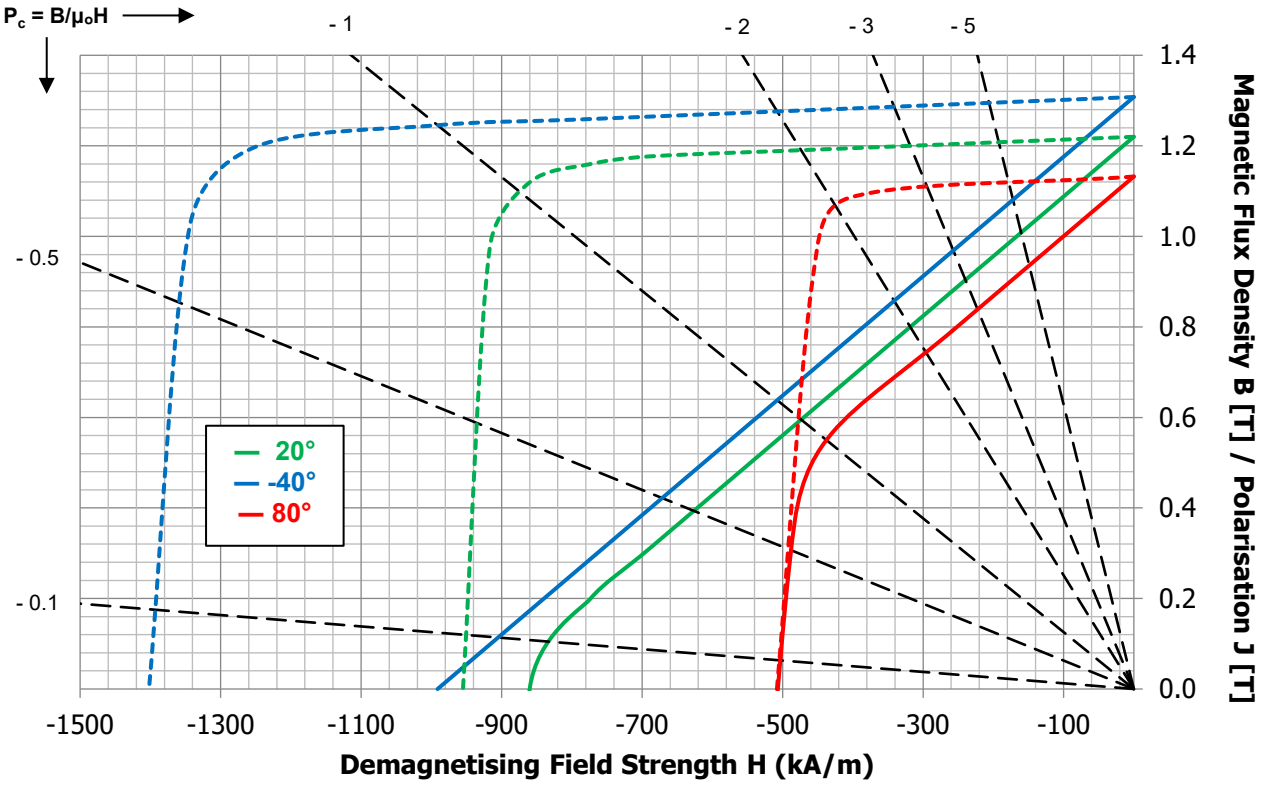
Issue date: 15-10-2025

Technical Datasheet: Neodymium N38 – Anisotropic Sintered

Demagnetisation Curve N38



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_r	min	1.22	T
H_{cB}	min	860	kA/m
H_{cJ}	min	955	kA/m
$(BH)_{ma}$	min	281	kJ/m^3
$\alpha(B_r)$	min typ	-0.12	%/°C
$\beta(H_{cJ})$	min typ	-0.78	%/°C
T_{max}		80	°C
μ_r	typ	1.05	-

Physical & Mechanical Properties @20°C			
Density	typ	7400 - 7800	kg/m^3
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^{-6}/K
Coefficient of linear thermal expansion, ⊥ DOM*	typ	-3 - 0	10^{-6}/K

* DOM = Direction Of Magnetisation