



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

SAFETY DATA SHEET

Identity: Calcium Sulfide

Formula: CaS

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: 72.14

CAS #	OSHA PEL	ACGIH TLV	%
20548-54-3	N/A	N/A	0.0-100.0%

SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A	Vapor Pressure (vs. air or mmHg): N/A
Melting Point: N/A	Specific Gravity(H ₂ O=1): 2.5 at 15.0°C
Evaporation Rate: N/A	Flash Point: N/A
Solubility in water: Soluble	

Appearance and odor: White powder, rotten egg 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 media for surrounding material 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.



Flammable Properties and Hazards:

Flammable when exposed to flame or by spontaneous chemical reaction.
When heated to decomposition, calcium sulfide may emit toxic fumes of hydrogen sulfide.
Reacts with water, moisture or steam to evolve toxic and flammable hydrogen sulfide.
Reacts violently with chromyl chloride and lead dioxide.
May produce a mild explosion with potassium chlorate.
May ignite easily in air at room temperature.
May ignite violently on contact with powerful oxidizing agents.

SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (instability): None

Incompatibility: Acids, water, moisture, steam, potassium nitrate, chromyl chloride, lead dioxide, potassium chlorate and oxidizing agents.

Hazardous Decomposition or Byproducts: Hydrogen sulfide, oxides of sulfides and calcium.

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

Route of entry: Inhalation? No Skin? Yes Eyes? Yes Ingestion? Yes Other: N/A

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

Calcium compounds should be considered toxic only when they contain toxic components or as calcium oxide or hydroxide. Calcium compounds are common air contaminants. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Sulfides have variable toxicity. The alkaline sulfides (potassium, calcium, ammonium, and sodium) are similar in action to alkalis. They cause softening and irritation of the skin. If ingested they are corrosive and irritating through the liberation of hydrogen sulfide and free alkali. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause a red, dry throat, coughing, irritation of the nose, sneezing, headache, excitability, dizziness, staggering, nausea, vomiting, difficulty breathing, pale complexion, cold sweat, diarrhea, muscular weakness and drowsiness.

Ingestion: May cause burning sensation in mouth, chest and stomach, pain in swallowing and stomach cramps.

Skin: May cause redness, burning sensation, inflammation and itching.

Eye: May cause redness, burning sensation, itching and watering.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: SEVERE IRRITANT AND CORROSIVE. Poison by inhalation.

Chronic: May cause pulmonary edema.



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Ingestion:

Acute: SEVERE IRRITANT AND CORROSIVE. May cause severe irritation to the gastrointestinal tract.
Chronic: No chronic health effects recorded.

Skin:

Acute: SEVERE IRRITANT AND CORROSIVE to moist skin. May cause softening and irritation.
Chronic: No chronic health effects recorded.

Eye:

Acute: SEVERE IRRITANT AND CORROSIVE.
Chronic: No chronic health effects recorded.

Target Organs: No target organs recorded.

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

Medical Conditions Aggravated by Exposure: Pre-existing respiratory disorders

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.

Precautions to be taken in Handling/storing: Calcium sulfide reacts with water, moisture and steam.

Handle and store in a controlled environment and an inert gas, such as argon.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

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



Ventilation:

Local Exhaust: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

Special: Handle in a controlled atmosphere

Mechanical (General): Not recommended

Other: Handle in an inert gas such as argon

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