



Super Conductor Materials, Inc.

391 Spook Rock Industrial Park, Suffern, NY 10901 · 845.368.0240 · www.scm-inc.com

Chemtrec: (800) 424-9300

Poison Center: (800) 562-8236

Revision Date: January 8th, 2019

SAFETY DATA SHEET

Identity: Germanium Telluride

Formula: GeTe

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: 200.19

CAS #	OSHA PEL	ACGIH TLV	%
12025-39-7	.1 mg/m ³	.1 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: 725.00°C

Density: 6.14 g/cm³

Evaporation Rate:

Flash Point: N/A

Solubility in water: Insoluble

Appearance and odor: Silver-gray pieces, no 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 or on contact with acid or acid fumes, germanium telluride may emit toxic fumes.

SECTION V - REACTIVITY DATA

Stability: Stable



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Conditions to Avoid (instability): None

Incompatibility: Acids

Hazardous Decomposition or Byproducts: None recorded

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 germanium telluride have not been thoroughly investigated and recorded.

Germanium compounds are considered to be of a low order of toxicity, but rare instances of poisoning have been reported in the literature. Experimental LD50 values are typically about 100-1000 mg/kg for parenteral route and 500-5000 mg/kg for ingestion. The animals suffer from hypothermia, diarrhea, and respiratory and cardiac failure. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Elemental 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 exposures may, in addition, result in headache, drowsiness, metallic taste, loss of appetite, nausea, tremors, convulsions, and respiratory arrest. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

Signs and Symptoms of Overexposure:

Inhalation: May cause a dry mouth, garlic-like odor to breath, sweat and urine, loss of appetite, sleepiness and nausea. Acute germanium toxicity may cause: hypothermia, listlessness, diarrhea, cyanosis, edema and hemorrhage of lungs, petechial hemorrhage in the walls of the small intestines and a peritoneal effusion which is rich in protein. Edematous changes are also seen in heart muscle and in the parenchymal cells of the liver and kidneys. Chronic germanium toxicity may cause: growth and fatty degeneration of the liver.

Ingestion: May cause a dry mouth, garlic-like odor to breath and urine, loss of appetite, sleepiness and nausea.

Skin: May cause redness and itching.

Eye: May cause redness, itching, and watering

Health Hazards (Acute and Chronic):

Inhalation:

Acute: DANGER-POISON. Dust may cause irritation to the respiratory system, dry mouth, garlic odor to breath, sweat and urine, nausea, vomiting and acute germanium toxicity.

Chronic: May cause anorexia, nausea, depression to the central nervous system, somnolence and chronic germanium toxicity.

Ingestion:

Acute: DANGER-POISON. May cause dry mouth, suppression of sweat, garlic odor to breath and urine.

Chronic: May cause anorexia, nausea, depression to the central nervous system and somnolence.

Skin:

Acute: May cause irritation and itching.

Chronic: May cause dermatitis.



Eye:

Acute: May cause irritation.

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 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. 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.

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 or below PEL, TLV

Special: Handle in an enclosed, 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