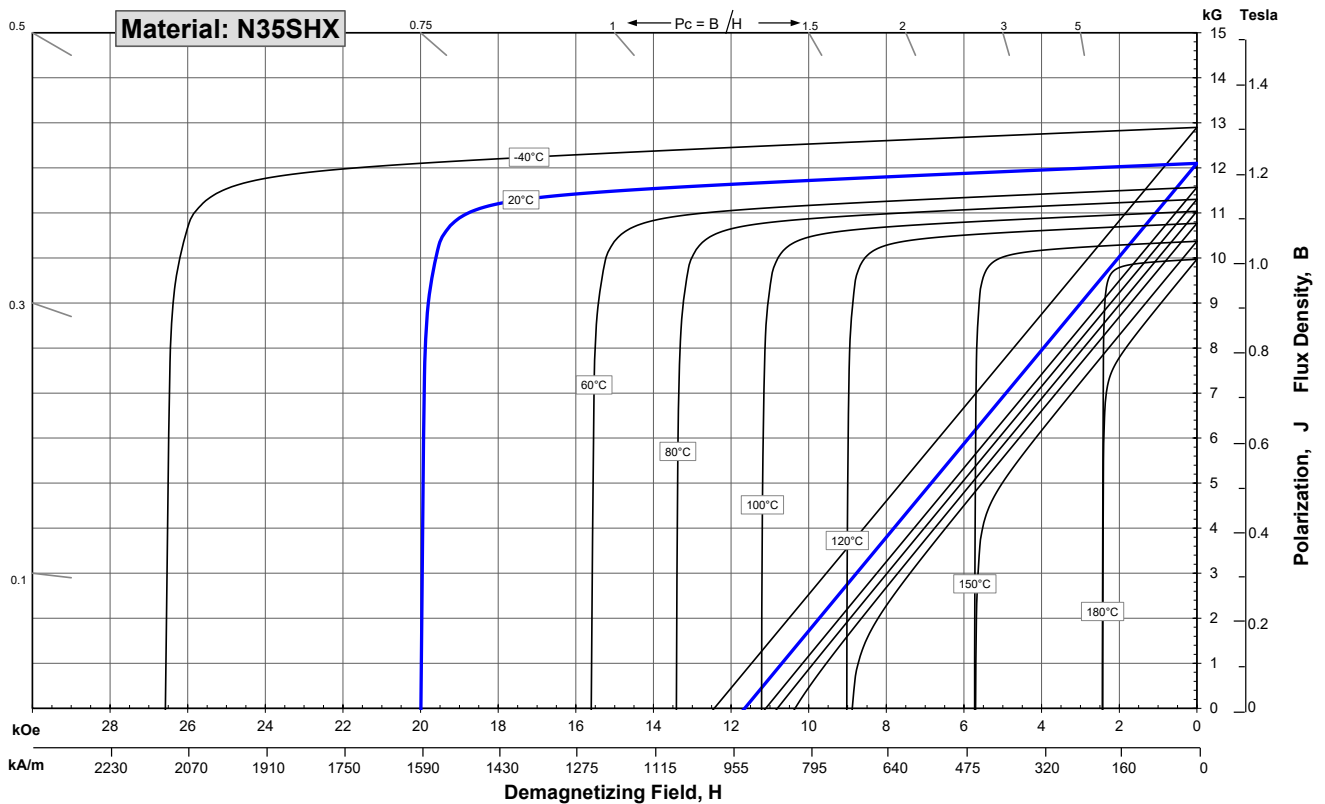
## Sintered Neodymium-Iron-Boron Magnets

These are also referred to as "Neo" or NdFeB magnets. They offer a combination of high magnetic output at moderate cost. Please contact Arnold for additional grade information and recommendations for protective coating. Assemblies using these magnets can also be provided.

| Characteristic                                   | Units             | Magnetic Properties |         |        |
|--|-------------------|---------------------|---------|--------|
|  |                   | min.                | nominal | max.   |
| <b>Br</b> , Residual Induction                   | Gauss             | 11,700              | 12,100  | 12,500 |
|  | mT                | 1170                | 1210    | 1250   |
| <b>H<sub>cB</sub></b> , Coercivity               | Oersteds          | 11,000              | 11,500  | 12,000 |
|  | kA/m              | 876                 | 915     | 955    |
| <b>H<sub>cJ</sub></b> , Intrinsic Coercivity     | Oersteds          | 20,000              |         |        |
|  | kA/m              | 1,592               |         |        |
| <b>BH<sub>max</sub></b> , Maximum Energy Product | MGOe              | 33                  | 36      | 38     |
|  | kJ/m <sup>3</sup> | 263                 | 283     | 302    |

| Characteristic                                     | Units                              | Thermal Properties |       |
|--|------------------------------------|--------------------|-------|
|  |                                    | C //               | C ⊥   |
| Reversible Temperature Coefficients <sup>(1)</sup> |                                    |                    |       |
|  | of Induction, α(Br)                | %/°C               | -0.11 |
|  | of Coercivity, α(H <sub>cj</sub> ) | %/°C               | -0.55 |
| Coefficient of Thermal Expansion <sup>(2)</sup>    | ΔL/L per °Cx10 <sup>-6</sup>       | 7                  | -1    |
| Thermal Conductivity                               | kcal/mhr°C                         | 5.3                | 5.8   |
| Specific Heat <sup>(3)</sup>                       | cal/g°C                            | 0.11               |       |
| Curie Temperature, T <sub>c</sub>                  | °C                                 | 330                |       |
| Flexural Strength                                  | psi                                | 41,300             |       |
|  | MPa                                | 285                |       |
| Density  | g/cm <sup>3</sup>                  | 7.6                |       |
| Hardness, Vickers                                  | Hv                                 | 620                |       |
| Electrical Resistivity, ρ                          | μΩ • cm                            | 150 // 130 ⊥       |       |

Notes: (1) Coefficients measured between 20 and 150 °C  
 (2) Between 20 and 200 °C. Values are typical and can vary.  
 (3) Between 20 and 140 °C



1 kA/m = 12.566 Oe    1 kOe = 79.577 kA/m

**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 H<sub>cj</sub>.**

Magnets can be supplied thermally stabilized or magnetically calibrated to customer specifications.

Additional grades are available. Please contact the factory for information.