



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

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1. Product and Company Identification

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Trade Name: Aluminum silicon alloy  
Chemical Formula: Al/Si  
Recommended Use: Scientific research and development

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

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2. Hazards Identification

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Signal Word: Danger



Hazard Statements: H228 Flammable solid  
H261 In contact with water releases flammable gas

Precautionary Statements: P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking  
P231+P232 Handle under inert gas. Protect from moisture  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P240 Ground bond container and receiving equipment  
P241 Use explosion-proof electrical/ventilating/lighting/equipment  
P370+P378 In case of fire: Use CO<sub>2</sub>, sand, extinguishing powder  
P402+P404 Store in a dry place. Store in a closed container  
P501: Dispose of contents/container in accordance with local/regional/national/international regulations

HMIS Health Ratings (0-4):

	Powder	Bulk
Health:	1	0
Flammability:	2	0
Physical:	2	0

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### 3. Composition

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Chemical Family: Metal alloy  
Additional Names:

Aluminum (Al):  
Percentage: 0-100 wt.%  
CAS #: 7429-90-5  
EC #: 231-072-3  
Silicon (Si):  
Percentage: 0-100 wt.%  
CAS #: 7440-21-3  
EC #: 231-130-8

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### 4. First Aid Procedures

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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.  
Ingestion: Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.  
Skin: Wash affected area with mild soap and water.  
Eyes: Flush eyes with water, blinking often for several minutes.

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### 5. Firefighting Measures

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Flammability: Non-flammable, except as powder  
Extinguishing Media: Do not use water for metal fires – use CO<sub>2</sub>, sand, 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.

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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. Keep away from ignition sources.  
Environmental Precautions: Isolate runoff to prevent environmental pollution.

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### 7. Handling and Storage

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Handling Conditions: 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.  
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 Si, long-term value
Threshold Limit Value:	10 mg/m <sup>3</sup> as Si, 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:	Rubber gloves
Eye Protection:	Safety glasses or goggles Full face protection
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color	Silver grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Contact with water releases flammable gases as powder/ Insoluble as Bulk
Boiling Point:	N/A
Melting Point:	577-1414 °C
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:	Strong oxidizing agents ,Water to release flammable gases which may ignite instantly
Incompatible Conditions/Materials:	Oxidizing agents, Water/Moisture, Bases
Hazardous Decomposition Products:	Silicon oxide, Aluminum oxide, Metal oxide fumes

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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:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	N/A
Carcinogen:	Aluminum may be implicated in Alzheimer's disease. Inhalation of aluminum containing dusts may cause pulmonary disease. Inorganic silicon compounds/silicon metal may be acute inhalation irritants. Prolonged inhalation may cause pulmonary fibrosis known as silicosis.

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## 12. Ecological Information

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Aquatic Toxicity:	N/A
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	Do not allow undiluted product or large quantities to reach ground water, water course or sewage system. Avoid transfer into the environment

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## 13. Disposal Considerations

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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, emit flammable gases
Packing Group:	III
UN Number:	UN1398
Proper Shipping Name:	Aluminum Silicon powder, uncoated

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## 15. Regulatory Information

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

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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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