



CHANGSHA ADVANCED ENGINEERING MATERIALS LIMITED

Tel: +86 731-84472418

Email: sales@aemdeposition.com

Website: www.aemdeposition.com

ALUMINUM SAFETY DATA SHEET

1. Product and Company Identification

Trade Name	Aluminum metal
Chemical Formula	Al
Recommended Use	Scientific research and development
Supplier	Changsha Advanced Engineering Materials Limited
Manufacturer	Changsha Advanced Engineering Materials Limited Address: Rm.408, Building 1, No. 31, Yinshan Road, Yuelu District, Changsha, Hunan 410013 China Tel: +86 731-84472418 E-mail: sales@aemdeposition.com Website: www.aemdeposition.com

2. Hazards Identification

Signal Word Danger



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

Precautionary Statements
P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking
P222 Do not allow contact with air
P231+P232 Handle under inert gas. Protect from moisture
P370+P378 In case of fire: Use special powder for metal fires for extinction
P422 Store contents under inert gas
P501 Dispose of contents/container in accordance with local / regional / national / international regulations

HMIS Health Ratings (0-4)	Powder	Bulk
Health	1	0
Flammability	3	0
Physical	2	0

3. Composition

Chemical Family Metal

Additional Names

Aluminum (Al)

Percentage	100 wt%
CAS #	7429-90-5
EC #	231-072-3

4. First Aid Procedures

General Treatment	Seek medical attention if symptoms persist.
Special Treatment	None
Important Symptoms	None

Inhalation	Remove victim to fresh air. If unconscious, place patient stably in side position for transportation
Ingestio	Seek medical attention
Skin	Wash affected area with mild soap and water
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, except as powder

Extinguishing Media Do not use water for metal fires – use CO₂, 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.

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 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.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits	15 mg/m ³ as Al, long-term value
Threshold Limit Value	1 mg/m ³ as Al, long-term value
Special Equipment	None
Respiratory Protection	Dust Respirator
Protective Gloves	Rubber gloves
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	Metallic grey
Form	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor	Odorless
Water Solubility	Insoluble – may produce flammable gas
Boiling Point	2519 °C
Melting Point	660 °C
Flash Point	N/A
Autoignition Temperature	N/A
Density	2.70 g/cc
Molecular weight	29.981 g/mol

10. Reactivity

Stability	Stable under recommended storage conditions
Reacts With	Oxidizing agents, Air, Acids, Bases, Halocarbons, water
Incompatible Conditions	Air, Moisture
Hazardous Decomposition Products	Metal oxide fume

11. Toxicological Information

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	N/A
12. Ecological Information	
Aquatic Toxicity	Low
Persistent Bioaccumulation Toxicity	No
Very Persistent, Very Bioaccumulative	No

Notes

N/A

13. Disposal Considerations

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

14. Transportation Data

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

Aluminium Powder, Uncoated

15. Regulatory Information

Sec 302 Extremely Hazardous

No

Sec 304 Reportable Quantities

N/A

Sec 313 Toxic Chemicals

Yes

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.