



XI'AN FUNCTION MATERIAL GROUP CO., LTD  
Material Safety Data Sheet  
Germanium Arsenide

---

1. Product and Company Identification

---

Trade Name:	Germanium arsenide
Chemical Formula:	GeAs
Manufacturer/Supplier:	XI'AN FUNCTION MATERIAL GROUP CO., LTD
Street:	No. 69, Gazelle Valley, High-Tech Zone
City:	XI'AN
State:	Shaanxi
Zip Code:	710077
Country:	China
Tel #:	+86-29-88993870/+86-13519132051

---

2. Hazards Identification

---

Signal Word: Danger



Hazard Statements: H301+H331: Toxic if swallowed or if inhaled  
H319 Causes serious eye irritation

Precautionary Statements: P261 Avoid breathing dust/fume/vapor  
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
P304+P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
P311: Call a POISON CENTER or doctor/physician  
P321: Specific treatment  
P405: Store locked up  
P403+P233: Store in a well ventilated place. Keep container tightly closed  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):  
Health: 3  
Flammability: 1  
Physical: 1

---

### 3. Composition

---

Chemical Family:	Ceramic
Additional Names:	None
Germanium arsenide (GeAs):	
Percentage:	100 wt%
CAS #:	12271-72-6
EC #:	235-547-6

---

### 4. First Aid Procedures

---

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Remove breathing apparatus only after contaminated clothing has been completely removed.
Ingestion:	Do not induce vomiting. Seek immediate medical attention.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

---

### 5. Firefighting Measures

---

Flammability:	Non-flammable
Extinguishing Media:	Do not use water for metal fires – use extinguishing powder.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

---

### 6. Accidental Release Measures

---

If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.

---

### 7. Handling and Storage

---

Handling Conditions:	Handle under dry protective gas. Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store under dry inert gas. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.

---

## 8. Exposure Controls and Personal Protection

---

Permissible Exposure Limits:	0.01 mg/m <sup>3</sup> as As, inorganic compounds, long-term value
Threshold Limit Value:	0.01 mg/m <sup>3</sup> as As, long-term value
Special Equipment:	None
Respiratory Protection:	Use a respirator with type P100 (USA) or P3 (EN143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber, NBR 0.11mm thick.
Penetration time of glove material:	480 minutes
Eye Protection:	Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

---

## 9. Physical and Chemical Characteristics

---

Color	Greyish
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble
Boiling Point:	N/A
Melting Point:	N/A
Flash Point:	N/A
Autoignition Temperature:	N/A
Density:	N/A
Molecular weight:	147.56 g/mol

---

## 10. Reactivity

---

Stability:	Stable under recommended storage conditions
Reacts With:	Acids, Halogens, Oxidizing agents
Incompatible Conditions:	Air
Hazardous Decomposition Products:	Metal oxide fume

---

## 11. Toxicological Information

---

### Potential Health Effects:

Eyes:	May cause irritation
Skin:	May cause irritation
Ingestion:	Toxic
Inhalation:	Toxic
Chronic:	N/A

Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A

Median Lethal Dose:	145 mg/kg for mouse by mouth as As 769 mg/kg for rat by mouth as As
---------------------	------------------------------------------------------------------------

Carcinogen:	Arsenic: EPA-A: human carcinogen: sufficient evidence from epidemiologic studies to support a causal association between exposure and cancer IARC-1: Carcinogenic to humans: sufficient evidence of carcinogenicity. ACGIH A1: Confirmed human carcinogen: Agent is carcinogenic to humans based on epidemiologic studies of, or convincing clinical evidence in, exposed humans. Carcinogen as defined by OSHA. NTP-K: Known to be carcinogenic: sufficient evidence from human studies.
-------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

---

## 12. Ecological Information

---

Aquatic Toxicity:	High
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	Very toxic for aquatic organism. May cause long lasting harmful effect on aquatic life. Do not allow material to be released to the environment without proper governmental permits. Do not allow product to reach any water sources. Danger to drinking water if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment.

---

## 13. Disposal Considerations

---

Dispose of in accordance with local, state, national, and international regulations.

---

#### 14. Transportation Data

---

Hazardous: Hazardous for transportation.



Hazard Class: 6.1 Toxic substances.  
Packing Group: II  
UN Number: UN1557  
Proper Shipping Name: Arsenic compounds, solid, inorganic, n.o.s.(Germanium arsenide)

---

#### 15. Regulatory Information

---

Sec 302 Extremely Hazardous: No  
Sec 304 Reportable Quantities: N/A  
Sec 313 Toxic Chemicals: Components: Arsenic

---

#### 16. Other Information

---

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

Document Last Revised: 07/22/2017