

Safety Data Sheet


according to OSHA HCS (29CFR 1910.1200) and WHMIS 2015 Regulations

Revision: August 22, 2020

1 Identification

- **Product identifier**
- **Trade name:** Magnesium, Powder
- **Product code:** S25407
- **CAS Number:**
7439-95-4
- **Recommended use and restriction on use**
- **Recommended use:** Laboratory chemicals
- **Restrictions on use:** No relevant information available.
- **Details of the supplier of the Safety Data Sheet**
- **Manufacturer/Supplier:**
AquaPhoenix Scientific, Inc.
860 Gitts Run Road
Hanover, PA 17331 USA
Tel +1 (717)632-1291
Toll-Free: (866)632-1291
info@aquaphoenixsci.com
- **Distributor:**
Fisher Science Education
6771 Silver Crest Road,
Nazareth, PA 18064
(800) 955-1177
- **Emergency telephone number:**
ChemTel Inc.
(800)255-3924 (North America)
+1 (813)248-0585 (International)

2 Hazard(s) identification

- **Classification of the substance or mixture**
Flam. Sol. 1 H228 Flammable solid.
Self-heat. 2 H252 Self-heating in large quantities; may catch fire.
Water-react. 2 H261 In contact with water releases flammable gas.
- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**

GHS02
- **Signal word:** Danger
- **Hazard statements:**
H228 Flammable solid.
H252 Self-heating in large quantities; may catch fire.
H261 In contact with water releases flammable gas.
- **Precautionary statements:**

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- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P223 Do not allow contact with water.
- P231+P232 Handle under inert gas. Protect from moisture.
- P235+P410 Keep cool. Protect from sunlight.
- P240 Ground/bond container and receiving equipment.
- P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P335+P334 Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
- P370+P378 In case of fire: Use for extinction: CO2, sand, extinguishing powder.
- P402+P404 Store in a dry place. Store in a closed container.
- P407 Maintain air gap between stacks/pallets.
- P420 Store away from water.
- P420 Store away from acids.
- P422 Store in mineral oil.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards** There are no other hazards not otherwise classified that have been identified.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
7439-95-4 Magnesium metal

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Brush off loose particles from skin.
In case of contact with burning product:
Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
- **After eye contact:**
Remove contact lenses if worn.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed:**
Nausea in case of ingestion.
Gastric or intestinal disorders when ingested.
When product is ignited:
Thermal burns, if mishandled.
- **Danger:** No relevant information available.
- **Indication of any immediate medical attention and special treatment needed:**
If medical advice is needed, have product container or label at hand.

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5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
 - Dry sand.
 - Graphite powder.
 - Special powder for metal fires. Do not use water.
- **For safety reasons unsuitable extinguishing agents:** For metal fires: Use specific agents only.
- **Special hazards arising from the substance or mixture**
 - Formation of toxic gases is possible during heating or in case of fire.
 - Flammable solid.
 - Self-heating in large quantities; may catch fire.
 - In contact with water releases flammable gas.
- **Advice for firefighters**
- **Protective equipment:**
 - Wear self-contained respiratory protective device.
 - Wear fully protective suit.
- **Additional information:** Eliminate all ignition sources if safe to do so.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
 - Ensure adequate ventilation.
 - Do not allow contact with water.
 - Keep away from ignition sources.
 - Wear protective equipment. Keep unprotected persons away.
 - For large spills, use respiratory protective device against the effects of fumes/dust/aerosol.
- **Environmental precautions**
 - Do not allow product to reach sewage system or any water course.
 - Inform respective authorities in case of seepage into water course or sewage system.
- **Methods and material for containment and cleaning up**
 - Pick up mechanically.
 - Store in mineral oil.
 - Send for recovery or disposal in suitable receptacles.
- **Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

7 Handling and storage

- **Handling**
- **Precautions for safe handling:**
 - Open and handle receptacle with care.
 - Use only in well ventilated areas.
- **Information about protection against explosions and fires:**
 - Flammable solid.
 - Self-heating in large quantities; may catch fire.

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In contact with water releases flammable gas.
Protect against electrostatic charges.

- **Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:**
Avoid storage near extreme heat, ignition sources or open flame.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Do not store together with acids.
Store away from oxidizing agents.
- **Further information about storage conditions:**
Keep containers tightly sealed.
Store under dry inert gas or mineral oil.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Exposure controls**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Engineering controls:** Provide adequate ventilation.
- **Breathing equipment:** Not required under normal conditions of use.
- **Protection of hands:**



Protective gloves

When product is ignited:
Thermally-protective gloves.

- **Eye protection:**



Safety glasses

When product is ignited:



Wear glasses or face shield with appropriate shading.

Follow relevant national guidelines concerning the use of protective eyewear.

- **Body protection:**
When product is ignited:

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Thermal protection must be provided.

· **Limitation and supervision of exposure into the environment**

No relevant information available.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **Appearance:**

· **Form:** Powder

· **Color:** White

· **Odor:** Odorless

· **Odor threshold:** Not determined.

· **pH-value:** Not applicable.

· **Melting point/Melting range:** 649.5 °C (1201.1 °F)

· **Boiling point/Boiling range:** 1090 °C (1994 °F)

· **Flash point:** 500 °C (932 °F)

· **Flammability (solid, gaseous):** Flammable solid.

· **Auto-ignition temperature:** Not determined.

· **Decomposition temperature:** Not determined.

· **Danger of explosion:** Not determined.

· **Explosion limits**

· **Lower:** Not determined.

· **Upper:** Not determined.

· **Oxidizing properties:** Non-oxidizing.

· **Vapor pressure at 20 °C (68 °F):** 0 hPa

· **Density at 20 °C (68 °F):** 1.74 g/cm³ (14.52 lbs/gal)

· **Relative density:** Not determined.

· **Vapor density:** Not applicable.

· **Evaporation rate:** Not applicable.

· **Solubility in / Miscibility with**

· **Water:** Reacts with water.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity**

· **Dynamic:** Not applicable.

· **Kinematic:** Not applicable.

· **Other information** No relevant information available.

10 Stability and reactivity

· **Reactivity:** No relevant information available.

· **Chemical stability:** Stable under normal temperatures and pressures.

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- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
Self-heating in large quantities; may catch fire.
- **Possibility of hazardous reactions**
Contact with water releases flammable gases.
Contact with acids releases flammable gases.
Reacts violently with oxidizing agents.
Strong exothermic reaction with acids.
Flammable solid.
Toxic fumes may be released if heated above the decomposition point.
- **Conditions to avoid** Keep ignition sources away - Do not smoke.
- **Incompatible materials**
Acids.
Oxidizing agents.
Water
- **Hazardous decomposition products**
Under fire conditions only:
Metal oxide smoke.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:** None.
- **Primary irritant effect:**
- **On the skin:** Based on available data, the classification criteria are not met.
- **On the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.

- **IARC (International Agency for Research on Cancer):**

Substance is not listed.

- **NTP (National Toxicology Program):**

Substance is not listed.

- **OSHA-Ca (Occupational Safety & Health Administration):**

Substance is not listed.

- **Probable route(s) of exposure:**

Ingestion.
Inhalation.
Eye contact.
Skin contact.

- **Acute effects (acute toxicity, irritation and corrosivity):** No relevant information available.
- **Repeated dose toxicity:** No relevant information available.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure:** Based on available data, the classification criteria are not met.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.

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12 Ecological information

- **Toxicity**
- **Aquatic toxicity** No relevant information available.
- **Persistence and degradability** No relevant information available.
- **Bioaccumulative potential:** No relevant information available.
- **Mobility in soil:** No relevant information available.
- **Additional ecological information**
- **General notes:**
Do not allow product to reach ground water, water course or sewage system.
In contact with water releases flammable gas.
- **Other adverse effects** No relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
The user of this material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes. Residual materials should be treated as hazardous.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|---|---|
| · UN-Number | |
| · DOT, ADR/RID/ADN, IMDG, IATA | UN1418 |
| · UN proper shipping name | |
| · ADR/RID/ADN | MAGNESIUM ALLOYS POWDER |
| · Transport hazard class(es) | |
| · DOT | |
| |   |
| · Class | 4.3 |
| · Label | 4.3, 4.2 |
| <hr style="border-top: 1px dashed black;"/> | |
| · ADR/RID/ADN | |
| |   |
| · Class | 4.3 (WS) |
| · Label | 4.3+4.2 |

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· **IMDG**



· **Class** 4.3
 · **Label** 4.3/4.2

· **IATA**



· **Class** 4.3
 · **Label** 4.3 (4.2)

· **Packing group**

· **DOT, ADR/RID/ADN, IMDG, IATA** II

· **Environmental hazards**

Not applicable.

· **Special precautions for user**

Warning: Substances which, in contact with water, emit flammable gases

· **Hazard identification number (Kemler code):** 429

· **EMS Number:** F-G,S-O

· **Segregation groups** Powdered metals

· **Transport in bulk according to Annex II of**

MARPOL73/78 and the IBC Code

Not applicable.

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **United States (USA)**

· **SARA**

· **Section 302 (extremely hazardous substances):**

Substance is not listed.

· **Section 313 (Specific toxic chemical listings):**

Substance is not listed.

· **TSCA (Toxic Substances Control Act)**

All ingredients are listed or exempt.

· **Proposition 65 (California)**

· **Chemicals known to cause cancer:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity for females:**

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Substance is not listed.

· **Chemicals known to cause developmental toxicity for males:**

Substance is not listed.

· **Chemicals known to cause developmental toxicity:**

Substance is not listed.

· **EPA (Environmental Protection Agency):**

Substance is not listed.

· **IARC (International Agency for Research on Cancer):**

Substance is not listed.

· **Canadian Domestic Substances List (DSL):**

Substance is not listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Abbreviations and acronyms:**

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

CAS: Chemical Abstracts Service (division of the American Chemical Society)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

OSHA: Occupational Safety & Health Administration

Flam. Sol. 1: Flammable solids – Category 1

Self-heat. 2: Self-heating substances and mixtures – Category 2

Water-react. 2: Substances and mixtures which in contact with water emit flammable gases – Category 2

· **Sources**

Website, European Chemicals Agency (echa.europa.eu)

Website, US EPA Substance Registry Services (ofmpub.epa.gov/sorinternet/registry/substreg/home/overview/home.do)

Website, Chemical Abstracts Registry, American Chemical Society (www.cas.org)

Patty's Industrial Hygiene, 6th ed., Rose, Vernon, ed. ISBN: 978-0-470-07488-6

Casarett and Doull's Toxicology: The Basic Science of Poisons, 8th Ed., Klaasen, Curtis D., ed., ISBN: 978-0-07-176923-5.

Safety Data Sheets, Individual Manufacturers

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