

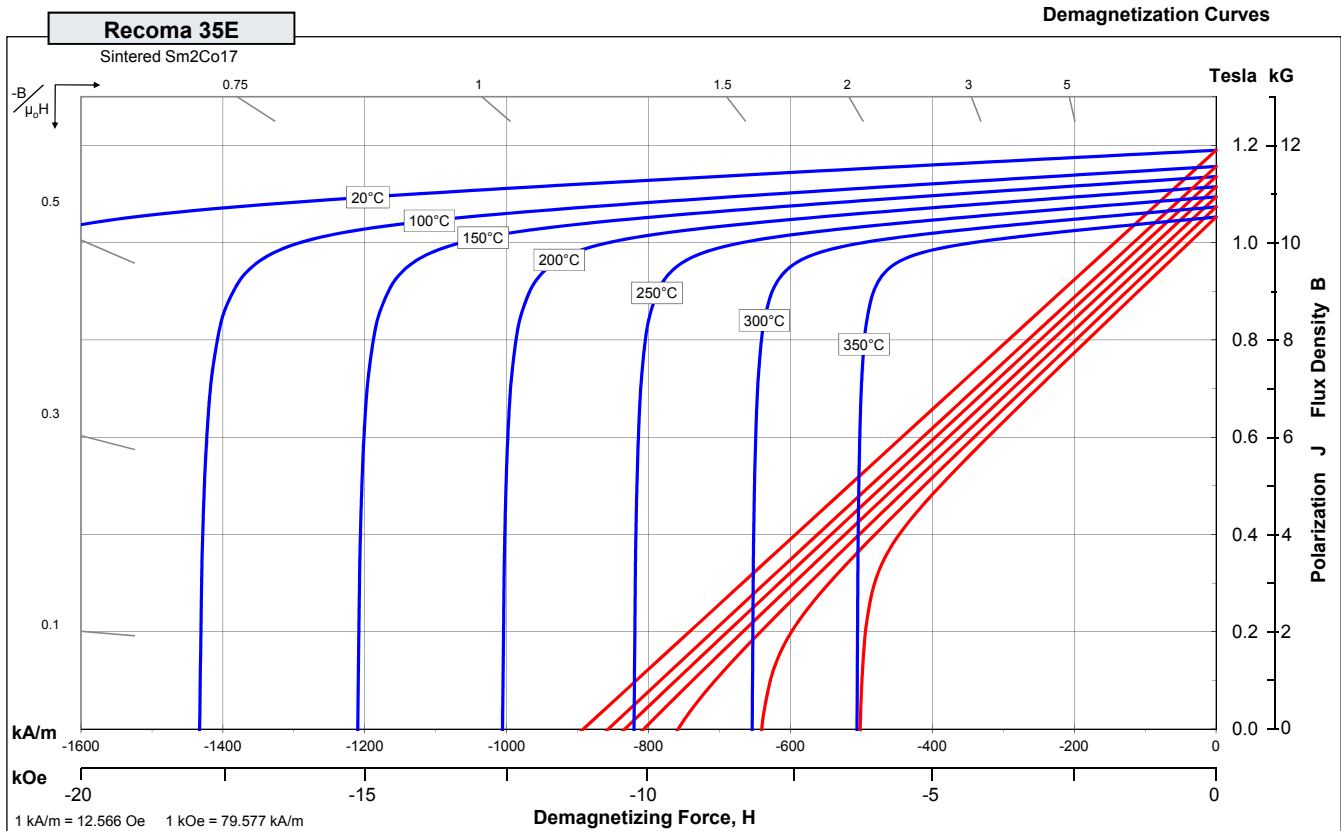
Recoma® Sintered Samarium Cobalt Magnets

These are also referred to as Rare Earth or SmCo magnets. The Recoma family of materials offer a combination of high magnetic output and excellent temperature stability. Please contact Arnold for additional grade information, application assistance and recommendations for protective coatings. Assemblies using these magnets can also be provided.

Magnetic Properties	Characteristic	Units	min.	nominal
	Br , Residual Induction		Gauss	11,700
		Tesla	1.170	1.190
H_{CB} , Coercivity		Oersteds	10,810	11,060
		kA/m	860	880
H_{CJ} , Intrinsic Coercivity		Oersteds	21,000	23,000
		kA/m	1,710	1,800
BH_{max} , Maximum Energy Product		MGOe	32.0	33.3
		kJ/m ³	255	265

Thermal Properties	Characteristic	Units	C //	C ⊥
	Thermal Properties	Reversible Temperature Coefficients ⁽¹⁾		
of Induction, α(Br)		%/°C		-0.035
of Coercivity, α(H _{Cj})		%/°C		-0.25
Coefficient of Thermal Expansion ⁽²⁾		ΔL/L per °C×10 ⁻⁶	11	13
Thermal Conductivity		W/(m·K)		10
Other Properties	Specific Heat ⁽³⁾	J/(kg·K)		350
	Max. Recommended Use Temperature	°C		300
Other Properties	Curie Temperature, T _c	°C		820
	Flexural Strength		psi	17,400
			MPa	120
	Compressive Strength		psi	116,000
			MPa	800
	Young's Modulus	GPa		140
	Density	Mg/m ³		8.3
	Hardness, Vickers	Hv		600
Electrical Resistivity, ρ	μΩ · cm		90	

Notes: (1) Coefficients measured between 20 and 200 °C
 (2) Between 20 and 200 °C
 (3) Between 20 and 150 °C



Notes The material data and demagnetization curves shown above represent typical properties that may vary due to product shape and size. Demagnetization curves show nominal Br and H_{Cj}. Magnets can be supplied thermally stabilized or magnetically calibrated to customer specifications. Additional grades are available. Please contact the factory for information.

Dimensions and shape of the magnet, in combination with required manufacturing processes, may cause the magnetic and physical characteristics to vary from typical values. Therefore, all data presented in this document are for general reference only and should not be relied upon to represent standard characteristics, nor are they guaranteed upon use. Arnold Magnetic Technologies reserves the right to change information in this document, including magnet performance standards, specifications, and characteristics without notice.