
1. Product and Company Identification

Trade Name: Aluminum magnesium alloy
Chemical Formula: Al-Mg
Recommended Use: Scientific research and development

Manufacturer/Supplier: Stanford Advanced Materials 23661 Birtcher Dr.,
Lake Forest, CA 92630 U.S.A.

24-Hour Emergency Contact: (949) 407-8904
(This telephone number is available 24 hours per day, 7 days per week.)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H228 Flammable solid
H250 Catches fire spontaneously in contact with air.
H251 Self-heating: may catch fire
H261 In contact with water, releases flammable gas

Precautionary Statements: P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking
P261 Keep away from heat/sparks/flame. No smoking.
P280 Wear protection gloves/protective clothing/eye protection/ face protection
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.
P422 Store contents under inert gas.

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

3. Composition

Chemical Family: Metal alloy
Additional Names: Magnalium

Aluminum (Al):
Percentage: 0-100 wt.%
CAS #: 7429-90-5
EC #: 231-072-3

Magnesium (Mg):
Percentage: 0-100 wt.%
CAS #: 7439-95-4
EC #: 231-104-6

4. First Aid Procedures

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

Inhalation: Remove victim to fresh air. If unconscious, place patient stably in side position for transportation.

Ingestion: Seek 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. Fire and Explosion Hazards Data

Flammability: Spontaneously flammable as powder. Flammable as small or thin pieces. Contact with water may release flammable gases.

Flash Point: N/A

Autoignition Temperature: N/A

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.

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.

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, total dust or respirable fraction
Threshold Limit Value:	1 mg/m ³ as Al, long-term value, respirable fraction
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	Metallic grey
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	Insoluble, contact with water may release flammable gas
Boiling Point:	N/A
Melting Point:	437-660.4 °C
Density:	N/A
Molecular weight:	N/A

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts with:	Oxidizing agents, Air, Acids, Bases, Halocarbons, water
Incompatible Conditions:	Air, Water/Moisture, Nitrogen
Hazardous Decomposition Products:	Metal oxide fume, Magnesium oxide

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

Ecological data is not available.

13. Disposal Considerations

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

14. Transportation Data

Hazardous:

As Powder:



Hazard Class:

4.3 Substances which in contact with water release flammable gas

Secondary Class:

4.2 Spontaneously combustible solids

Packing Group:

II

UN Number:

UN1418

Proper Shipping Name:

Magnesium alloy powder (Aluminum magnesium)

Hazardous:

As pieces with more than 50 wt% Mg:



Hazard Class:

4.3

Packing Group:

III

UN Number:

UN1869

Proper Shipping Name:

Magnesium alloys with more than 50 percent magnesium
(Aluminum magnesium)

15. Regulatory Information

Sec 302 Extremely Hazardous:

No

Sec 304 Reportable Quantities:

N/A

Sec 313 Toxic Chemicals:

Yes (Aluminum)

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:

07/19/2016