

RARE EARTH MAGNETS
NdFeB 223/199
 anisotropic



MATERIAL DATA

NdFeB 223/199

anisotropic

Magnetic values as in DIN IEC 60404-8-1

20 °C

Energy product (B·H) _{max.}	typ.	kJ/m ³	235
	min.	kJ/m ³	223
Remanence B _r	typ.	mT	1110
	min.	mT	1080
revers. Temp.- coeff. of B _r	approx. ¹⁾	%/K	-0.11
Coercivity H _c	H _{cB} min.	kA/m	>804
	H _{cJ} min.	kA/m	>1990
revers. Temp.- coeff. of H _{cJ}	approx. ²⁾	%/K	-0.6
relative permanent permeability μ _{rec.}	approx.		1.1
Curie temperature	approx.	°C	350
max. operating temperature	approx. ⁵⁾	°C	180
Magnetising field strength	min.	kA/m	~2400

Mechanical values

20 °C

Density	approx.	g/cm ³	7.6
Vickers hardness		HV	500-700
Elasticity modulus	approx.	10 ³ N/mm ²	150
Compressive strength	approx.	N/mm ²	1000
Flexural strength	approx.	N/mm ²	250
Expansion coefficient	p.p.d. ³⁾	Approx. 10 ⁻⁶ /K	-2
	i.p.d. ⁴⁾		5
spec. elec. resistance	approx.	10 ⁻⁶ Ωm	1.6
spec. heat capacity	approx.	J/(kg·K)	440
Thermal conductivity	approx.	W/mK	8

¹⁾ In the temperature range from 20° C to 100° C.

²⁾ At higher temperatures, the temperature coefficient has smaller values

³⁾ p.p.d. = perpendicular to preferred direction

⁴⁾ i.p.d. = in preferred direction

⁵⁾ The max. operating temperature depends on the magnet dimension and the specific application. Please contact our application engineering for more information.

All values indicated were determined on standard samples according to IEC 60404-5.

Depending on the shape and dimensions as well as for coated magnets there could occur deviations.