Aluminum Powder

SECTION 1: Identification

Product identifier

Product name: Aluminum Powder
Product code: AL7700

Recommended use of the product and restriction on use

Relevant identified uses: Laboratory chemicals
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

Manufacturer or supplier details

Manufacturer:
United States
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331
1-717-632-1291

Emergency telephone number:

United States
ChemTel
800-255-3924
1-813-248-0585

SECTION 2: Hazard identification

GHS classification:

Flammable solids, category 1
Substance and mixture, which in contact with water, emit flammable gas 2

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements:

H228 Flammable solid
H261 In contact with water releases flammable gas

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
P223 Keep away from any possible contact with water, because of violent reaction and possible flash fire
P231+P232 Handle under inert gas. Protect from moisture
P370+P378 In case of fire: Use agents recommended in section 5 for extinction

P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages
P501 Dispose of contents and container as instructed in Section 13

Hazards not otherwise classified: None

SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7429-90-5	Aluminum	100

Additional Information: None

SECTION 4: First-aid measures

Description of first-aid measures

General notes:
Not determined or not available.

After inhalation:
Loosen clothing as necessary and position individual in a comfortable position
Maintain an unobstructed airway

After skin contact:
Rinse affected area with soap and water
If symptoms develop or persist, seek medical attention

After eye contact:
Rinse/flush exposed eye(s) gently using water for 15-20 minutes
If symptoms develop or persist, seek medical attention

After ingestion:
Rinse mouth thoroughly
Seek medical attention if irritation, discomfort, or vomiting persists

Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:
Not determined or not available.

Delayed symptoms and effects:
Not determined or not available.

Immediate medical attention and special treatment

Specific treatment:
Not determined or not available.

Notes for the doctor:
Not determined or not available.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media:
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide

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Unsuitable extinguishing media:
Not determined or not applicable.

Specific hazards during fire-fighting:
Thermal decomposition can lead to release of irritating gases and vapors

Special protective equipment for firefighters:
Wear protective eye wear, gloves and clothing
Refer to Section 8

Special precautions:
Avoid inhaling gases, fumes, dust, mist, vapor and aerosols
Avoid contact with skin, eyes and clothing

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:
Ensure adequate ventilation
Ensure air handling systems are operational
Wear protective eye wear, gloves and clothing

Environmental precautions:
Should not be released into the environment
Prevent from reaching drains, sewer or waterway

Methods and material for containment and cleaning up:
Wear protective eye wear, gloves and clothing

Reference to other sections:
Not determined or not applicable.

SECTION 7: Handling and storage

Precautions for safe handling:
Do not eat, drink, smoke or use personal products when handling chemical substances.
Avoid breathing mist or vapor.

Conditions for safe storage, including any incompatibilities:
Store in a cool, well-ventilated area.

SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
Canada	Aluminum	7429-90-5	Alberta TWA 8-hr: 10 mg/m³ (Metal dust), 5 mg/m³ (Pyro powders, as Al)
	Aluminum	7429-90-5	British Columbia TWA 8-hr: 1 mg/m³
	Aluminum	7429-90-5	Manitoba TLV-TWA 8-hr: 1 mg/m³
	Aluminum	7429-90-5	Ontario TWA 8-hr: 1 mg/m³

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Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Aluminum	7429-90-5	Quebec TWA 8-hr: 5 mg/m³ (Fumes), 10 mg/m³ (Metal), 5 mg/m³ (Pyro powders)
	Aluminum	7429-90-5	Saskatchewan TWA 8-hr: 10 mg/m³ (Metal dust), 5 mg/m³ (Pyro powders); STEL 15-min: 20 mg/m³ (Metal dust), 10 mg/m³ (Pyro powders)

Biological limit values:
No biological exposure limits noted for the ingredient(s).

Information on monitoring procedures:
Not determined or not applicable.

Appropriate engineering controls:
Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Personal protection equipment

Eye and face protection:
Safety goggles or glasses, or appropriate eye protection.

Skin and body protection:
Select glove material impermeable and resistant to the substance.

Respiratory protection:
When necessary, use NIOSH-approved breathing equipment.

General hygienic measures:
Wash hands before breaks and at the end of work.
Avoid contact with skin, eyes and clothing.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance (physical state, color):	Silver-white solid
Odor:	Silver solid
Odor threshold:	Silver solid
pH-value:	Not determined or not available.
Melting/Freezing point:	2327 °C, 4221°F
Boiling point/range:	660 °C, 1220 °F
Flash point:	Not determined or not available.
Evaporation rate:	Not determined or not available.
Flammability (solid, gaseous):	Not determined or not available.
Explosion limit upper:	Not determined or not available.
Explosion limit lower:	Not determined or not available.
Vapor pressure:	Not determined or not available.
Vapor density:	Not determined or not available.
Density:	Not determined or not available.

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Relative density:	2.7 g/cm³
Solubilities:	Insoluble in water.
Partition coefficient (n-octanol/water):	Not determined or not available.
Auto/Self-ignition temperature:	Not determined or not available.
Decomposition temperature:	Not determined or not available.
Dynamic viscosity:	Not determined or not available.
Kinematic viscosity:	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

Other information

Molecular Weight	26.98

SECTION 10: Stability and reactivity

Reactivity:
Does not react under normal conditions of use and storage.

Chemical stability:
Stable under normal conditions of use and storage.

Possibility of hazardous reactions:
None under normal conditions of use and storage.

Conditions to avoid:
Heat, flames and sparks.

Incompatible materials:
acids, Acid chlorides, Halogens, Oxidizing agents, Bases, Oxygenacids, Acid chlorides, Halogens, Oxidizing agents, Bases, Oxygen

Hazardous decomposition products:
Oxides of aluminum.

SECTION 11: Toxicological information

Acute toxicity
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Skin corrosion/irritation
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Serious eye damage/irritation
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Respiratory or skin sensitization
Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.

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Substance data: No data available.

Carcinogenicity

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.
International Agency for Research on Cancer (IARC): None of the ingredients are listed.
National Toxicology Program (NTP): None of the ingredients are listed.

Germ cell mutagenicity

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Reproductive toxicity

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Specific target organ toxicity (repeated exposure)

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Aspiration toxicity

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

Information on likely routes of exposure: No data available.

Symptoms related to the physical, chemical and toxicological characteristics: No data available.

Other information: No data available.

SECTION 12: Ecological information

Acute (short-term) toxicity

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data:

Name	Result
Aluminum	mortality LOEC - Ctenopharyngodon idella - 0.1 mg/l - 96 h
	LC50 - Oncorhynchus mykiss (rainbow trout) - 0.12 mg/l - 96 h

Chronic (long-term) toxicity

Product data: No data available.
Substance data: No data available.

Persistence and degradability

Product data: No data available.

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Substance data: No data available.

Bioaccumulative potential

Product data:
Salvelinus fontinalis - 56 d - 268 µg/l
Bioconcentration factor (BCF): 36
Substance data: No data available.

Mobility in soil

Product data: No data available.
Substance data: No data available.

Other adverse effects: No data available.

SECTION 13: Disposal considerations

Disposal methods:
It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

SECTION 14: Transport information

Canadian Transportation of Dangerous Goods (TDG)

UN number	UN1396
UN proper shipping name	Aluminum powder, uncoated
UN transport hazard class(es)	4.3 
Packing group	II
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number	UN1396
UN proper shipping name	Aluminum powder, uncoated
UN transport hazard class(es)	4.3 
Packing group	II
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN1396
UN proper shipping name	Aluminum powder, uncoated
UN transport hazard class(es)	4.3 

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Packing group	II
Environmental hazards	None
Special precautions for user	None

SECTION 15: Regulatory information

Canada regulations

Domestic substances list (DSL):

7429-90-5	Aluminum	Listed

Non-domestic substances list (NDSL): Not determined.

SECTION 16: Other information

Abbreviations and Acronyms: None

Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

NFPA: 1-0-1

HMIS: 1-0-1

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End of Safety Data Sheet