

Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 11.18.2014

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Aluminum Metal Granular

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Aluminum Metal Granular

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25141

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education
Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:



Flammable

Flammable solids, category 1
Substances and mixtures, which in contact with water, emit flammable gases, category 2

Flammable Solid 1.

Water Reactive Flammable Gas 2.

Signal word: Danger

Hazard statements:

Flammable solid.
In contact with water releases flammable gas.

Precautionary statements:

If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection.
Handle under inert gas.
Protect from moisture.
In case of fire: Use ... for extinction.
Store in a dry place. Store in a closed container.
Dispose of contents/container to

Other Non-GHS Classification:

WHMIS

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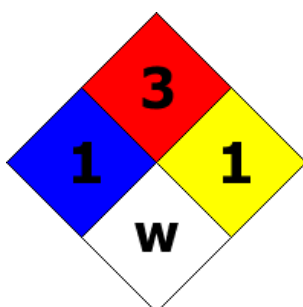
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NFPA/HMIS



NFPA SCALE (0-4)

Health	1
Flammability	3
Physical Hazard	1
Personal Protection	X

HMIS RATINGS (0-4)

SECTION 3: Composition/information on ingredients

Ingredients:

CAS 7429-90-5

Aluminum

100 %

Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration, if necessary. (Use protective barrier device if possible.). If breathing difficult, give oxygen.

After skin contact:

Wash affected area with soap and water. Seek medical attention if irritation persists or if concerned. Rinse skin for 15 minutes.

After eye contact:

Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek immediate medical attention.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed:

Nausea. Headache. Shortness of breath. May cause respiratory irritation. May cause skin irritation. May cause eye irritation (mechanical). Ingestion may cause gastrointestinal irritation (large doses). Redness, tearing.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention, provide SDS document to physician. Note to physician: Treat symptomatically.

SECTION 5: Firefighting measures

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Extinguishing media

Suitable extinguishing agents:

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Smother with suitable dry powder for extinction. (Pressure from this media may cause severe dusting).

Unsuitable extinguishing agents:

Do not use water. Do not use halogenated extinguishing media.

Special hazards arising from the substance or mixture:

Combustion products may include metallic oxides or other toxic vapors. Combustible Solid, finely divided dust is easily ignited; may cause explosions.

Advice for firefighters:

Protective equipment:

Use NIOSH-approved respiratory protection/breathing apparatus. Wear fire/flame resistant/retardant clothing.

Additional information (precautions):

Use spark-proof tools and explosion-proof equipment.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Wear protective equipment. Avoid generating dusty conditions. Use respiratory protective device against the effects of fumes/dust/aerosol. Keep unprotected persons away. Ensure adequate ventilation. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent. Transfer to a disposal or recovery container.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13.

Methods and material for containment and cleaning up:

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Collect liquids using vacuum or by use of absorbents. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Always obey local regulations.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid generation of dust or fine particulate. Dust may form flammable or explosive mixture with air, especially when damp.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly sealed.

SECTION 8: Exposure controls/personal protection



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Control Parameters:	7429-90-5, Aluminum (as Al) (pyrophoric powder), ACGIH TLV TWA 5 mg/m ³ . 7429-90-5, Aluminum (as Al) (metal dust), ACGIH TLV TWA: 10 mg/m ³ . 7429-90-5, Aluminum (as Al) (respirable), OSHA PEL TWA: 5 mg/m ³ . 7429-90-5, Aluminum (as Al) (total), OSHA PEL TWA: 15 mg/m ³ . 7429-90-5, Aluminum (as Al) (respirable), NIOSH REL: TWA 5 mg/m ³ . 7429-90-5, Aluminum (as Al) (total), NIOSH REL: TWA 10 mg/m ³ .
Appropriate Engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Respiratory protection:	Not required under normal conditions of use. Use suitable respiratory protective device when high concentrations are present. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.
Protection of skin:	The glove material has to be impermeable and resistant to the product/ the substance/ the preparation being used/handled. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
Eye protection:	Safety glasses with side shields or goggles.
General hygienic measures:	The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	Silver, white solid	Explosion limit lower:	Not determined
		Explosion limit upper:	Not determined
Odor:	Odorless	Vapor pressure at 20°C:	Not determined
Odor threshold:	Not determined	Vapor density:	Not determined
pH-value:	Not Applicable	Relative density:	2.7
Melting/Freezing point:	660 °C, 1220°F	Solubilities:	Insoluble in water.
Boiling point/Boiling range:	2327 °C, 4221°F	Partition coefficient (n-octanol/water):	Not determined
Flash point (closed cup):	Not determined	Auto/Self-ignition temperature:	Not determined
Evaporation rate:	Not determined	Decomposition temperature:	Not determined
Flammability (solid, gaseous):	Not determined	Viscosity:	a. Kinematic: Not determined b. Dynamic: Not Determined
Density at 20°C:	Not determined	Specific Gravity: :2.7	

SECTION 10: Stability and reactivity

Reactivity:

Corrodes in contact with acids & other metals. Ignition may occur if powders are mixed with halogens, carbon disulfide, or methyl chloride. Reacts violently and/or explosively with water, steam or moisture. May ignite or

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explode on contact with moist air.

Chemical stability:

No decomposition if used and stored according to specifications.

Possible hazardous reactions:

Combustible Solid, finely divided dust is easily ignited; may cause explosions.

Conditions to avoid:

Store away from oxidizing agents, strong acids or bases.

Incompatible materials:

Strong oxidizers & acids. Halogenated hydrocarbons.

Hazardous decomposition products:

Metallic oxides.

SECTION 11: Toxicological information

Acute Toxicity:

Oral:

LD50 rat >15900 mg/kg bw

Chronic Toxicity: No additional information.

Corrosion Irritation:

Ocular:

Section 2 May cause eye irritation.

Sensitization: No additional information.

Numerical Measures: No additional information.

Carcinogenicity: No additional information.

Mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

LC50 Fish: Ctenopharyngodon idella (Grass carp, white amur) [Al 7429-90-5]: 260 ug/L/96 hr

LC50 Crustacea: Daphnia magna (Water flea) [Al 7429-90-5]: 2.6 mg/L/24 hr

LC50 Fish: Oncorhynchus mykiss (Rainbow trout) [Al 7429-90-5]: 120 ug/L/96 hr; static

Persistence and degradability: No additional information.

Bioaccumulative potential:

Birds and mammals are most likely exposed through dietary ingestion of soil or Al-contaminated foods.

Mobility in soil: No additional information.

Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/ provincial and local regulations regarding the proper disposal of waste material that may incorporate some amount of this

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product.

SECTION 14: Transport information

US DOT

UN Number:

ADR, ADN, DOT, IMDG, IATA

1396

Limited Quantity Exception:

None

Bulk:

RQ (if applicable): None

Proper shipping Name: Aluminum powder, uncoated.

Hazard Class: 4

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None

Non Bulk:

RQ (if applicable): None

Proper shipping Name: Aluminum powder, uncoated.

Hazard Class: 4

Packing Group: II.

Marine Pollutant (if applicable): No additional information.

Comments: None



SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Reactive, Acute, Fire

SARA Section 313 (Specific toxic chemical listings):

7429-90-5 Aluminum (fume or dust).

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

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None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

7429-90-5 Aluminum, elemental.

SECTION 16: Other information

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. Note. 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.

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA Resource Conservation and Recovery Act (USA).
TSCA Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

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