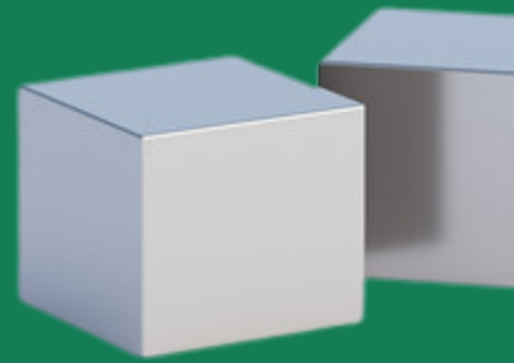
SAMARIUM COBALT MAGNETS

Superior thermal stability in high-performance applications



FEATURES

Samarium cobalt (SmCo) magnets are a type of rare earth magnet known for their high temperature stability, corrosion resistance, and good magnetic properties. They are particularly useful in applications where these features are crucial, such as in high-temperature environments, demanding industrial settings, and where strong, reliable magnets are needed.

HIGH TEMPERATURE STABILITY

CORROSION RESISTANCE

GOOD MAGNETIC STRENGTH

COST EFFICIENCY

100% EMPLOYEE OWNED
THOMAS & SKINNER INC.

TRUSTED MANUFACTURER

Thomas & Skinner is a trusted provider of high-performance metal solutions. With over a century of experience, we're a trusted leader in producing high quality permanent magnets that provide solutions across a range of applications. Our engineers have a deep understanding of the science behind our high performance metals allowing us to provide world-class customer service and expertise to provide solutions to optimize design performance based on your unique needs.

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Thomas and Skinner, Inc.
High Performance Metals

DFARS Compliant ITAR AS9100D CERTIFIED ISO 9001

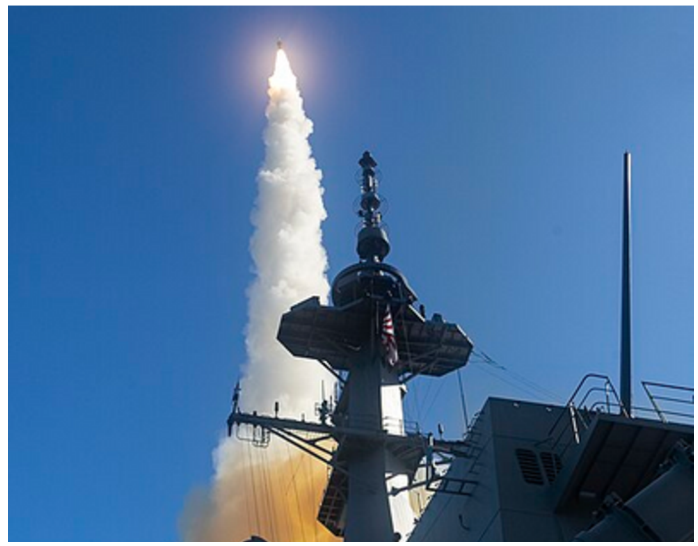
SAMARIUM COBALT MAGNETS

KEY PROPERTIES

- **High temperature stability:** Maintains magnetic strength and properties over a wide range of temperatures.
- **Corrosion Resistance:** Naturally resistant to corrosion and don’t require protective coatings.
- **Good Magnetic Strength:** Known for high coercive force making them resistant to demagnetization.
- **Cost:** Typically more expensive than other rare earth magnets but advantages justify the cost in certain applications.

APPLICATIONS

- **High-Temperature Applications:**
  - Motors, generators, and other devices that operate in high-temperature environments.
- **Demanding Industrial Environments:**
  - Industries like aerospace, automotive, and electronics where reliable performance in harsh conditions is critical.
- **Specialized Applications:**
  - Where specific magnetic characteristics are required, such as in sensors, and certain electronic devices.



SAMARIUM COBALT (SmCo)
Summary of main grades of SmCo

	Maximum Operating Temperature	Temperature Coefficient of Br	Residual Induction Br		Coercivity Hc		Intrinsic Coercivity iHc		Maximum Energy Product (BH)max	
	°C	%/°C	kG	T	kOe	kA/m	kOe	kA/m	MGOe	kJ/m3
Grade	typ	typ	typ	typ	typ	typ	min	min	typ	typ
SmCo5 Magnets										
SmCo5 18	300	-0.040	8.50	0.97	8.3	661	24	1910	18	143
SmCo5 20	300	-0.040	9.00	0.93	8.7	693	24	1910	20	159
SmCo5 22	300	-0.040	9.30	0.90	9.0	716	24	1910	22	175
SmCo5 24	300	-0.040	9.70	0.85	9.4	748	24	1910	24	191
Sm2Co17 Magnets										
Sm2Co17 24	320	-0.035	10.00	1.00	9.5	756	24	1910	24	191
Sm2Co17 27	320	-0.035	10.75	1.08	10.3	821	24	1910	27	215
Sm2Co17 29	320	-0.035	11.00	1.10	10.5	836	24	1910	29	231
Sm2Co17 30	300	-0.035	11.25	1.13	10.6	844	20	1592	30	239
Sm2Co17 31	300	-0.035	11.50	1.15	10.7	852	20	1592	31	247
Sm2Co17 33	250	-0.040	11.65	1.17	10.9	868	18	1433	33	263
Sm2Co17 34	250	-0.040	11.90	1.19	11.1	884	18	1433	34	271

Ultra High Temperature and Temperature Compensated grades are also available.
Please call or email us for more information regarding these products.

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