

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 8th, 2019

SAFETY DATA SHEET

Identity: Tin (IV) fluoride

Formula: SnF₂

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: 194.68

CAS #	OSHA PEL	ACGIH TLV	%
7783-62-2	2.5 mg (Sn)/m ³	2.5 mg (Sn)/m ³	0.0-100.0%

SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 720.00°C	Vapor Pressure: N/A
Melting Point: 320.00°C	Specific Gravity (water=1) 5.28
Evaporation Rate: N/A	Flash Point: N/A
Solubility in water: Decomposes	Vapor Density: N/A

Appearance and odor: White crystalline solid

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown *Explosive Media:* LEL: NA UEL: NA
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 Hazard:

When heated to decompositions, tin fluoride may emit toxic fumes of fluoride.



SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (Instability): Moisture

Incompatibility (materials to Avoid): Moisture and Acids

Hazardous Decomposition or Products: Fumes of fluoride

Hazardous Polymerization: Will not occur

Conditions to avoid (hazardous polymerization): None

SECTION VI - HEALTH HAZARD DATA

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

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

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 of decomposition. The latter is particularly true of tin halogens. Inhalation of tin dusts over a period of years may cause pneumoconiosis. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Inorganic fluorides are generally highly irritating and toxic. Chronic fluorine poisoning, or "fluorosis," occurs among miners of cryolite, and consists of sclerosis of the bones, caused by fixation of the calcium by fluorine. There may also be some calcification of the ligaments. The teeth are mottled, and there is osteosclerosis and ostemalacia. Large doses can cause very severe nausea, vomiting, and diarrhea, aggravate attacks of asthma and severe bone changes, making normal movements painful. Some signs of pulmonary fibrosis are noted. Some enzyme system effects are reported. Irritants to the eyes, skin and mucous membranes. Loss of weight, anorexia, anemia, wasting and cachexia and dental defects are among the common findings in chronic fluorine poisoning. There may be an eosinophilia and impairment of growth in young workers. Symptoms of intoxication include gastric, intestinal, circulatory, respiratory and nervous complaints and rashes. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause ulcers of the upper respiratory tract, excessive salivation, vomiting, thirst, sweating, colic and diarrhea. Fibrosis may cause: sclerosis of the bones, calcification of ligaments, mottled teeth, osteosclerosis, and ostemalacia, loss of weight, anorexia, anemia, wasting, cachia and dental defects.

Ingestion:

May cause nausea, vomiting, diarrhea, abdominal burning, cramp-like pain, a stiff spine, calcification of ligaments of the ribs and pelvis.

Skin: May cause redness, itching and chemical burns.

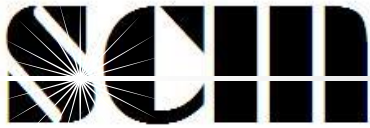
Eye: May cause redness, itching, watering and chemical burns.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: SEVERE IRRITANT AND CORROSIVE to the respiratory tract and mucous membranes. May cause asthma attacks, excessive salivation, thirst, and sweating, vomiting, colic, diarrhea and lung granulomas.

Chronic: May cause fluorosis, pulmonary fibrosis and severe bone changes.



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Ingestion:

Acute: SEVERE IRRITANT AND CORROSIVE. May cause gastrointestinal irritation, nausea, vomiting, diarrhea and cramp-like pains.

Chronic: May affect the circulatory, enzyme and nervous system.

Skin:

Acute: SEVERE IRRITANT AND CORROSIVE. May cause rashes and skin granulomas.

Chronic: SEVERE IRRITANT AND CORROSIVE.

Eye:

Acute: SEVERE IRRITANT AND CORROSIVE.

Chronic: SEVERE IRRITANT AND CORROSIVE.

Target Organs: May affect the skeleton, liver, kidneys, central nervous system, respiratory system, eyes and skin.

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

Medical Conditions Generally Aggravated by Exposure: Can cause or aggravate attacks of 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.

Precautions:

Tin fluoride is hygroscopic. Handle and store in a controlled environment and inert gas such as argon.

SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):



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Protective clothing: Neoprene gloves, safety goggles, clothes to prevent skin contact.

Respiratory Protection: NIOSH? MESA approved can or cartridge gas or vapor, filter dust, fume and mist.

Ventilation:

Local Exhaust: To maintain concentration at or below PEL, TLV

Special: Handle in a controlled, enclosed process

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