

# MetalPowdersUSA, INC

## Safety Data Sheet

Material Name: Aluminum Powder

### \*\*\* Section 1 - IDENTIFICATION\*\*\*

#### PRODUCT IDENTIFICATION

**Material Name:** Aluminum Powder

**Grade Names:** 902

**Product Use**

Refractory; Powder metallurgy; Coatings; Ink; Colorant; Metallurgical uses; Tools manufacturing

**Restrictions on Use**

None known.

### \*\*\* Section 2 - HAZARDS IDENTIFICATION\*\*\*

#### EMERGENCY OVERVIEW

**This material is potentially explosive when loosened and dispersed in air.**

**Color:** Silver/Gray

**Physical Form:** Powder

**Odor:** N/A

**Health Hazards:** May cause irritation of the skin, eyes, and respiratory tract.

#### POTENTIAL HEALTH EFFECTS

**Inhalation**

May cause respiratory tract irritation

**Skin**

May cause irritation on repeated contact

**Eye**

May cause mechanical irritation (abrasion)

**Ingestion**

None expected

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## \*\*\* Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS\*\*\*

CAS	Component	Percent
7429-90-5	Aluminum	100%

## \*\*\* Section 4 - FIRST AID MEASURES\*\*\*

### Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. If breathing is difficult, oxygen should be administered by qualified personnel. Get immediate medical attention.

### Skin

Wash skin with soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention, if needed. Thoroughly clean and dry contaminated clothing and shoes before reuse.

### Eyes

Flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Then get immediate medical attention.

### Ingestion

Aspiration hazard. Do NOT induce vomiting. If vomiting occurs, keep head lower than hips to help prevent aspiration. Get immediate medical attention. Give artificial respiration if not breathing.

### Notes to Physician

For inhalation, consider oxygen

## \*\*\* Section 5 - FIRE FIGHTING MEASURES\*\*\*

### Extinguishing Media

Dry sand; Class D Extinguishing Agent (for metal powder fires).

### Unsuitable Extinguishing Media

Do not use halogenated extinguishing agents, water, carbon dioxide, ABC powder, or foam.

### Special Hazards Arising from the Substance or Mixture

This material is potentially explosive when loosened and dispersed in air. DO NOT ALLOW A DUST CLOUD TO BE FORMED. Avoid heat, sparks, and open flames. Eliminate the generation of static electricity. Aluminum powder will react with acids, bases, or water to form flammable hydrogen gas. Finely divided **burning** aluminum powder will react violently with water to form hydrogen gas.

### Combustion Products:

Oxides of aluminum

### Fire Fighting Measures

Use Class "D" extinguisher or dry sand. Gently cover the burning powder with the sand or Class "D" agent and allow to burn itself out under the crust. Once covered do not disturb until totally cooled. Do not use Class A, B, or C extinguishers, halogenated agents, or water.

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## Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

## \*\*\* Section 6 - ACCIDENTAL RELEASE MEASURES\*\*\*

### Personal Precautions, Protective Equipment and Emergency Procedures

Wear personal protective clothing and equipment, see Section 8.

### Environmental Precautions

Avoid release to the environment. Collect spillage.

### Methods and Material for Containment and Cleaning up

Eliminate all sources of ignition. Do not touch or walk through spilled material. Stop leak if possible without personal risk. Do not get water directly on material. Eliminate the generation of static electricity. Use natural bristle broom or brush to collect material into suitable container for disposal. Move containers away from spill to a safe area. Do not form dust cloud.

## \*\*\* Section 7 - HANDLING AND STORAGE\*\*\*

### Precautions for Safe Handling

Keep away from heat, sparks and flame. Eliminate the generation of static electricity. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wash thoroughly after handling. Wear protective gloves/clothing and eye/face protection. Do not eat, drink, or smoke when using this product. Use only with adequate ventilation. Dust can form an explosive mixture with air. Take precautionary measures against static charges. Use explosion-proof equipment and non-sparking tools.

Empty containers may contain residues and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition; they may explode and cause injury or death.

### Conditions for Safe Storage, Including any Incompatibilities

Store and handle in accordance with all current regulations and standards. Store in a well-ventilated place. Store in a cool, dry place. Store in a tightly closed container. Store locked up. Keep separated from oxidizing agents, acids, alkalis, nitrates, alcohols, halogenated hydrocarbons, halogens, and water. Keep material dry. Humidity penetration into closed containers may lead to pressure increase and possible bursting of the container.

## \*\*\* Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION\*\*\*

### Component Exposure Limits

#### Aluminum (7429-90-5)

**ACGIH:** 1 mg/m<sup>3</sup> TWA (respirable fraction)

**OSHA:** 15 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable fraction)

**NIOSH:** 10 mg/m<sup>3</sup> TWA (total dust); 5 mg/m<sup>3</sup> TWA (respirable dust)

**Mexico** 10 mg/m<sup>3</sup> TWA LMPE (dust)

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## Engineering Controls

Ventilation equipment should be explosion-resistant if explosive concentrations of material are present. Provide local exhaust or process enclosure ventilation system. Ensure compliance with applicable exposure limits.

## Eye / Face Protection

The appropriate eye/face protection must be determined by the user of the material, based upon the conditions of use. Safety glasses with side shields should be worn at a minimum. Chemical safety goggles provide a greater level of protection, and should be considered based upon the material's anticipated exposure levels. A face shield (in addition to safety goggles) should be considered when significant exposures are expected.

## Skin Protection

Wear appropriate chemical resistant clothing.

## Glove Recommendations

Wear appropriate chemical resistant gloves.

## Respiratory Protection

Use a full facepiece respirator for concentrations exceeding the occupational limits.

Protection provided by air-purifying respirators is limited.

Use a positive-pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known, or any other circumstance where air-purifying respirators may not provide adequate protection.

## \*\*\* Section 9 - PHYSICAL AND CHEMICAL PROPERTIES\*\*\*

<b>Physical State:</b>	Finely Divided Powder	<b>Appearance:</b>	Silver/Gray Powder
<b>Color:</b>	Silver/Gray	<b>Physical Form:</b>	Solid Powder
<b>Odor:</b>	N/A	<b>Odor Threshold:</b>	N/A
<b>pH:</b>	N/A	<b>Melting Point:</b>	660C (1220F)
<b>Boiling Point:</b>	N/A	<b>Flash Point:</b>	N/A
		<b>Specific Gravity (water = 1):</b>	2.7
<b>Water Solubility:</b>	Not available	<b>Log KOW:</b>	Not available
<b>Coeff. Water/Oil Dist:</b>	Not available	<b>Auto Ignition:</b>	Not available
<b>Viscosity:</b>	N/A	<b>Volatility:</b>	N/A

## \*\*\* Section 10 - STABILITY AND REACTIVITY\*\*\*

### Chemical Stability

Stable at normal temperatures and pressure.

### Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat. Take precautionary measures against static discharge.

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## Possibility of Hazardous Reactions

Will not polymerize.

## Decomposition Products

**Combustion:** oxides of aluminum

## Possibility of Hazardous Reactions

Will not polymerize.

## Hazardous Reactions

Reacts violently with halogenated hydrocarbons and oxidizers to produce heat. Reacts with water and slowly generates heat and hydrogen gas. Aluminum reacts with acids or alkalis to form flammable hydrogen gas. Will not polymerize.

## Incompatible Materials

Water, acids, bases, combustible materials, oxidizing materials, halogenated hydrocarbons, strong oxidizers.

## \*\*\* Section 11 - TOXICOLOGICAL INFORMATION\*\*\*

### Carcinogenicity

**Aluminum (7429-90-5)**

**ACGIH:** A4 - Not Classifiable as a Human Carcinogen

### Irritation

Respiratory tract irritation, skin irritation, eye irritation

### Medical Conditions Aggravated by Exposure

None known.

## \*\*\* Section 12 - ECOLOGICAL INFORMATION\*\*\*

No information available for the product.

## \*\*\* Section 13 - DISPOSAL CONSIDERATIONS\*\*\*

### Disposal Methods

Dispose in accordance with all applicable regulations. Reprocess whenever possible. Co-process or incinerate in authorized facilities. Incineration should be done in accordance with prevailing municipal, state, and federal laws and standards from local environmental agencies.

## \*\*\* Section 14 - TRANSPORT INFORMATION\*\*\*

### US DOT Information

Not regulated as a hazardous material

### TDG Information

Not regulated as a dangerous good

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## \*\*\* Section 15 - REGULATORY INFORMATION\*\*\*

### U.S. Federal Regulations

#### SARA 313

	Max. % in Product
Aluminum (7429-90-5) –dust or fume only	100%

### Canada

This product has been classified in accordance with the criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

### Canadian WHMIS Ingredient Disclosure List (IDL)

Components of this material have been checked against the Canadian WHMIS Ingredients Disclosure List. The List is composed of chemicals which must be identified on MSDSs if they are included in products which fall under WHMIS criteria specified in the Controlled Products Regulations and present above the threshold limits listed on the IDL.

#### **Aluminum (7429-90-5)**

1 %

### Inventory List Status

**U.S. TSCA:** All components listed or exempt

**Canada DSL:** All components listed or exempt

**EINECS:** All components listed or exempt

**Australia (AICS):** All components listed or exempt

**Philippines (PICCS):** All components listed or exempt

**Japanese Inventory:** All components listed or exempt

**Korea Inventory:** All components listed or exempt

**China Inventory:** All components listed or exempt

**New Zealand (NZIoC):** All components listed or exempt

## \*\*\* Section 16 - OTHER INFORMATION\*\*\*

### Summary of Changes

Revision 1.0000, 20 August, 2012: New MSDS.

### Key / Legend

ACGIH - American Conference of Governmental Industrial Hygienists; CAS - Chemical Abstracts Service; DOT - Department of Transportation; EC50 - Effective Concentration, 50%; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; Kow - Octanol/water partition coefficient; LD50 - Lethal Dose, 50%; LEL - Lower Explosive Limit; MAK - Maximum Concentration Value in the Workplace; MEL -

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Maximum Exposure Limits; NIOSH - National Institute for Occupational Safety and Health; NTP = National Toxicology Program; STEL - Short-term Exposure Limit; TWA - Time Weighted Average; UEL - Upper Explosive Limit; UEL - Upper Explosive Limit; WHMIS - Workplace Hazardous Materials Information System

## **Other Information**

The information set forth in this Safety Data Sheet does not purport to be all-inclusive and should be used only as a guide. While the information and recommendations set forth herein are believed to be accurate, the company makes no warranty regarding such information and recommendations and disclaims all liability from reliance thereon.