

SAMARIUM COBALT
SAFETY DATA SHEET
DATE OF LAST REVISION: 07/01/15

Section 1: Identification

Product Name: Samarium Cobalt
CAS Number: 12017-68-4 / **EC Number:** 231-625-7
Company: Angstrom Sciences, Inc.
40 South Linden Street
Duquesne, PA 15110
For more information call: 412-469-8466
(Monday - Friday 9:00 AM -5:00 PM EST)

Section 2: HAZARD IDENTIFICATION

Signal Word: Danger



Hazard Statements: H228: Flammable solid
H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317: May cause an allergic skin reaction.

Precautionary Statements: P210: Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P284: Wear respiratory protection
P261: Avoid breathing dust/fume/gas/mist/vapours/spray
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P342 + P311: If experiencing respiratory symptoms: Call a Poison Center or doctor/physician.
P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

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HMIS Health Ratings (0-4):

Health: 1
Flammability: 2
Physical: 2

Section 3: Composition/Information on Ingredients

Chemical characterization: Alloy

Additional Names: Samarium pentacobalt

CAS# Description: 12017-68-4

Percentage: 100 wt%

EC number: 246-625-7

Section 4: FIRST AID MEASURES

General Treatment: Seek medical attention if symptoms persist.

Special Treatment: None

Important Symptoms: None

Eye Contact: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Skin Contact: Wash affected area with mild soap and water. Remove any contaminated clothing.

Inhalation: Remove to fresh air. If required, give artificial respiration. Seek medical advice.

Ingestion: Seek medical attention.

Section 5: FIRE FIGHTING MEASURES

Suitable extinguishing Media: Do not use water for metal fires - use CO₂, sand, extinguishing powder

Flammability: Non-flammable, except as powder

Special Fire Fighting Procedure: Use full-face, self contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.

Environmental Precautions: Isolate runoff to prevent environmental pollution.

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Section 7: HANDLING AND STORAGE

Handling Precautions for safe handling: Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in Section 10.

Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

Section 8: EXPOSURE CONTROL/PERSONAL PROTECTION

Permissible Exposure Limits: 0.1 mg/m³ as Co, dust and fume, long-term value

Threshold Limit Value: 0.02 mg/m³ as Co, long-term value

Special Equipment: None

Respiratory Protection: Dust Respirator

Protective Gloves: Rubber Gloves

Eye Protection: Safety glasses or goggles

Body Protection: Protective work clothing. Wear close-toed shoes and long sleeves/pants.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Form: Powder, Granules, Pellets, Sputtering target, Custom parts

Color: Grey

Odor: Odorless

Water Solubility: Insoluble

Boiling Point: N/A

Melting Point: 1325°C

Flash Point: N/A

Autoignition Temperature: N/A

Density: N/A

Molecular Weight: N/A

Section 10: STABILITY AND REACTIVITY

Reactivity: Oxidizing agents

Chemical Stability: Stable under recommended storage conditions

Incompatible Conditions: None

Hazardous Decomposition Products: Toxic Metal Oxide Fume

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Section 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eyes: Causes irritation

Skin: Causes irritation, May cause an allergic skin reaction.

Ingestion: May cause irritation

Inhalation: May cause allergy or asthma symptoms or breathing difficulty.

Chronic: Lanthanons can cause delayed blood clotting leading to hemorrhages. Exposure may also lead to sensitivity to heat, itching, increased awareness of odor and taste, and liver damage. Cobalt is an experimental neoplastigen and tumorigen. It is an experimental carcinogen of the connective tissue and lungs. Cobalt metal and inorganic compounds are classified as an animal carcinogen by the ACGIH. Ingestion may cause burning in the mouth, esophagus, and stomach. Inhalation of dusts and fumes may cause irritation of the respiratory tract and labored breathing and coughing. Sensitization, nausea, flushing of the face and ringing in the ears is also possible. Chronic ingestion may result in pericardial effusion, polycardial effusion, polycythemia, cardiac failure, vomiting, convulsions and thyroid enlargement.

Signs & Symptoms: N/A

Aggravated Medical Conditions: N/A

Median Lethal Dose: N/A

Carcinogen:
human
IARC-2B: Possibly carcinogenic to humans: limited evidence in the absence of sufficient evidence in experimental animals.
ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by routes of administration, at sites, of histologic types, or by mechanisms not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or level of exposure.

Section 12: ECOLOGICAL INFORMATION

Aquatic Toxicity: Low

Persistence Bioaccumulation Toxicity: No

Very Persistent, Very Bioaccumulative: No

Notes: N/A

Section 13: DISPOSAL CONSIDERATIONS

Dispose of in accordance with local, state, national, and international regulations

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Section 14: TRANSPORT INFORMATION

Hazardous: Hazardous as powder only



Hazard Class: 4.1 Flammable solids, self-reactive substances and solid desensitized explosives
Packing Group: III
UN Number: UN3089
Proper Shipping Name: Metal powders, flammable, n.o.s. (Samarium Cobalt)

Section 15: REGULATORY INFORMATION

Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: N/A
Sec 313 Toxic Chemicals: No

Section 16: OTHER INFORMATION

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.