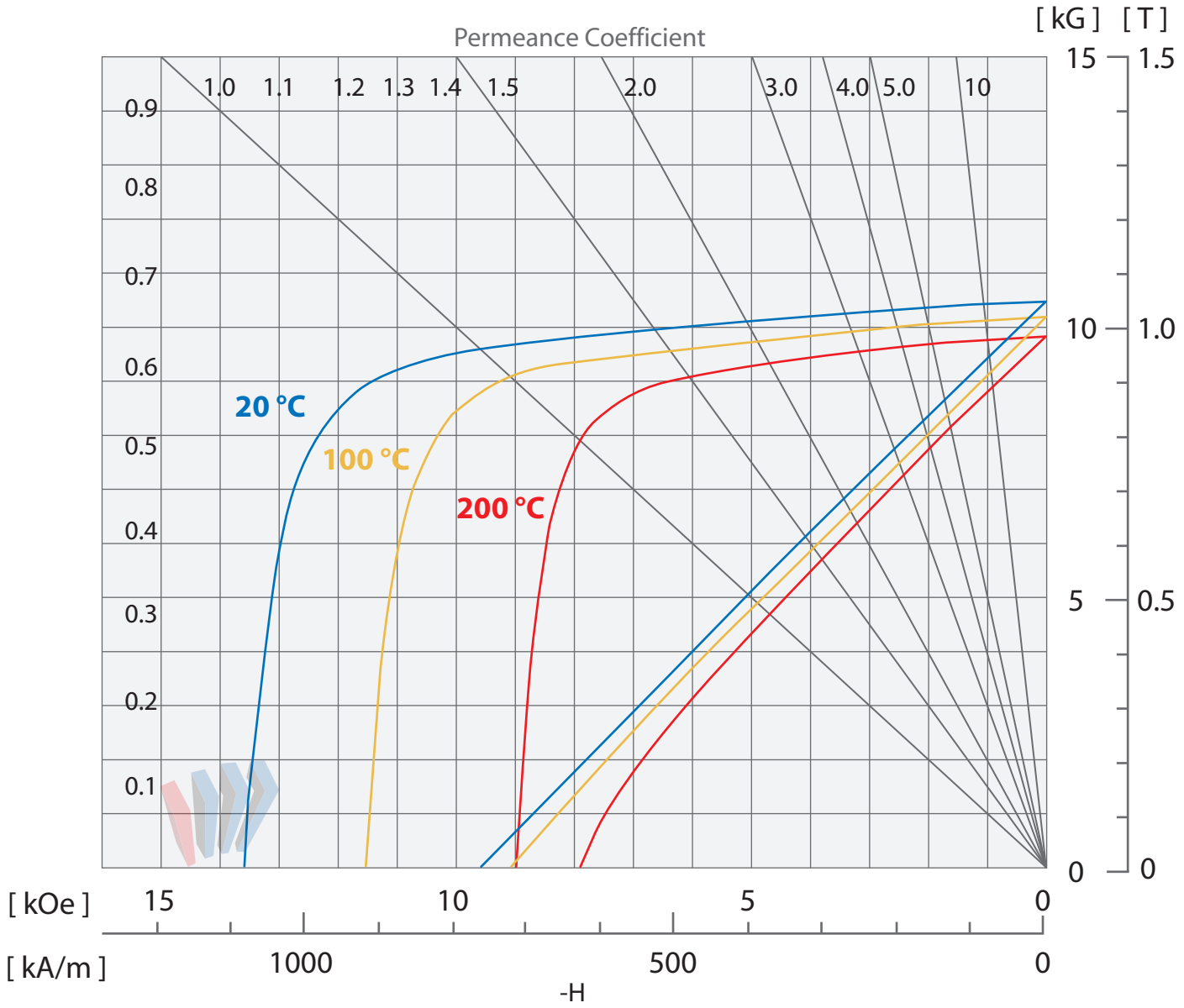
Integrated Magnetics

Technical Data Sheet

Material: Samarium Cobalt Magnet — Grade: S2809



Samarium Cobalt / Magnetic Properties										
Grade	Press[1]	Type[2]	Br (Gauss)	Hc (Oersteds)	Hci (Oersteds)	BHmax (MGOe)	Temperature Coefficients (%/°C)		Maximum Operating Temp @ Pc = 2 ([3])	
			Range	Typical	Minimum	Range	of Br	of Hci	(°C)	(°F)
S2809	D	2:17	10,000 ~ 10,800	9,250	9,000	24 ~ 28	-0.03	-0.19	~ 300	~ 570

[1] D: Die-Pressed, I: Isostatically-Pressed
[2] Type: Sm_1Co_5 or Sm_2Co_{17} types
[3] The Maximum Operating Temperature shown here is for magnets operating at a Permeance Coefficient of 2. At the temperatures shown the operating point of the material is above the knee of the BH Curve.

Samarium Cobalt / Physical Properties											
Grade	Density		Bending Strength		Compressive Strength		Electrical Resistivity (Ωm)	Coeff. of Thermal Expansion[4]		Curie Temperature	
	(kg/m³)	(lbs/in³)	(kg/m²)	(lbs/in²)	(kg/m²)	(lbs/in²)		// M	⊥M	(°C)	(°F)
S2809	8.4 x 10^3	0.304	1.2 x 10^3	1.7 x 10^4	9.1 x 10^3	1.3 x 10^5	0.8 x 10^{-6}	9.2 x 10^{-6}	12.2 x 10^{-6}	825	1510

[3] // M Parallel to magnetic orientation, ⊥M Perpendicular to magnetic orientation.