



# Super Conductor Materials, Inc.

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

## SAFETY DATA SHEET

Identity: Tin

Formula: Sn

### 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: 118.71

CAS #	OSHA PEL	ACGIH TLV	%
7440-31-5	2mg (Sn)/m <sup>3</sup>	2mg (Sn)/m <sup>3</sup>	100.0%

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 2270.00°C

Vapor Pressure (vs. air or mm Hg): 1mmHg at 1492°C

Melting Point: 231.9°C

Density: 7.31 g/cm<sup>3</sup>

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water: Insoluble

*Appearance and odor:* Silver-white, lustrous, soft pieces, no odor

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

*Method Used:* Unknown

*Explosive Limits:* LEL: NA UEL: NA

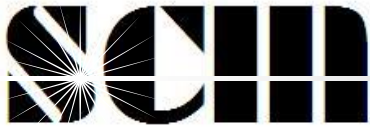
*Extinguishing Media:* Use suitable extinguishing agent for surrounding materials and type of fire.

*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:*

Combustible in the form of dust when exposed to heat or by spontaneous chemical reaction with Br<sub>2</sub>, BrF<sub>3</sub>, Cl<sub>2</sub>, ClF<sub>3</sub>, Cu (NO<sub>3</sub>), K<sub>2</sub>O<sub>2</sub> and S.

Powder oxidizes, especially in the presence of moisture.



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## SECTION V - REACTIVITY DATA

*Stability:* Stable

*Conditions to Avoid (Instability):* None

*Incompatibility:* Carbon tetrachloride, water, disulfur dichloride, Br<sub>2</sub>, BrF<sub>3</sub>, Cl<sub>2</sub>, ClF<sub>3</sub>, Cu(NO<sub>3</sub>), K<sub>2</sub>O<sub>2</sub>, S and oxidants

*Hazardous Decompositions or Byproducts:* Stannic oxide

*Hazardous Polymerization:* Will not occur

*Conditions to avoid (hazardous polymerization):* None

## SECTION VI - HEALTH HAZARD DATA

*Route of Entry:* Inhalation? Yes    Skin? Yes    Eyes? Yes    Ingestion? Yes    Other: No

Tin compounds have variable toxicity. Elemental tin and inorganic tin compounds have low toxicity and are poorly absorbed when ingested. Some inorganic tin salts are irritating or can liberate toxic fumes on decomposition. The latter is particularly true of tin halogens. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

### Signs and Symptoms of Overexposure:

*Inhalation:* May cause throat dryness, cough, headache, vomiting, chest pain, irritability, depression, loss of weight and pneumonitis. Tin poisoning may cause: bronchopneumonia, testicular degeneration and pancreatic atrophy.

*Ingestion:* May cause nausea, vomiting, constipation or diarrhea and abdominal pain.

*Skin:* May cause redness and itching.

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

### Health Hazards (Acute and Chronic):

#### *Inhalation:*

Acute: May cause irritation of the upper respiratory system, metal fume fever, thirst, metallic taste, coughing, fever, chills, muscular pain, headache, nausea, vomiting, profuse sweating, excessive urination and diarrhea.

Chronic: May cause pneumoconiosis and tin poisoning.

#### *Ingestion:*

Acute: Poor absorption makes it relatively non-toxic.

Chronic: Repeated or high levels may cause abdominal pain, nausea, constipation or diarrhea, gastric irritation and loss of weight.

#### *Skin:*

Acute: May cause irritation.

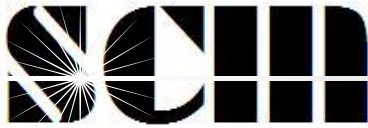
Chronic: May cause dermatitis.

#### *Eye:*

Acute: May cause irritation.

Chronic: May cause conjunctivitis.

*Target Organs:* May affect the respiratory system, skin, and eyes



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

*Medical Condition Generally Aggravated by Exposure:* Pre-existing respiratory and skin 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:* 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-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.

## SECTION VIII - CONTROL MEASURES

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

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

### *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