

# 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: Iron disulfide

Formula: FeS<sub>2</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 119.98

CAS #	OSHA PEL	ACGIH TLV	%
12068-85-8	N/A	N/A	0.0-100.0%

### SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A

Melting Point: 1171.00°C

Evaporation Rate: N/A

Solubility in water: Insoluble

Vapor Pressure: (vs. air or mmHg): N/A

Density: 5.0 g/cm<sup>3</sup>

Flash Point: N/A although highly Flammable

*Appearance and odor:* Yellow powder, smells like rotten eggs.

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

*Method Used:* Unknown

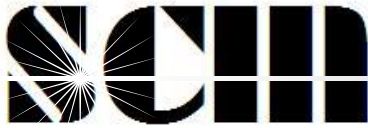
*Explosive Limits:* LEL: N/A UEL: N/A

*Extinguishing Media:* Use suitable extinguishing powder or Carbon dioxide. DO NOT USE POWDER.

*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, iron sulfide may emit toxic fumes of Sox.



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## SECTION V - REACTIVITY DATA

*Stability:* Stable

*Conditions to Avoid (Instability):* Areas close to water.

*Incompatibility:* Moisture/water, acids.

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

*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 iron sulfide have not been thoroughly investigated and recorded.

Iron compounds have varying toxicity. Some iron compounds are suspected carcinogens. In general, ferrous compounds are more toxic than ferric compounds. Acute exposure to excessive levels of ferrous compounds can cause liver and kidney damage, altered respiratory rates and convulsions. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

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 and coughing. Acute iron poisoning may cause: biphasic shock, rapid increase in respiration and pulse rate, congestion of blood vessels which may lead to hypotension, pallor and drowsiness. Chronic iron poisoning may cause: hemorrhagic necrosis of the gastrointestinal tract, hepatotoxicity, metabolic acidosis, prolonged blood clotting time, elevation of plasma levels of serotonin and histamine. Symptoms of pathological deposition or fibrosis of the pancreases, diabetes, mellitus and liver cirrhosis.

*Ingestion:* No acute or chronic health effects recorded

*Skin:* May cause redness and itching

*Eyes:* May cause redness, itching, and watering

### Health Hazards (Acute and Chronic):

#### *Inhalation:*

Acute: Inhalation of dust or powder may cause irritation to the respiratory system and possibly acute iron poisoning. Large amounts of iron may cause iron pneumoconiosis.

Chronic: Inhalation of finely divided powder may cause pulmonary fibrosis. May cause chronic iron poisoning and pathological deposition of iron in the body tissue.

#### *Ingestion:*

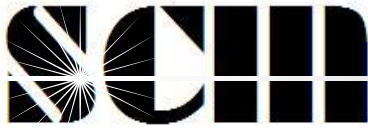
Acute: No acute health effects recorded.

Chronic: May cause damage to the liver.

#### *Skin:*

Acute: May cause irritation

Chronic: No chronic health effects recorded



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*Eyes:*

Acute: May cause irritation

Chronic: No health effects recorded

*Target Organs:* May affect the liver and kidney

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

*Medical condition generally aggravated by exposure:* Pre-existing respiratory disorder

*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:* Do not induce vomiting, seek medical attention immediately.

*Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention immediately.

*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-Control Measures. 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. Wash thoroughly after handling. Use with adequate ventilation.

## SECTION VIII - CONTROL MEASURES

*Protective Equipment Summary (Hazard Label Information):*

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact, goggles or face shield.

*Ventilation:*

Local Exhaust: To maintain concentration at low exposure levels.

Mechanical (General): 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