



# Super Conductor Materials, Inc.

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Chemtrec: (800) 424-9300

Poison Center: (800) 562-8236

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## **SAFETY DATA SHEET**

Identity: Gallium Arsenide

Formula: GaAs

### 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: 144.64

CAS #	OSHA PEL	ACGIH TLV	%
1303-00-0	10 ug(As)/m <sup>3</sup>	200 ug(As)/m	0.0-100.0%

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: N/A

Melting Point: 1238.00°C

Evaporation Rate: N/A

Solubility in water: Insoluble

Vapor Pressure (vs. air or mmHg): N/A

Specific Gravity (Water=1): 5.31 gm/cc at 25.0°C

Flash Point: N/A

*Appearance and odor:* Dark-gray, metallic sheen 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, gallium arsenide may emit toxic fumes of arsenic.

May react with steam, acids and acid fumes to evolve the deadly poisonous arsine.

Reacts with mineral acids, alkalis and under circumstances, with water to produce phosphine.



SECTION V - REACTIVITY DATA

*Stability:* Stable

*Conditions to Avoid (instability):* None

*Incompatibility:* Water, steam, acids and acid fumes

*Hazardous Decomposition or Byproducts:* Fumes of arsenic, arsine and phosphine

*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

*Signs and Symptoms of Overexposure:*

*Inhalation:* May cause throat dryness, coughing, sneezing, difficulty breathing, 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 behavioral changes such as sleepiness and loss of appetite may be noted. Other symptoms may include nausea, vomiting, metallic taste in mouth, general itching, sweating, 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, vomit 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, inflammation, ulcerations, and pigmentation changes.

*Eye:* May cause redness, watering, inflammation, itching and burning.

*Health Hazards (Acute and Chronic):*

*Inhalation:*

Acute: DANGER-POISON. May cause irritation to the respiratory system.

Chronic: May cause chronic arsenic poisoning, ulceration of the nasal septum, depression of bone marrow, liver damage and cancer/disease of the blood, kidneys and nervous system.

*Ingestion:*

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

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

*Skin:*

Acute: May cause severe 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 severe irritation.

Chronic: No chronic health effects recorded.

*Target Organs:* May effect the liver, kidneys, skin, lungs, and lymphatic system

*Carcinogenicity:* NTP? Yes IARC Monographs? Yes OSHA Regulated? Yes

*Medical Conditions Aggravated by Exposure:* Pre-existing respiratory and 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:* Minimum requirements for warning labels according to OSHA is as follows:

Danger; Contains inorganic arsenic; Cancer hazard; Harmful if inhaled or swallowed; Use only with adequate ventilation or respiratory protection.

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 a controlled atmosphere

Mechanical (General): Not recommended

*Work/Hygienic/Maintenance Practices:*



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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
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