



221 Rochester Street
Avon, NY 14414
(585) 226-6177

MATERIAL SAFETY DATA SHEET

MSDS No.: AA0140
Revision Date: November 22, 2011
Approved by: James A. Bertsch

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Section 1 Chemical Product and Company Information

Product	ALUMINUM METAL
Synonyms	N/A

CHEMTREC 24 Hour Emergency Phone Number (800) 424-9300

Section 2 Hazards Identification

Emergency Overview

WARNING! FLAMMABLE! DANGEROUS WHEN WET!
Aluminum powder dispersed in air forms an explosion hazard.
Avoid creating dust. Wash thoroughly after handling.
Target organs: Eyes, skin, respiratory system.

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Severe

Health	0
Fire	1
Reactivity	1
Contact	1

HMIS *

Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	TLV Units
Aluminum	7429-90-5	> 99.5%	TWA: 10 mg/m ³ (Al metal dust) (ACGIH 2001)

Section 4 First Aid Measures

INGESTION: Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

EYE CONTACT: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

SKIN CONTACT: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

Section 5 Fire Fighting Measures

General information: Use water spray to keep fire-exposed containers cool. In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Molten metals produce fume, vapor and/or dust that may be toxic and/or a respiratory irritant. Metal reacts with oxidizing agents. Powders form explosive mixtures with air which may be ignited by a spark.

Extinguishing Media: Sand, dry chemical, or CO₂ should be used on surrounding fire. Do NOT use water on fire where molten metal is present.

Flash Point: Flammable.

Autoignition temperature: N/A

Explosion Limits: Lower: 40 mg/l **Upper:** N/A

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Severe



Section 6 Accidental Release Measures

Use proper personal protective equipment as indicated in Section 8. Remove all sources of ignition. Provide adequate ventilation. Recover for use if not contaminated. Use non-sparking tools. Wet-sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water after material pickup is complete. Avoid runoff into storm sewers and ditches which lead to waterways.

(2008 EMERGENCY RESPONSE GUIDEBOOK, (PHH50-ERG2008), GUIDE # 138)

Section 7 Handling & Storage FLAMMABLE STORAGE CODE RED

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. For laboratory use only. Not for drug, food or household use. Keep out of reach of children.
Handling: Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, spray or mist. Wash thoroughly after handling. Remove and wash clothing before reuse.
Storage: Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources. Avoid exposure to water and moisture.

Section 8 Exposure Controls / Personal Protection

Engineering controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

Respiratory protection: Use a chemical fume hood and/or wear a NIOSH/MSHA-approved respirator.

Section 9 Physical & Chemical Properties

Physical state: Solid.
Appearance: Silvery gray, metallic powder.
Odor: No odor.
pH: N/A
Vapor pressure (mm Hg): N/A
Vapor Density (Air = 1): N/A
Evaporation rate (Butyl acetate = 1): N/A
Viscosity: N/A

Boiling point: N/A
Freezing / Melting point: 657°C (1215°F)
Decomposition temperature: N/A
Solubility: Insoluble.
Specific gravity (H₂O = 1): 2.7
Percent volatile (%): 99.9%
Molecular formula: Al
Molecular weight: 26.98

Section 10 Stability & Reactivity

Chemical stability: Stable **Hazardous polymerization:** Will not occur.

Conditions to avoid: Excessive temperatures, heat, sparks, open flame and other sources of ignition.

Incompatibilities with other materials: Strong oxidizers, mineral acids, strong alkalies, halogenated hydrocarbons, and water.

Hazardous decomposition products: Reacts with water, acids or alkalies to generate hydrogen gas.

Section 11 Toxicological Information

Effects of overexposure: May cause burns and corneal abrasions to the eyes. It has been reported that chronic exposure has been suspected of causing lung injury. To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

ORL-RAT LD50: N/A

IHL-RAT LC50: N/A

SKN-RBT LD50: N/A

Section 12 Ecological Information

Data not yet available.

Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

Section 14 Transport Information

UN/NA number: UN1396

Shipping name: Aluminum powder, uncoated

Hazard class: 4.3

Packing group: II

Exceptions: Ltd Qty ≤ 0.5 Kg/1.1 lb.

Section 15 Regulatory Information

TSCA-listed, EINECS-listed (231-072-3), RCRA code D001 (dust only)

Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. * Hazardous Materials Industrial Standards.