

RARE EARTH MAGNETS
Sm₂Co₁₇ 207/143
 anisotropic



MATERIAL DATA

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 anisotropic

Magnetic values as in DIN IEC 60404-8-1

Energy product (B·H) _{max.}	typ.	kJ/m ³	223
	min.	kJ/m ³	207
Remanence B _r	typ.	mT	1080
	min.	mT	1030
revers. Temp.- coeff. of B _r	approx. ¹⁾	%/K	-0,03
Coercivity H _C	H _{cB} typ.	kA/m	780
	H _{cB} min.	kA/m	>716
	H _{cJ} typ.	kA/m	1750
	H _{cJ} min.	kA/m	>1433
revers. Temp.- coeff. of H _{cJ}	approx.	%/K	-0,2
relative permanent permeability μ _{rec.}	approx.		1,05
Curie temperature	approx.	°C	800
max. operating temperature	approx.	°C	300
Magnetising field strength	min.	kA/m	~3500

Mechanical values

Density	approx.	g/cm ³	8,3
Vickers hardness		HV	800
Elasticity modulus	approx.	10 ³ N/mm ²	110
Compressive strength	approx.	N/mm ²	580
Flexural strength	approx.	N/mm ²	80
Expansion coefficient	p.p.d. ²⁾	approx. 10 ⁻⁶ /K	12
	i.p.d. ³⁾		11
spec. elec. resistance	approx.	10 ⁻⁶ Ωm	0,86
spec. heat capacity	approx.	J/(kg·K)	355
Thermal conductivity	approx.	W/mK	-

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

²⁾ p.p.d. = perpendicular to preferred direction

³⁾ i.p.d. = in preferred direction