



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

**SAFETY DATA SHEET**

Identity: Chromium Sulfide

Formula: Cr<sub>2</sub>S<sub>3</sub>

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: 200.18

CAS #	OSHA PEL	ACGIH TLV	%
12018-22-3	0.5 mg(Cr)/m <sup>3</sup>	0.5 mg(Cr)/m <sup>3</sup>	0.0-100.0%

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A  
Melting Point: 1350.00 C (2462.0 F)  
Evaporation Rate: N/A  
Solubility in water: Insoluble (decomposes in cold water)

Vapor Pressure (vs. air or mmHg): N/A  
Specific Gravity: 3.77 at 19.0°C  
Flash Point: N/A

*Appearance and odor:* Brown-black powder, no odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

*Method Used:* N/A                      *Explosive Limits:* LEL: N/A                      UEL: N/A  
*Extinguishing Media:* Use suitable extinguishing agent for surrounding material and type of fire. DO NOT USE: Water

*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:*

When heated to decomposition, chromium sulfide may emit toxic fumes of SO<sub>x</sub>. Many sulfides ignite easily in air at room temperature. Others require a higher temperature or the presence of an oxidizer. Many powerful oxidizers on contact with sulfides ignite violently.

**SECTION V - REACTIVITY DATA**

*Stability:* Stable

*Conditions to Avoid (instability):* None

*Incompatibility- Materials to avoid:* Strong oxidizing agents, acids.

*Hazardous Decomposition or Byproducts:* Hydrogen sulfide and oxides and sulfur.

*Hazardous Polymerization:* Will not occur

*Conditions to avoid (hazardous polymerization):* None

**SECTION VI - HEALTH HAZARD DATA**

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

To the best of our knowledge the chemical, physical and toxicological properties of chromium sulfide have not been thoroughly investigated and recorded.

Chromium: Confirmed human carcinogen with experimental tumorigenic data. Human poison by ingestion with gastrointestinal effects. (Sax, Dangerous Properties of Industrial Materials)

Sulfides have variable toxicity. Sulfides of the heavy metals are generally insoluble and hence have little toxic action except through the liberation of hydrogen sulfide. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

*Signs and Symptoms of Overexposure:*

*Inhalation:* May cause a red, dry throat, coughing and shortness of breath.

*Ingestion:* May cause gastritis, convulsions, asphyxia, giddiness, nausea, and diarrhea and vomiting.

*Skin:* May cause redness and itching.

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

*Health Hazards (Acute and Chronic):*

*Inhalation:*

Acute: May cause a red, dry throat.

Chronic: May cause histologic fibrosis of lungs, nasal and/or lung cancer.

*Ingestion:*

Acute: May cause gastrointestinal disorders.

Chronic: No chronic health effects recorded.

*Skin:*

Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

*Eye:*



# Super Conductor Materials, Inc.

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Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded

*Target Organs:* May affect the respiratory system.

*Carcinogenicity:* NTP? Yes IARC Monographs? Yes OSHA Regulated? Yes

*Medical Conditions Aggravated by Exposure:* Pre-existing respiratory disorders, pulmonary functions and asthma.

### 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

## 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 and extinguish sources of ignition. 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. 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:*

Good general ventilation is recommended.

Local exhaust ventilation may be necessary to control any air contaminants to within their PELs or TLVs during the use of this product.

### *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