



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Aluminum Germanium

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1. Product and Company Identification

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Trade Name: Aluminum Germanium  
Chemical Formula: AlGe  
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.  
Street: 37 Ramland Road  
City: Orangeburg  
State: New York  
Zip Code: 10962  
Country: USA  
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)  
+1-703-527-3887 (International)

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2. Hazards Identification

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Signal Word: Danger



Hazard Statements: H250 Catches fire spontaneously if exposed to air.  
H261 In contact with water releases flammable gases.

Precautionary Statements: P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking.  
P222: Do not allow contact with air.  
P223: Do not allow contact with water.  
P231 + P232: Handle under inert gas. Protect from moisture  
P240: Ground/bond container and receiving equipment  
P241: Use explosion-proof electrical/ventilating/light/equipment  
P280: Wear protective gloves/protective clothing/eye protection/face protection  
P335 + P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.  
P370+P378: In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction

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

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### 3. Composition

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Chemical Family:	Ceramic
Additional Names:	N/A
Aluminum (Al):	
Percentage:	0-100 wt.%
CAS #:	7429-90-5
EC #:	231-072-3
Germanium (Ge):	
Percentage:	0-100 wt.%
CAS #:	7440-56-4
EC #:	231-164-3

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### 4. First Aid Procedures

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General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	N/A
Important Symptoms:	N/A
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep victim warm. Seek medical advice if discomfort or irritation persists.
Ingestion:	DO NOT induce vomiting if unconscious. Never give anything by mouth to an unconscious person. Seek medical attention immediately.
Skin:	Wash affected area with mild soap and water for at least 15 minutes. Remove any contaminated clothing. Seek medical attention if irritation persists or if concerned.
Eyes:	Rinse/Flush exposed eye(s) using water for 15-20 mins, blinking often for several minutes. Remove contact lenses if present and able to do so during rinsing. Seek medical attention immediately if irritation persists or if concerned.

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### 5. Firefighting Measures

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Flammability:	Flammable as powder
Extinguishing Media:	Special powder against metal fire. Use alcohol-resistant foam, dry sand or dry chemical. Water, carbon dioxide and ABC powders are unsuitable.
Special Hazards	N/A
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Wear fire/flame resistant clothing. See section 10 for decomposition products.

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### 6. Accidental Release Measures

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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. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas.
Environmental Precautions:	Isolate runoff to prevent environmental pollution. Don't let product enter drains. Collect contaminated soil for characterization per section 13

Containment method: Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13). Do not flush with water. Keep in suitable, closed containers for disposal. Contain spillage, pick up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal according to local regulations (see section 13).

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## 7. Handling and Storage

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Handling Conditions: Wash thoroughly after handling. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge. Do not eat, drink, smoke or use personal products when handling chemical substances. Avoid contact with skin and eyes. Avoid ingestion and inhalation. Wash thoroughly after handling.

Storage Conditions: Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10. Do not store near combustible materials. Keep in a cool place away from acids, bases, and oxidizing agents.

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.

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## 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits: 5 mg/m<sup>3</sup> as Al, long-term value  
Threshold Limit Value: 1 mg/m<sup>3</sup> as Al, long-term value

Special Equipment: None  
Respiratory Protection: Dust Respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Protective Gloves: Nitrile rubber gloves  
Eye Protection: Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU)

Body Protection: Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace

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## 9. Physical and Chemical Characteristics

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Color	Silver
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:	N/A

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions.
Reacts With:	Reacts violently with water.
Incompatible Conditions:	Acids, Acid chlorides, Halogens, Oxidizing agents, Bases, Oxygen.
Hazardous Decomposition Products:	Metal oxide fume, Germanium oxide, Aluminum Oxide, Germanium monoxide and Germanium dioxide

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## 11. Toxicological Information

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### Potential Health Effects:

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

### Signs & Symptoms:

Aggravated Medical Conditions: N/A

### Median Lethal Dose:

2000 mg/kg for rat by mouth

### Carcinogen:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA

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## 12. Ecological Information

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Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	N/A
Very Persistent, Very Bio accumulative:	N/A
Notes:	N/A

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## 13. Disposal Considerations

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Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Dispose of in accordance with local, state, national, and international regulations.

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#### 14. Transportation Data

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Hazardous: Hazardous as powder only.



Hazard Class: 4.3 Substances which, in contact with water produce flammable gas.  
Packing Group: II  
UN Number: UN1396  
Proper Shipping Name: Aluminum powder, uncoated.

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#### 15. Regulatory Information

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Sec 302 Extremely Hazardous: N/A  
Sec 304 Reportable Quantities: N/A  
Sec 313 Toxic Chemicals: N/A

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#### 16. Other Information

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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.

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