

**MATERIAL SAFETY DATA SHEET****I PRODUCT IDENTIFICATION**

**Trade Name:** Aluminum Arsenide **Chemical Family:** Metal arsenide  
**Formula:** AlAs

**II HAZARDOUS INGREDIENTS**

<b>Hazard Components:</b>	<b>CAS#:</b>	<b>OSHA PEL:</b>	<b>ACGIH TLV:</b>	<b>Percentage:</b>
Aluminum arsenide	22831-42-1	0.01 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>	0.0 -100.0
Arsenic		0.01 mg/m <sup>3</sup>	0.2 mg/m <sup>3</sup>	0.0 -100.0

**III PHYSICAL DATA**

**Boiling Point:** N/A **Melting Point:** N/A  
**Density (Air=1):** N/A **Other comments:** This is a fused product.  
**Appearance and Odor:** Clear to white granules, no odor.

**IV FIRE AND EXPLOSION HAZARDS DATA**

**Flash Point (Method used):** N/A **Autoignition Temperature:** N/A  
**Flammable Limits:** Non-flammable **Upper:** N/A **Lower:** N/A

**Extinguishing Media:** Not applicable. Use suitable extinguishing media 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 & Explosion:** When heated or on contact with acid, acid fumes and moisture, aluminum arsenide may emit toxic arsine and arsenic fumes.

**V HEALTH HAZARD INFORMATION**

**Route(s) of Entry:** **Inhalation:** Yes **Skin:** No **Eyes:** No **Ingestion:** Yes **Other:** No

**Effects of Exposure (Acute and Chronic):**

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

Aluminum compounds have many commercial uses and are commonly found in industry. Many of these materials are active chemically and thus exhibit dangerous toxic and reactive properties (Sax, Dangerous Properties of Industrial Materials, eighth edition).

**Inhalation: Acute:** May cause irritation to the respiratory system.

**Chronic:** May cause chronic arsenic poisoning, ulceration of the nasal septum, liver damage and cancer/diseases of the blood, kidneys and nervous system.

**Ingestion: Acute:** Poison by ingestion. May cause gastrointestinal and skin effects and acute arsenic poisoning.  
**Chronic:** May cause arsenic poisoning, gastrointestinal disturbances, liver damage, and cancer/disease of the blood, kidneys and nervous system. Aluminum may be implicated in Alzheimers.

**Skin: Acute:** May cause irritation.  
**Chronic:** No chronic health effects recorded.

**Signs and Symptoms of Exposure:**

**Chronic Arsenic Poisoning May Cause:** Disturbances of the digestive system such as loss of appetite, cramps, nausea, constipation or diarrhea.

**Inhalation:** May cause laryngitis, bronchitis, and huskiness of the voice.

**Ingestion:** May cause gastrointestinal disturbances, irritation of the nose and conjunctiva, skin eruptions and inflammation.

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

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

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

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

**Recommended Exposure Limits:** LD 50/LC 50: No toxicity data recorded.

**Medical Conditions Generally Aggravated by Exposure:** Pre-existing respiratory and disorders.

**EMERGENCY AND FIRST AID PROCEDURES:**

**INGESTION:** If conscious, give 1-2 glasses of milk or water and induce vomiting; seek medical attention immediately.

**INHALATION:** Remove victim to fresh air; keep warm and quite; give oxygen if breathing is difficult and seek medical attention immediately.

**SKIN CONTACT:** Remove contaminated clothing from affected area; brush material off skin; wash affected area with mild soap and water; seek medical attention immediately.

**EYE CONTACT:** Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention.

**VI REACTIVITY DATA**

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**Stability:** Stable

**Incompatibility (Material to Avoid):** Acids, acid fumes and moisture.

**Hazardous Polymerization:** Will not Occur

**Hazardous Decomposition Products:** Arsine gas and arsenic fumes.

**VII SPILL OR LEAK PROCEDURES**

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**Steps to be Taken in Case Material is Released or Spilled:** Wear appropriate respiratory and protective equipment specified in section VIII-control measures. 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 proper disposal. Take care not to raise dust.

**Waste Disposal Method:** Dispose of in accordance with local, state and federal regulations.

## VIII SPECIAL PROTECTION INFORMATION

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**Respiratory Protection (Specify Type):** Select according to OSHA 29 CFR 1910.1018(h)(2)(i) Table 1 and 2.

**Ventilation: Local Exhaust:** To maintain concentration at or below PEL, TLV. **Special:** Handle in a controlled atmosphere.  
**Other:** Handle in a inert gas such as argon.

**Protective Gloves:** Butyl or PVC gloves

**Eye/Face Protection:** Safety goggles or face shield

**Other Protective Clothing or Equipment:** Protective gear suitable to prevent contamination.

## X SPECIAL PRECAUTIONS

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**Other Handling and Storage Conditions:** Implement engineering and work 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 and smoking. Do not blow dust off clothing or skin with compressed air.

The above information is believed to be correct, but does not purport to be all inclusive and shall be used only as a guide. ESPI shall not be held liable for any damage resulting from handling or from contact with the above product.

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