



SINTERED SAMARIUM COBALT (SAS)

Leghe a base Terre Rare più fragili e molto meno sensibili alla corrosione rispetto alle leghe NdFeB. Elevata stabilità termica e temperature di lavoro fino a 550°C

Typical magnetic properties

Grade	Residual Induction (Br)		Coercivity (bHC)		Intrinsic Coercivity (jHC)		Max Energy Product (BH)max		Temperature Coefficient $\Delta \% / \cdot ^\circ\text{C}^{-1}$		
	KGs	T	KOe	KA/m	KOe	KA/m	MGOe	KJ/m3	Br	jHC	
1:5 Sm1Co5	SAS-18	8.0 - 9.0	0.80 - 0.90	7.8 - 8.8	621 - 700	> 25	> 1990	16 - 20	127 - 159	0.05	0.3
	SAS-20	9.0 - 9.5	0.90 - 0.95	8.5 - 9.3	676 - 740	> 18	> 1432	19 - 21	151 - 167	0.05	0.3
	SAS-22	9.5 - 10.0	0.95 - 1.00	9.0 - 9.5	716 - 756	> 15	> 1194	21 - 23	167 - 183	0.05	0.3
2:17 Sm2 (Co,Cu,Fe,Zr)17	SAS-18T	8.5 - 9.5	0.85 - 0.95	8.0 - 9.0	636 - 716	> 20	> 1592	16 - 20	127 - 159	0.01	0.3
	SAS-22T	9.5 - 10.0	0.95 - 1.00	8.5 - 9.5	676 - 756	> 20	> 1592	20 - 24	159 - 191	0.01	0.3
	SAS-22L	9.5 - 10.0	0.95 - 1.00	6.0 - 7.0	477 - 557	6.2 - 9.0	493 - 716	20 - 24	159 - 191	0.03	0.3
	SAS-22H	9.5 - 10.0	0.95 - 1.00	7.0 - 9.5	557 - 756	> 8	> 637	20 - 24	159 - 191	0.03	0.3
	SAS-22U	9.5 - 10.0	0.95 - 1.00	9.0 - 10.0	716 - 796	> 25	> 1990	20 - 24	159 - 191	0.03	0.3
	SAS-26L	10.0 - 10.8	1.00 - 1.08	6.0 - 7.0	477 - 557	6.2 - 9.0	493 - 716	24 - 28	191 - 223	0.03	0.3
	SAS-26H	10.0 - 10.8	1.00 - 1.08	7.0 - 10.2	557 - 812	> 8	> 637	24 - 28	191 - 223	0.03	0.3
	SAS-26U	10.0 - 10.8	1.00 - 1.08	9.5 - 10.5	756 - 836	> 25	> 1990	24 - 28	191 - 223	0.03	0.3
	SAS-30L	10.8 - 11.2	1.08 - 1.12	6.0 - 7.0	477 - 557	6.2 - 9.0	493 - 716	28 - 31	223 - 247	0.03	0.3
	SAS-30H	10.8 - 11.2	1.08 - 1.12	8.0 - 10.5	637 - 836	> 8	> 637	28 - 31	223 - 247	0.03	0.3
	SAS-30U	10.8 - 11.2	1.08 - 1.12	10.0 - 10.8	796 - 859	> 25	> 1990	28 - 31	223 - 247	0.03	0.3
	SAS-32	> 11.20	> 1.12	> 7.0	> 757	> 8	> 637	> 30.0	> 239	0.03	0.3
	SAS-32H	11.0 - 11.4	1.1 - 1.14	10.3 - 10.8	820 - 860	> 25	> 1990	30 - 32	239 - 255	0.035	0.2
SAS-32U	> 10.9	> 1.09	> 10.5	> 836	> 25	> 1990	> 29.5	> 235	0.03	0.3	

Note: The above properties are not guaranteed for any size. Pls contact us for details

Other typical properties

Curie Temperature	Specific heat	Recoil Permeability	Minimum saturation field
°C	J/KJ °C	Sm1Co5 1.00 < 1.05 1.00 < 1.10 Sm2Co17	KA/m > 3200
Sm1Co5 750 < 800 800 < 850 Sm2Co17	550		KOe > 40
Density	Coefficient of thermal expansion	Thermal conductivity	Electric resistivity
g/cm3	6 X 10-6 °C Sm1Co5	W/m °C	5 < 6 x 10-6 ohm/cm Sm1Co5
Sm1Co5 8.2 < 8.4 8.3 < 8.5 Sm2Co17	8 X 10-6 °C Sm2Co17	12	8 < 9 x 10-6 ohm/cm Sm1Co5
Compression Strenght	Tensil Strenght	Young's Module	Vickers Hardness
N/mm2	N/mm2	N/mm2	HV
800	45	150	450 < 500 Sm1Co5 - 500 < 600 Sm2Co17
Flexural Strenght	Max Operating Temperature		
N/mm2	°C		
120	Sm1Co5 < 250 350 > Sm2Co17		

Note: The above properties are subject to change without notice. Pls contact us for details