



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: Arsenic telluride

Formula: As₂Te₃

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: 532.64

CAS #	OSHA PEL	ACGIH TLV	%
12044-54-1	0.01 mg/m ³	0.2 mg/m ³	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: 381°C (718°F)

Density: 6.50 g/cm³

Evaporation Rate: N/A

Flash Point: N/A

Solubility in water: N/A

Appearance and odor: Silver-grey powder and pieces, slight garlic odor.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

Method Used: Unknown

Explosive Limits: LEL: N/A

UEL: N/A

Extinguishing Media: Use suitable extinguishing agent 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.

Unusual Fire and Explosion Hazards: When heated to decomposition, it may emit toxic fumes of arsenic and tellurium.



SECTION V - REACTIVITY DATA

Stability: Stable

Conditions to Avoid (instability): None

Incomparability (materials to be avoided): None

Hazardous Decomposition or Byproducts: Fumes of arsenic and tellurium

Hazardous Polymerization: Will not occur

Dangerous reactions: No dangerous reactions known.

SECTION VI - HEALTH HAZARD DATA

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

Inorganic arsenic compounds are confirmed human carcinogens producing tumors of the mouth, esophagus, larynx, bladder, and para nasal sinus. A recognized carcinogen of the skin, lungs, and liver. Poisoning from arsenic compounds may be acute or chronic. Acute poisoning usually results from swallowing arsenic compounds; chronic from either swallowing or inhaling. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Tellurium has relatively low toxicity. It is converted in the body to dimethyl telluride which imparts a garlic-like odor to the breath and sweat. Heavy exposure may in addition, result in headache, drowsiness, metallic taste, loss of appetite, nausea, tremors, convulsions and respiratory arrest. Large doses can be fatal. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause garlic odor to breath and sweat, dry mouth, metallic taste, somnolence, anorexia, headache, drowsiness, loss of appetite, tremors, convulsions, laryngitis, bronchitis, and huskiness of the voice. Chronic arsenic poisoning may cause: disturbances of the digestive system such as loss of appetite, cramps, nausea, constipation or diarrhea.

Ingestion: May cause gastrointestinal disturbances, irritation of the nose and conjunctiva, skin eruptions and inflammation. Acute arsenic poisoning may cause: irritation of the stomach and intestines with nausea, vomitis and stools are bloody, collapse and shock with weak rapid pulse and cold sweats. May cause chronic arsenic poisoning, see inhalation symptoms.

Skin: May cause redness, itching, ulcerations, and pigmentation changes.

Eye: May cause redness, itching and burning.

Health Hazards (Acute and Chronic):

Inhalation:

Acute: DANGER - POISON. May cause irritation to the respiratory system, garlic odor to breath and sweat, dry mouth metal taste, somnolence, anorexia, nausea, headache, drowsiness, loss of appetite, tremors and convulsions.

Chronic: DANGER - POISON. May cause respiratory arrest, chronic arsenic poisoning, ulceration of the nasal septum, liver damage and cancer/disease of the blood, kidneys and nervous system.



Ingestion:

Acute: DANGER - POISON. May cause systemic gastrointestinal and skin effects and acute arsenic poisoning.

Chronic: DANGER - POISON. May cause chronic arsenic poisoning, gastrointestinal disturbances, liver damage and cancer/disease of the blood, kidneys and nervous system.

Skin:

Acute: May cause irritation and skin abnormalities.

Chronic: May cause irritation, occasional ulceration, spotty pigmentation, dermatitis, skin cancer and keratoses (especially on soles and palms).

Eye:

Acute: May cause irritation.

Chronic: No chronic health effects recorded.

Target Organs: May affect the central nervous system, liver, kidneys, skin, lungs and lymphatic system.

Carcinogenicity: NTP? Yes LARC Monographs? Yes OSHA Regulations? Yes

Medical Conditions Aggravated by Exposure: Pre-existing respiration and skin 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. And Use wet methods if possible.



SECTION VIII - CONTROL MEASURES

Protective Equipment Summary (Hazard Label Information):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact, face shield, and an eye wash station in work area.

Ventilation:

Local Exhaust: To maintain concentration at low exposure levels.

Special: Handle in a controlled environment

Mechanical (General): Not 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