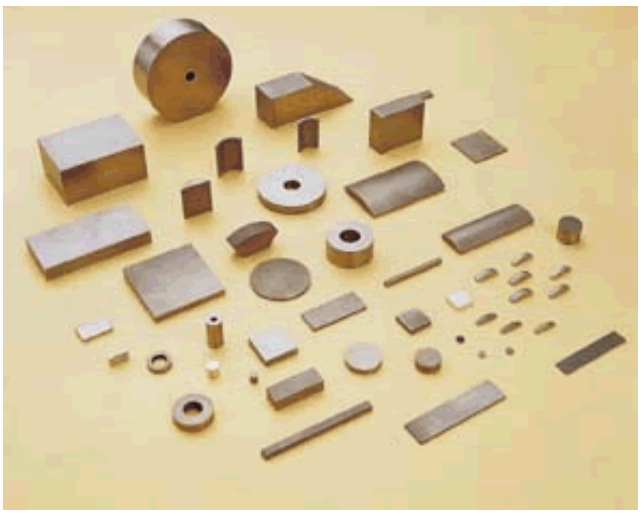
SmCo Magnet

General Description: SmCo Magnet



As part of the rare earth group of permanent magnets, samarium cobalt (SmCo) magnets typically fall into two families of materials. They include rare earth Sm1Co5 and Sm2Co17 and are referred to as 1:5 and 2:17 materials. There're three different manufacturing processes: sintered SmCo magnet, bonded SmCo magnet, and injection moulding SmCo magnet. SmCo magnet is high performance, low temperature coefficient permanent made of samarium and cobalt and other rare-earth elements. Its biggest advantage is high working temperature-300 degree centigrade. It needn to be coated because it is difficult to be eroded and oxidized. SmCo magnet is widely used in motor, watch, transducers, instruments, positional detector, generator, radar, etc.

Key features for sintered SmCo Magnet

1) The most excellent temperature characteristics in Rare-Earth magnet family since mid-1960s.
2) Manufactured by a powder metallurgical process which involves the sintering of powder under vaccum. As part of rare earth group of magnets, SmCo magnets typically fall into two families of materials. They include SmCo5 and Sm2Co17, and commonly referred to as 1:5 and 2:17 materials
3) Good corrosion resistance and no special surface treatment is required, which makes SmCo an excellent choice for compact designs where high temperature environments my be present.
4) Grinding and slicing can be operated into the desired shape and size.

Key features for bonded SmCo Magnet

1) Being manufactured using both injection and compression moulding techniques, particularly suitable for high volume production of a wide variety of shapes and size ranges.
2) Rare-Earth Cobalt5 and Rare-Earth2 Transition Element 17,two different types of powder are applied to production to be varied to achieve the desired magnetic performance.
3) Precise dimensional control is achieved in both processed and usually the component does not

require further machining.
4) Due to excellent corrosion resistance, coating is not recommended for products

Key features for injection moulding SmCo Magnet
1) Flexible in shape
2) Precise in size
3) Good at consistency
4) Recombination compaction
5) Flexible in magnetization orientation
6) High mechanical strength

Comparison of NdFeB and SmCo Magnet

Material	Energy Products	Mechanical Strength	Density(lbs/in^3-gm/cm^3)	Corrosion Resistance	Temperature Stability	Cost
NdFeB	10 to 48	Medium	0.275-7.5	Low	Low to Medium	Lower
SmCo	15-32	Low	0.300-8.3	High	High	Higher

Application:
RE magnet can be used in many modern high-tech industries, such as acoustics, motors, MRI, electron, electrical computer, machining, measuring meter, oil, metallurgical industrial and so on.

Shape: All kinds of permanent materials such as squares, rounds, rings, tiles, bars, polygons can be supplied according to customer's requirements.

Delivery after magnetization in accordance with blue prints.

Add :F/16, Jinyuan plaza, # 57 South Hubin.Rd, Xiamen, CHINA 361004
Tel : (86)592 2295387 (86)592 2217138 Fax: (86)592 2207122
Email To Us: susana@aaamagnet.net