



# Super Conductor Materials, Inc.

391 Spook Rock Industrial Park, Suffern, NY 10901 · 845.368.0240 · Fax 845.368.0250 · www.scm-inc.com

Chemtrec: (800) 424-9300  
Poison Center: (800) 562-8236  
Revision Date: January 8<sup>th</sup>, 2019

## SAFETY DATA SHEET

Identity: Cobalt

Formula: Co

### SECTION I - GENERAL INFORMATION

Manufacturer: Super Conductor Materials, Inc.

The information below is believed to be accurate and represents the best information available to Super Conductor Materials, Inc. However, SCM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

### SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 58.93

CAS #	OSHA PEL	ACGIH TLV	%
7440-48-4	.1mg/m <sup>3</sup>	0.02mg/m <sup>3</sup>	0.0-100.0%

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 2927.00°C  
Melting Point: 1495.00°C  
Evaporation Rate: N/A  
Solubility in water: Insoluble

Specific Gravity (H<sub>2</sub>O=1): 8.92  
Vapor Pressure (vs. air or mmHg): N/A  
Vapor Density (vs. air=1): N/A  
Flash Point: N/A

*Appearance and odor:* Metallic gray powder or pieces, no odor

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

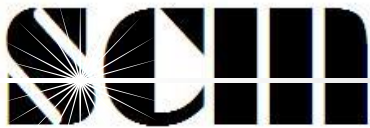
*Method Used:* Unknown      *Explosive Limits:* LEL: N/A      UEL: N/A  
*Extinguishing Media:* Use suitable extinguishing media for surrounding materials and type of fire.

#### *Special Fire Fighting Procedures:*

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

#### *Unusual Fire and Explosion Hazards:*

Contact with strong acids may form flammable hydrogen gas and contact with bromine pentafluoride may cause it to ignite.



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## SECTION V - REACTIVITY DATA

*Stability:* Stable

*Conditions to Avoid (stability):* None

*Incompatibility:* Strong acids, oxidizing agents, hydrazinium nitrate, ammonium nitrate + heat, 1,3,4,7 tetramethylisindol, bromine pentafluoride.

*Hazardous Decomposition or Byproducts:* Hydrogen gas

*Hazardous Polymerization:* Will not occur

*Conditions to avoid (hazardous polymerization):* None recorded

## SECTION VI - HEALTH HAZARD DATA

Routes of entry: Inhalation? Yes      Skin? Yes      Eyes? No      Ingestion? Yes      Other? No

Cobalt has a low toxicity by ingestion. Ingestion of soluble salts produces nausea and vomiting by local irritation. In animals, administration of cobalt salts produces an increase in the total red cell mass of the blood. In humans, a single case of poisoning with liver and kidney damage has been attributed to cobalt. Locally, cobalt has been shown to produce dermatitis and investigators have been able to demonstrate a hypersensitivity of the skin to cobalt. There have been reports of hematologic, digestive and pulmonary changes in humans. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

### Signs and symptoms of over exposure:

*Inhalation:* May cause shortness of breath, coughing and loss of weight.

*Ingestion:* Acute cobalt poisoning may cause: diarrhea, lower blood pressure and body temperature.

*Skin:* May cause redness, itching and inflammation.

*Eye:* May cause redness, itching and watering.

### Health Hazards (Acute and Chronic):

#### *Inhalation:*

Acute: May cause shortness of breath, coughing, weight loss and pulmonary damage.

Chronic: May cause diffuse nodular fibrosis and respiratory sensitivity.

#### *Ingestion:*

Acute: Moderately toxic by ingestion. May cause acute cobalt poisoning.

Chronic: No chronic health effects recorded.

#### *Skin:*

Acute: May cause irritation.

Chronic: May cause allergic sensitization and dermatitis.

#### *Eye:*

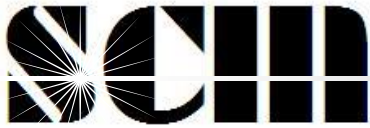
Acute: May cause irritation and possibly damage the cornea.

Chronic: No chronic health effects recorded.

*Target Organs:* May affect the respiratory and pulmonary system.

*Carcinogenicity:* NTP? No      IARC? Yes      OSHA Regulated? No

*Medical Conditions Aggravated by Exposure:* Pre-existing respiratory or skin disorders.



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## Emergency and First Aid Procedures:

- Inhalation:** Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention
- Ingestion:** Give 1 -2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.
- Skin:** Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist.
- Eye:** Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention immediately.

## SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

### *Steps to be taken in case material is released or spilled:*

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

### *Waste disposal method:*

Dispose of in accordance with state, local, and federal regulations.

### *Hazard Label Information:*

Store in cool, dry area and in tightly sealed container. AVOID oxidizing and acidic materials. Wash thoroughly after handling.

## SECTION VIII - CONTROL MEASURES

### *Protective Equipment Summary (Hazard Label Information):*

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

### *Ventilation:*

**Local Exhaust:** May be necessary to control any air contaminants to within their PELs or TLVs during the use of this product.

**Mechanical (General):** Not recommended

### *Work/Hygienic/Maintenance Practices:*

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established