

Aluminum Metal Powder 1-2-04

1 PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Aluminum Metal Powder 1-2-04
Common Name: Aluminum Metal Powder
SDS Number: A64
Revision Date: 7/2/2015
Version: 1
Supplier Details: Coatings for Industry, Inc.
 319 Township Line Road
 Souderton, PA 18964

Emergency: Infotrac
Contact: USA: 1-800-535-5053 / International :352-323-3500
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2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):
 no GHS classifications indicated

GHS Label elements, including precautionary statements

GHS Signal Word: **NONE**

no GHS pictograms indicated for this product

GHS Hazard Statements:

no GHS hazards statements indicated

GHS Precautionary Statements:

P210 - Keep away from heat/sparks/open flames/hot surfaces. No smoking
 P240 - Ground/bond container and receiving equipment.
 P241 - Use explosion-proof electrical/ventilating/light/equipment.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P370+378 - In case of fire: Use _ for extinction.

Hazards not otherwise classified (HNOC) or not covered by GHS

Aluminum powders were tested by the United States Department of Interior Bureau of Mines in 1991, under UN criteria and found not to meet the definition of a hazard class 4. Care should be taken, however, during bulk handling to prevent accumulation/generation over time of 75 micron or finer particles. Use only non-sparking tools and natural bristle brushes. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Prevent dust accumulation to minimize explosion hazard. Take precautionary measures against static discharge.

3 COMPOSITION/INFORMATION OF INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
7429-90-5	100%	Aluminum powder, uncoated

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4 FIRST AID MEASURES

Inhalation:	Move to an area free from further exposure. Give oxygen or artificial respiration if needed. Get immediate medical attention.
Skin Contact:	Wash with soap and water. Get medical attention if irritation develops and persists.
Eye Contact:	Immediately flush eyes with large amounts of water for at least 15 minutes, lifting eyelids occasionally to facilitate irrigation. Then remove contact lenses, if easily removable, and continue irrigation for not less than 15 minutes. Get immediate medical attention.
Ingestion:	If swallowed, dilute by drinking water. Recommend quantities up to 30 mL (~1 oz.) in children and 250 mL (~9 oz.) in adults. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do NOT induce vomiting. Consult a physician.

5 FIRE FIGHTING MEASURES

Suitable extinguishing media: Use Class D extinguishing agents on fines, dust or molten metal.

Unsuitable extinguishing media: DO NOT USE water, halogenated agents, or ABC dry chemical agents. These fire extinguishing agents will react with the burning material.

Specific hazards arising from the chemical

Aluminum powders were tested by the United States Department of Interior Bureau of Mines in 1991, under UN criteria and found not to meet the definition of a hazard class 4. Care should be taken, however, during bulk handling to prevent accumulation/generation over time of 75 micron or finer particles.

May be a potential hazard under the following conditions:

- Dust clouds may be explosive. Even a minor dust cloud can explode violently. Dust accumulation on the floor, ledges and beams can present a risk of ignition, flame propagation and secondary explosions.
- Powder or dusts in contact with water can generate flammable/explosive hydrogen gas. These gases could present an explosion hazard in confined or poorly ventilated spaces.
- Powder or dusts are in contact with certain metal oxides (e.g., rust, copper oxide).

Special protective equipment and precautions for firefighters

Firefighters should wear NIOSH approved, positive pressure, self-contained breathing apparatus and full protective clothing when appropriate.

Fire-fighting equipment/instructions

Use gentle surface application of Class D extinguishing agent or dry inert granular material (e.g., sand) to cover and ring the burning material. Avoid mixing of the extinguishing agent with the burning material. Apply extinguishing media carefully to avoid creating airborne dust. Do not disturb the material until completely cool. If possible, isolate the burning material to prevent fire spread, and allow the material to burn itself out. Move undamaged containers away from heat or flame, if possible.

General fire hazards

Dust and fines from processing may ignite readily. Dust or fines dispersed in the air can be explosive.

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6 ACCIDENTAL RELEASE MEASURES

Evacuation procedures

Keep people away from and upwind of spill/leak. Keep unnecessary personnel away.

Methods and materials for containment and cleaning up

Isolate area. Avoid the generation of dusts during clean-up. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Use only non-sparking tools and natural bristle brushes. Use dry cleanup procedures. Keep material dry. Place carefully in dry, water-tight containers. Seal containers. After complete clean-up by sweeping, area may be washed with large amounts of water if necessary. Material that cannot be reused may be sent to a metals reclamation facility that is able to handle fines. Waste material that cannot be reclaimed for metal value should be rendered non-reactive prior to disposal.

7 HANDLING AND STORAGE

Handling Precautions:

Keep away from sources of ignition - No smoking. Avoid contact with skin and eyes. Care should be taken during bulk handling to prevent accumulation/generation over time of 75 micron or finer particles. Keep material dry.
 "EMPTY" CONTAINER WARNING: "EMPTY" CONTAINERS MAY RETAIN RESIDUES (LIQUID, POWDER, OR VAPOR) 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. ALL CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

Storage Requirements:

Keep dry. Storage rooms must be of fire-resistant construction. Do not store powder in same room as other combustible materials

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal Protective Equipment:

Aluminum powder, uncoated (7429-90-5) [100%]
 Eye/face protection Wear safety glasses with side shields.
 Skin protection
 Hand protection: Wear impervious gloves to avoid direct skin contact.
 Other: Recommend fire resistant cotton or equivalent full-length fire resistant pants and jackets along with electrically conductive safety shoes or grounding straps. Great caution is required to avoid contact with unprotected electrical devices when wearing conductive safety shoes or grounding straps.
 Respiratory protection: Use NIOSH-approved respiratory protection as specified by an Industrial Hygienist or other qualified professional if concentrations exceed the limits listed in Section 8. Suggested respiratory protection: N95.
 Thermal hazards Not applicable.
 General hygiene considerations
 Handle in accordance with good industrial hygiene and safety practice. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

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Aluminum powder, uncoated (7429-90-5) [100%]

Components with workplace control parameters

7429-90-5 TWA 1 mg/m3 USA. ACGIH Threshold Limit Values (TLV)
 Lower Respiratory Tract irritation Pneumoconiosis Neurotoxicity Not classifiable as a human carcinogen

TWA(Total Dust)	15 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z- 1 Limits for Air Contaminants
TWA (Respirable Dust)	5 mg/m3	USA. Occupational Exposure Limits (OSHA) - Table Z- 1 Limits for Air Contaminants
PEL (Total Dust)	15 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
PEL (Respirable Dust)	5 mg/m3	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
TWA	5 mg/m3	USA. NIOSH Recommended Exposure Limits
TWA	10 mg/m3	USA. NIOSH Recommended Exposure Limits

9	PHYSICAL AND CHEMICAL PROPERTIES
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Appearance:	Gray	Odor:	Oderless
Physical State:	Powder	Solubility:	Insoluble
		Auto-Ignition Temp:	1202 F (650 C)
		UFL/LFL:	Flammability limit - lower 40mg/l

Explosive properties
 Dust can form an explosive mixture in air. Dust accumulation from this product may present an explosion hazard in the presence of an ignition source.

10	STABILITY AND REACTIVITY
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Chemical Stability:	Product is stable under normal conditions.
Conditions to Avoid:	<ul style="list-style-type: none"> • Water: Slowly generates flammable and explosive hydrogen gas and heat. Generation rate is greatly increased with smaller particles (e.g., fines and dusts). Water/aluminum mixtures may be hazardous when confined. • Heat: Oxidizes at a rate dependent upon temperature and particle size.
Materials to Avoid:	<ul style="list-style-type: none"> • Acids and alkalis: Reacts to generate flammable/explosive hydrogen gas. Generation rate is greatly increased with smaller particles (e.g., fines and dusts). • Strong oxidizers: Violent reaction with considerable heat generation. Can react explosively with nitrates (e.g., ammonium nitrate and fertilizers containing nitrate) when heated or molten. • Halogenated compounds: Many halogenated hydrocarbons, including halogenated fire extinguishing agents, can react violently with finely divided or molten aluminum. • Iron oxide (rust) and other metal oxides (e.g., copper and lead oxides): A violent thermite reaction generating considerable heat can occur. Reaction with aluminum fines and dusts requires only very weak ignition sources for initiation. • Iron powder and water: Explosive reaction forming hydrogen gas when heated above 1470°F (800°C).
Hazardous Decomposition:	Not known.
Hazardous Polymerization:	Will not occur.

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TOXICOLOGICAL INFORMATION

Aluminum powder, uncoated (7429-90-5) [100%]

Information on toxicological effects

Acute toxicity:

Oral LD50 LD50 Oral - rat - > 2,000 mg/kg

Inhalation LC50 LC50 Inhalation - rat - 4 h - > 888 mg/l

Dermal LD50 no data available

Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitisation: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System): no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed. Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: Cough, weight loss, anemia, Weakness, Incoordination.

Synergistic effects: no data available

Additional Information:

RTECS: BD0330000

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ECOLOGICAL INFORMATION

Aluminum powder, uncoated (7429-90-5) [100%]

Information on ecological effects

Toxicity: Fish, LC50 Rainbow trout, donaldson trout (*Oncorhynchus mykiss*) 0.16 mg/l, 96 hours

Persistence and degradability: The product is not biodegradable.

Bioaccumulative potential: The product does not contain any substances expected to be bioaccumulating.

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

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13 DISPOSAL CONSIDERATIONS

Disposal instructions: Reuse or recycle material whenever possible. Material that cannot be reused may be sent to a metals reclamation facility that is able to handle fines. Waste material that cannot be reclaimed for metal value should be rendered non-reactive prior to disposal.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Waste codes: RCRA Status: Not federally regulated in the U.S. if disposed of "as is." RCRA waste codes other than described here may apply depending on use of the product. Status must be determined at the point of waste generation. Refer to 40 CFR 261 or state equivalent in the U.S.

Waste from residues / unused products; If reuse or recycling is not possible, disposal must be made according to local or governmental regulations.

Contaminated packaging: Dispose of in accordance with local regulations.

"EMPTY" CONTAINER WARNING: "EMPTY" CONTAINERS MAY RETAIN RESIDUES (LIQUID, POWDER, OR VAPOR) 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. ALL CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

14 TRANSPORT INFORMATION

- This material has been tested under UN criteria and found not to meet the definition of a hazard class 4 and does not meet the definition of any other hazard class.
- Standard Transportation Commodity Code: 33-991-19.
- HTS (Harmonized Tariff Schedule) code: 7603.10.0000.
- The import/export HTS (Harmonized Tariff Schedule) code given above is the United States HTS code provided by Alcoa's Customs Compliance Office in Knoxville, TN. Other country specific HTS codes may apply. If available, more information on the HTS codes will be provided on country specific Material Safety Data Sheets.
- When "Not regulated", enter the proper freight classification, SDS Number and Product Name onto the shipping paperwork.

Disclaimer

This section provides basic classification information and, where relevant, information with respect to specific modal regulations, environmental hazards and special precautions. Otherwise, it is presumed that the information is not available/not relevant

15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Aluminum powder, uncoated (7429-90-5) [100%] EPCRAWPC, MASS, NJHS, OSHAWAC, PA, SARA313, TSCA, TXAIR

Regulatory CODE Descriptions

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- EPCRAWPC = EPCRA water Priority Chemicals
 - MASS = MA Massachusetts Hazardous Substances List
 - NJHS = NJ Right-to-Know Hazardous Substances
 - OSHAWAC = OSHA workplace Air Contaminants
 - PA = PA Right-To-Know List of Hazardous Substances
 - SARA313 = SARA 313 Title III Toxic Chemicals
 - TSCA = Toxic Substances Control Act
 - TXAIR = TX Air Contaminants with Health Effects Screening Level

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OTHER INFORMATION

NOTICE: This information is presented in good faith and believed to be accurate as of the effective date below. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof. Coatings For Industry, Inc. assumes no responsibility for personal injury or property damage to vendees, users, or third parties caused by the material. Such vendees or users assume all risks associated with the use of the material. Regulatory requirements are subject to change and may differ from one location to another: it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The preceding specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations.