

Recoma 35E

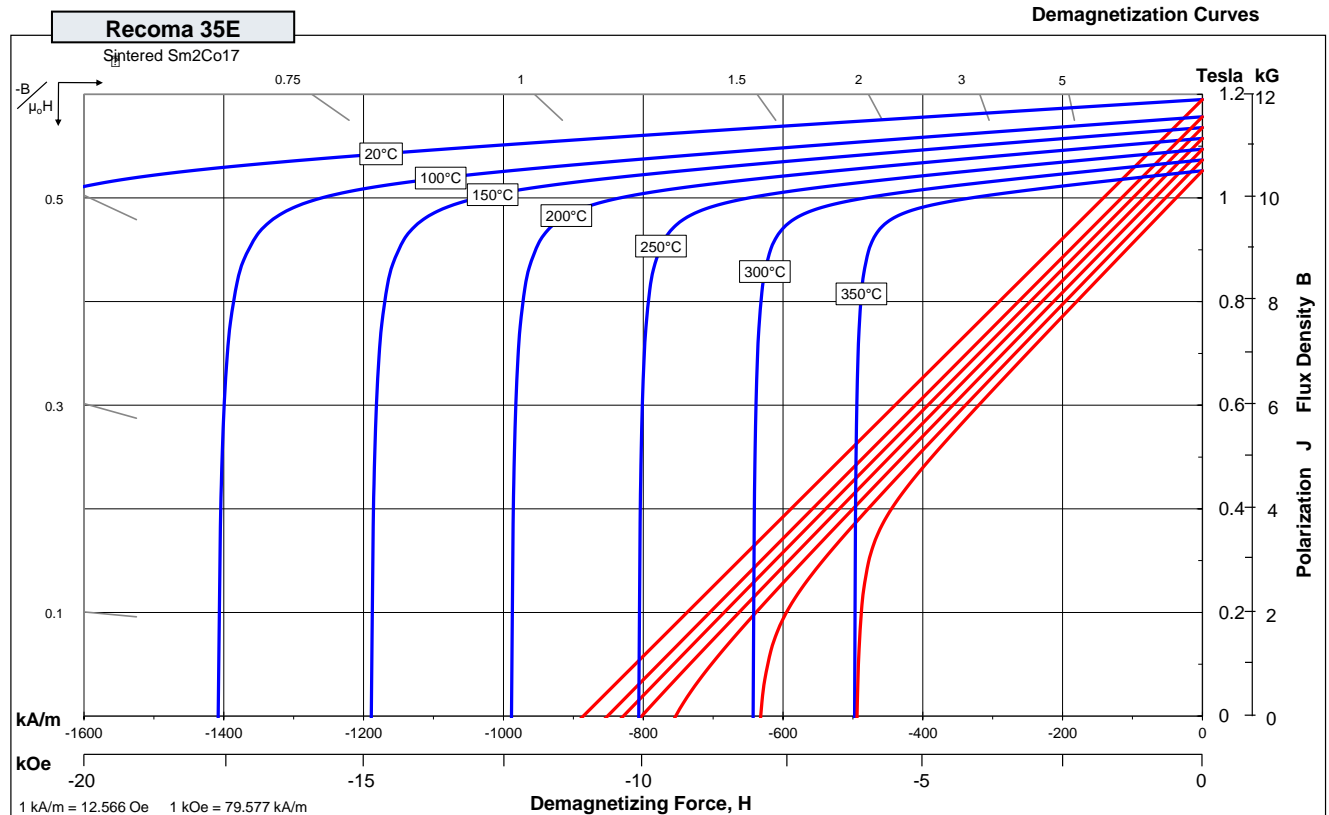
Recoma® Sintered Samarium Cobalt Magnets

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.

Characteristic	Units	Magnetic Properties	
		min.	nominal
Br , Residual Induction	Gauss	11'700	11'900
	Tesla	1.17	1.19
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

Characteristic	Units	Thermal Properties	
		C //	C ⊥
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 °Cx10 ⁻⁶	11	13
Thermal Conductivity	W/(m·K)		10
Specific Heat ⁽³⁾	J/(kg·K)		350
Max. Recommended Use Temperature	°C		300
Curie Temperature, T _c	°C		820
Other Properties			
Flexural Strength	psi		17'400
	MPa		120
Compressive Strength	psi		116'000
	MPa		800
Young's Modulus	GPa		140
Density	g/cm 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.