

## Common applications

High performance motors • Magnetic couplings  
•Magnetic separators • Sensors

## Machining and tolerances

We achieve dimensional size and tolerance by cutting or grinding with super abrasives. Samarium Cobalt (SmCo) cannot be machined with conventional drilling, turning or milling processes, and must be ground before they are magnetized. Additionally, large or complex assemblies are usually magnetized prior to assembly. Standard tolerances for Samarium Cobalt magnets are +/- .005" for ground dimensions. Adams stocks SmCo magnets in block, ring and disc form in a variety of sizes and grades, and we are fully equipped to produce the size and tolerance that you require.

## 1:15 alloy material

1:5 offers 16 MGOe to 22 MGOe and is made up of approximately 50% samarium and 50% cobalt. The 1:5 series has a maximum recommended operating temperature of 250°C. SmCo 1:5 magnets require lower field strengths than 2:17 materials to magnetize. In some instances, 1:15 material may be magnetized with multiple poles, provided that a magnetizing fixture is available.

## 2:17 alloy material

2:17 offers 24 MGOe to 32 MGOe and is composed of about 25% samarium, 5% copper, 18% iron, 2% hafnium or zirconium, with the remainder being cobalt. The 2:17 series of has a maximum operating temperature of 350°C. Special grades of 2:17 are available which can operate to even higher temperatures. SmCo 2:17 requires extremely high magnetizing fields, and multiple pole magnetization is not possible.

## Discs

Diametr	Thickness	Grade	Item#
0.118	0.118	18	55B0009
0.187	0.060	18	55B0001
0.250	0.100	24	55B0018
0.250	0.250	26	55B0035
0.312	0.200	20	55B0038
0.375	0.200	20	55B0040
0.500	0.190	18	55B0019
0.625	0.180	18	55B0031
0.750	0.180	26	55B0025
1.500	0.500	26	55B0063

## Rectangles

Thickness	Width	Length	Grade	Item#
0.188	1.000	1.500	26	50C0058
0.250	0.375	1.000	18	50C0016
0.500	1.000	2.000	26	50C0033

Notes: Dimensions are in inches. Direction of magnetization is through the thickness. Other sizes, shapes and magnetization types are available. Please call us if you don't find what you're looking for in this brief listing. 1-800-763-4795



**Call ADAMS for everything magnetic!**  
**1-800-763-4795**