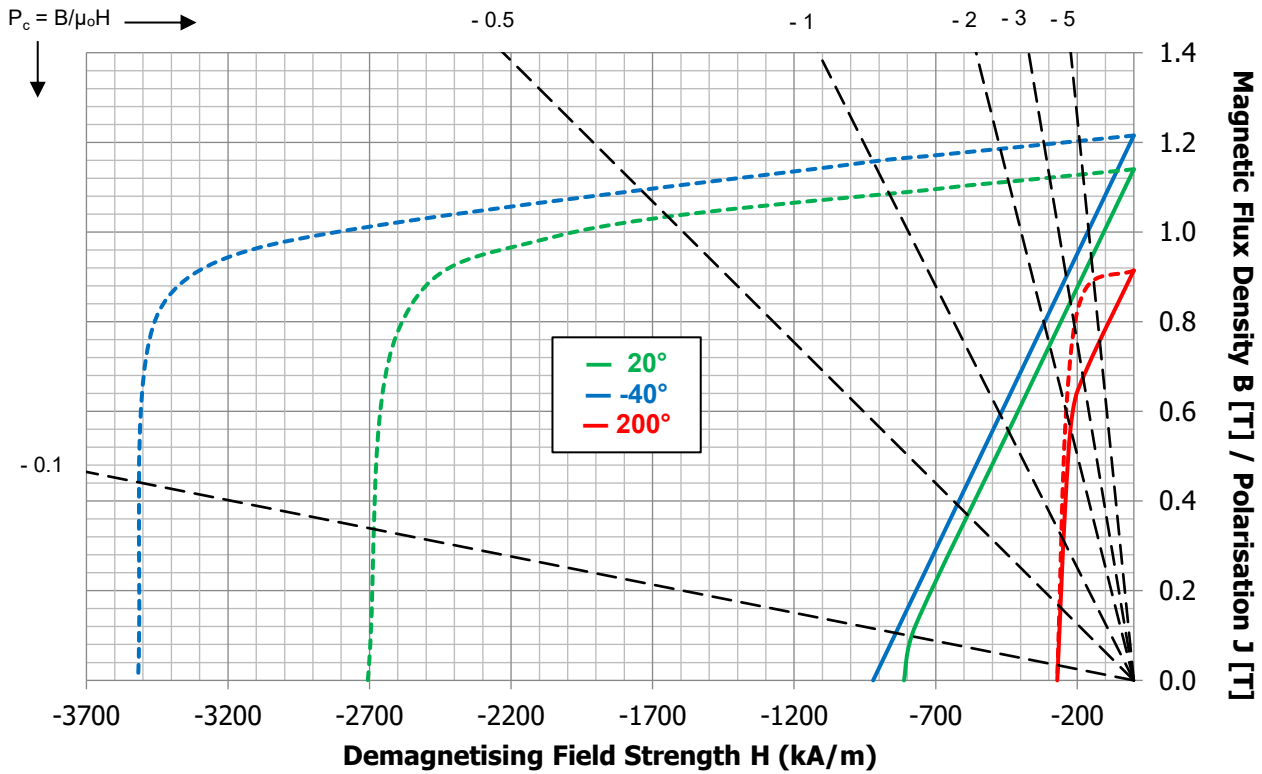


# Technical Datasheet: Neodymium N33AH – Anisotropic Sintered

## Demagnetisation Curve N33AH



Solid lines represent magnetic flux densities. Dashed lines represent polarisations. The curves here are estimates obtained from data available from the current GUK Magnetics grade system (Available on the website. See also the magnetic properties below). On request, actual measurements of demagnetisation curves can be obtained. For that, contact us on the address below.

| Magnetic Properties @20°C |         |       |                   |
|---------------------------|---------|-------|-------------------|
| <b>B<sub>r</sub></b>      | min     | 1.14  | T                 |
| <b>H<sub>cB</sub></b>     | min     | 812   | kA/m              |
| <b>H<sub>cJ</sub></b>     | min     | 2706  | kA/m              |
| <b>(BH)<sub>ma</sub></b>  | min     | 246   | kJ/m <sup>3</sup> |
| <b>α(B<sub>r</sub>)</b>   | min typ | -0.11 | %/°C              |
| <b>β(H<sub>cJ</sub>)</b>  | min typ | -0.50 | %/°C              |
| <b>T<sub>max</sub></b>    |         | 220   | °C                |
| <b>μ<sub>r</sub></b>      | typ     | 1.05  | -                 |

| Physical & Mechanical Properties @20°C           |     |             |                     |
|--|-----|-------------|---------------------|
| Density  | typ | 7400 - 7800 | kg/m <sup>3</sup>   |
| Vickers Hardness                                 | typ | 500 - 700   | HV                  |
| Modulus of Elasticity / Young's modulus          | typ | 140 - 200   | GPa                 |
| Flexural / bending strength                      | typ | 100 - 400   | MPa                 |
| Compressive strength                             | typ | 600 - 1100  | MPa                 |
| Tensile strength / ultimate strength             | typ | 74 - 90     | MPa                 |
| Electrical resistivity                           | typ | 1.1 - 1.7   | μΩm                 |
| Specific heat capacity                           | typ | 350 - 550   | J/(kg K)            |
| Thermal conductivity                             | typ | 5 - 15      | W/(m K)             |
| Coefficient of linear thermal expansion,    DOM* | typ | 3 - 9       | 10 <sup>-6</sup> /K |
| Coefficient of linear thermal expansion, ⊥ DOM*  | typ | -3 - 0      | 10 <sup>-6</sup> /K |

\* DOM = Direction Of Magnetisation