

# MATERIAL SAFETY DATA SHEET

## Section 1: Product/Company Information

**Identity:** Aluminum powder, Aluminum chips

**Mfg. Name:** Powder Technology Inc.  
14331 Ewing Avenue S.  
Burnsville, MN 55306

**Emergency Number:** (952) 894-8737  
**Number for Info:** (952) 894-8737  
**Date Updated:** 31 July 2009

## Section 2: Emergency and First Aid

**Eyes:** Immediately flush eye thoroughly with water. Get medical attention if irritation persists.

**Skin:** Wash exposed area with soap and water. Get medical advice if irritation develops

**Inhalation:** Remove person to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration. Seek medical help if coughing and other symptoms do not subside.

**Ingestion:** Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician if discomfort is experienced.

## Section 3: Composition Information

Chemical	CAS Number	Percent of Weight
Aluminum metal	7429-90-5	90-100%

## Section 4: Hazardous Ingredients/Identity Information

**Flammable solid** - Dust may form flammable or explosive mixture with air, especially when wet.

**HMIS Rating:**

Health Rating: 1 (slight)

Flammability Rating: 3 (serious)

Reactivity Rating: 3 (serious)

## Section 5: Hazard Identification

**Potential Health Effects:** Potential health effects may vary depending upon the duration and degree of exposure. To reduce or eliminate health hazards associated with this product, use exposure controls or personal protection methods as described in Section 12.

**Eye Contact:** (Acute/Chronic) Exposure to airborne dust may cause immediate or delayed irritation or inflammation of the cornea.

**Inhalation:** Causes irritation to respiratory tract. Symptoms may include coughing and shortness of breath.

**Ingestion:** Aluminum chloride may form slowly in the digestive tract with nausea, vomiting or other gastrointestinal effects in extreme cases.

**Chronic Exposure:** Pulmonary fibrosis from chronic inhalation has been reported. Chronic exposure has also produced numbness in fingers.

**Skin Contact:** May cause irritation

## Section 6: Accidental Release Measures

Remove all sources of ignition. Use clean-up methods that do not disperse dust into the air and avoid contact with water. Avoid inhalation of dust and contact with eyes. Use exposure controls and personal protection methods as described in Section 12.

## Section 7: Physical/Chemical Data

<b>Boiling Point:</b>	2467 <sup>0</sup> C
<b>Specific Gravity (H<sub>2</sub>O = 1.0):</b>	2.70
<b>Vapor Pressure:</b>	1 @ 1284 <sup>0</sup> C
<b>Solubility in Water:</b>	Insoluble
<b>Appearance:</b>	Silver
<b>Odor:</b>	No Odor
<b>Physical State:</b>	Solid
<b>Vapor Density:</b>	Not applicable

## Section 8: Fire and Explosion Hazard Data

**Fire:**  
Auto ignition temperature: 760<sup>0</sup> C

Explosive limits not determined. Aluminum powder is flammable and can burn violently in the presence of oxidizing substances and certain metal oxides. Bulk powder, when moistened with water, spontaneously heats. Hazard increases as fineness increases. Reactions with strong acids and alkalis cause the release of flammable hydrogen gas.

**Explosion:**

Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Minimum explosible concentration: 0.04 oz/ft<sup>3</sup>. Aluminum powder is sensitive to static discharge.

**Fire Extinguishing Media:**

Smother with a suitable dry powder. Do not use water. Do not use halogenated extinguishing media. Pressure from the extinguishing media may cause severe dusting.

**Section 9: Stability and Reactivity Data****Stability:**

Product is stable

**Incompatibility (Materials to Avoid):**

Strong Acids, water

**Hazardous Decomposition:**

Toxic metal fumes may form when heated to decomposition

**Hazardous Polymerization:**

Will not occur

**Section 10: Handling and Storage**

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Avoid dust formation and isolate from any source of heat or ignition. Protect from moisture. Employ grounding, venting and explosion relief provisions in accord with accepted engineering practices in any process capable of generating dust and static electricity.

**Section 11: Toxicological Information**

Conditions aggravated by exposure: Eye disease, Skin disorders and Chronic Respiratory conditions. Not listed as a known carcinogen by IARC (International Agency for Research on Cancer)

**Section 12: Exposure Control/Personal Protection**

**Respiratory Protection:** Use local exhaust or general dilution ventilation to control dust levels below applicable exposure limits. Minimize dispersal of dust into the air. Use appropriate NIOSH approved respiratory protection for respirable crystalline silica.

**Eye Protection:** Wear safety glasses with side shields or goggles to avoid contact with the eyes. In extremely dusty environments and unpredictable environments, wear tight-fitting unvented or indirectly vented goggles to avoid eye irritation or injury.

**Skin Protection:** Wear protective gloves

### Section 13: Disposal Considerations

All disposal methods must be in accordance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterization and compliance with applicable laws are the responsibility solely of the waste generator.

### Section 14: Transportation Data

#### Domestic (Land, D.O.T.)

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**Proper Shipping Name:** ALUMINUM, POWDER UNCOATED, (NON-PYROPHORIC)

**Hazard Class:** 4.3

**UN/NA:** UN1396

Packing Group: II

**Information reported for product/size:** 500G

#### International (Water, I.M.O.) and International (Air, I.C.A.O.)

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Packing Group: II

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### Section 15: Regulatory Information

#### SARA Title

Section 302: Not listed

Section 313: Aluminum (as a fume or dust) CAS# 7429-90-5 is listed in this section.

**TSCA Chemical Inventory:** This compound is on the EPA Toxic Substance Control Act (TSCA) inventory list

**EINECS:** Listed (231-072-3)

**WHMIS Canada:** Not WHMIS controlled.

### Section 16: Other Information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. It is the user's obligation to determine the conditions of safe use of this product.