

Sintered SmCo Magnetic Characteristics

GRADE	Br		Hcb		Hcj		(BH)max		Density	a (Br)	a (Hcj)	Tc	Tw	Alloy Series
	T	KGs	KA/m	KOe	KA/m	KOe	KJ/m3	MGOe	g/cm3	%/°C	%/°C	°C	°C	
SmCo16	0.81-0.85	8.1-8.5	620-660	7.8-8.3	1194-1830	15-23	110-127	14-16	8.3	-0.05	-0.3	750	250	Smco1:5 (SmPr)
SmCo18	0.85-0.90	8.5-9.0	660-700	8.3-8.8	1194-1830	15-23	127-143	16-18	8.3	-0.05	-0.3	750	250	
SmCo20	0.9-0.94	9.0-9.4	680-725	8.5-9.1	1191-1830	15-23	150-167	19-21	8.3	-0.05	-0.3	750	250	
SmCo22	0.92-0.96	9.2-9.6	710-750	8.9-9.4	1194-1830	15-23	160-175	20-22	8.3	-0.05	-0.3	750	250	
SmCo24	0.96-1.0	9.6-10.0	730-770	9.2-9.7	1194-1830	15-23	175-190	22-24	8.3	-0.05	-0.3	750	250	
SmCo18s	0.85-0.90	8.5-9.0	660-700	8.3-8.8	1433-1830	18-23	135-151	17-19	8.3	-0.045	-0.28	750	250	Smco1:5
SmCo20s	0.9-0.94	9.0-9.4	680-725	8.5-9.1	1433-1830	18-23	143-160	18-20	8.3	-0.045	-0.28	750	250	
SmCo22s	0.92-0.96	9.2-9.6	710-750	8.9-9.4	1433-1830	18-23	160-175	20-22	8.3	-0.045	-0.28	750	250	
SmCo24H	0.95-1.02	9.5-10.2	700-750	8.7-9.4	≥1990	≥25	175-191	22-24	8.4	-0.03	-0.2	800	350	Smco2:17
SmCo26H	1.02-1.05	10.2-10.5	750-780	9.4-9.8	≥1990	≥25	191-207	24-26	8.4	-0.03	-0.2	800	350	
SmCo28H	1.03-1.08	10.3-10.8	756-796	9.5-10	≥1990	≥25	207-220	26-28	8.4	-0.03	-0.2	800	350	
SmCo30H	1.08-1.10	10.8-11.0	788-835	9.9-10.5	≥1990	≥25	220-240	28-30	8.4	-0.03	-0.2	800	350	
SmCo24	0.95-1.02	9.5-10.2	700-750	8.7-9.4	≥1433	≥18	175-191	22-24	8.4	-0.03	-0.2	800	300	
SmCo26	1.02-1.05	10.2-10.5	750-780	9.4-9.8	≥1433	≥18	191-207	24-26	8.4	-0.03	-0.2	800	300	
SmCo28	1.03-1.08	10.3-10.8	756-796	9.5-10	≥1433	≥18	207-220	26-28	8.4	-0.03	-0.2	800	300	
SmCo30	1.08-1.10	10.8-11.0	788-835	9.9-10.2	≥1433	≥18	220-240	28-30	8.4	-0.03	-0.2	800	300	
SmCo26M	1.02-1.05	10.2-10.5	750-780	9.4-9.8	955-1273	12-16	191-207	24-26	8.4	-0.03	-0.2	800	300	
SmCo28M	1.03-1.08	10.3-10.8	756-796	9.5-10.0	955-1273	12-16	207-220	26-28	8.4	-0.03	-0.2	800	300	
SmCo30M	1.08-1.10	10.8-11.0	788-835	9.9-10.5	955-1273	12-16	220-240	28-30	8.4	-0.03	-0.2	800	300	
SmCo28L	1.02-1.08	10.2-10.8	413-716	5.2-9.0	438-796	5.5-10	207-220	26-28	8.4	-0.03	-0.2	800	250	
SmCo30L	1.08-1.15	10.8-11.5	413-716	5.2-9.0	438-796	5.5-10	220-240	28-30	8.3	-0.03	-0.2	800	250	

SmCo Magnet Application

Acoustic telecommunications devices	Motors
instruments	Top
Watches and clocks	Microwave appliance
Magnetic Machinery	Sensor
Medical equipments	Magnetic lifter

Physical properties of Sintered SmCo Magnet

Parameter name	Unit	SmCo1:5	SmCo2:17
Density	G/cm ³	8.2-8.4	8.3-8.5
Curie Temperature	°C	700-750	800-850
Vickers Hardness	MPa	450-500	500-600
Temperature Coefficient of Br	%/°C	-0.05	-0.03
Temperature Coefficient of Hcj	%/°C	-0.3	-0.2
Working Temperature	°C	250	350

The Feature Of Sintered SmCo Magnet

High energy product and coercive force, Maximum energy product can be up to 262kJ/m³(33MGOe)

A high curie temperature (800°C~850°C), low temperature coefficient (up to ±30ppm/°C) and steady temperature

It's brittleness, lacking of the ductility and unsuitable for using as structural part

Main ingredient is high purity cobalt(99.95%), the price relatively high

Good corrosion resistance and no special surface treatment required

Demagnetization curves of Sintered SmCo30

