Bonded SmCo magnet

Our bonded SmCo is made with ground sintered SmCo magnet. The powder is mixed with resin and molded like NdFeB bonded magnet. Various shapes of high dimensional accuracy can be produced without further processing. Due to excellent corrosion resistance, coating is not required.

Compression bonded magnets are available using many isotropic neodymium iron boron material grades as well as crushed & powdered samarium cobalt materials. Combinations of different material grades may also be used to create specific magnetic characteristics. Compression bonded magnets offers higher magnetic strength than injection molded magnets due to their higher magnetic particle density, but are limited to simpler geometries. The epoxy binder used is resistant to normal industrial solvent and automotive fluids. To reduce corrosion of the rare earth magnetic materials, they are further coated with epoxy after shaping. The normal application temperatures range from below -40°C to above 165°C.

Compression bonding is most appropriate for relatively simple geometries due to limitations of the compaction process. The tooling costs for compression bonding is comparatively low, making it a better choice than injection molding where volumes are small. However, with modest automation, compression bonding can also be adopted for high volume manufacturing, with volumes upto millions of pieces per year.



Magnetic properties of bonded SmCo magnets by compressing moulding:

Grade	Br	HcB	HcJ	BHmax	Tc.	Tw.	aBr	ALLOY Series
	[mT] [Gs]	KA/m] [Oe]	[KA/m] [Oe]	[kJ/m ³] [MGOe]	[C]	['C]	[% / C]	
SB6A	400 4000	278 3500	800 10000	32 4.0	720	120	-0.08	- 1:5
SB8A	500 5000	318 4000	800 10000	48 6.0	720	120	-0.08	
SB10B	600 6000	358 4500	800 10000	64 8.0	720	120	-0.08	
SB12B	700 7000	318 4000	400 5000	80 10.0	720	120	-0.08	2:17
SB12HB	700 7000	398 5000	800 10000	80 10.0	720	120	-0.08	

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