



SAFETY DATA SHEET

MATERION

1. Product and company identification

Name of the chemical	Magnesium Powder
Other means of identification	
SDS number	2HR
Materion Code	2HR
CAS number	7439-95-4
Synonyms	MAGNESIUM
Recommended use of the chemical and restrictions on use	
Recommended use	Not available.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/ Distributor information	Materion Advanced Chemicals Inc.
Address	407 N 13th Street 1316 W. St. Paul Avenue Milwaukee WI 53233 United States
Telephone	414.212.0290
E-mail	advancedmaterials@materion.com
Contact person	Laura Hamilton
Emergency telephone number	Chemtrec 800.424.9300

2. Hazards identification

Hazard classification		
Physical hazards	Pyrophoric solids	Category 1
	Self-heating substances and mixtures	Category 2
	Substances and mixtures which, in contact with water, emit flammable gases	Category 2
Health hazards	Not classified.	
Environmental hazards	Not classified.	

Label elements

Symbols



Signal word

Danger

Hazard statement

Catches fire spontaneously if exposed to air.

Precautionary statement

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not allow contact with air. Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. Protect from moisture. Wear protective gloves/eye protection/face protection.

Response

Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. In case of fire: Use appropriate media for extinction.

Storage

Store in a dry place. Store in a closed container. Store contents under appropriate liquid or inert gas.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards

None known.

Supplemental information

For further information, please contact the Product Stewardship Department at +1.800.862.4118.

3. Composition/information on ingredients

Substance

Chemical name	CAS Number	Concentration (%)
Magnesium Powder	7439-95-4	100

4. First aid measures

First aid measures for different exposure routes

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages. Get medical attention if irritation develops and persists.
Eye contact	Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical advice/attention if you feel unwell.

Most important symptoms and effects Direct contact with eyes may cause temporary irritation.

Personal protection for first-aid responders Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

Notes to physician Provide general supportive measures and treat symptomatically.

5. Fire-fighting measures

Extinguishing media	Powder. Dry sand. Dry chemical, soda ash, lime or DRY sand.
Extinguishing media to avoid	Water. Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards during fire fighting	Spontaneously flammable in air. In contact with water releases flammable gas.
Special fire fighting procedures	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Do not get water inside container.
Protection of fire-fighters	Wear suitable protective equipment. Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
General fire hazards	Catches fire spontaneously if exposed to air. In contact with water releases flammable gas.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

6. Accidental release measures

Personal precautions	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.
Spill cleanup methods	Do not get water on spilled substance or inside containers. Neutralize with lime or soda ash. Stop the flow of material, if this is without risk. Following product recovery, flush area with water.

7. Handling and storage

Handling	Do not allow contact with air. Open container carefully and only in a dry, oxygen-free or inert atmosphere. Keep away from any possible contact with water, because of violent reaction and possible flash fire. Handle under inert gas. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Storage	Keep away from heat, sparks and open flame. Store in a cool, dry place out of direct sunlight. Store in original tightly closed container. Store in a dry place. Never allow product to get in contact with water during storage.

8. Exposure controls/personal protection

Exposure limits

No exposure limits noted for ingredient(s).

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

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear eye/face protection. Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear suitable protective clothing.

Respiratory protection Respiratory protection not required.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking.

9. Physical and chemical properties

Appearance

Physical state Solid.

Form Powder.

Color Not available.

Odor Not available.

Odor threshold Not available.

Melting point/freezing point 1203.8 °F (651 °C)

pH Not available.

Boiling point, initial boiling point, and boiling range 2012 °F (1100 °C)

Flammability (solid, gas) Not available.

Flash point 932.0 °F (500.0 °C)

Decomposition temperature Not available.

Auto-ignition temperature 883.4 °F (473 °C)

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure < 0.0000001 kPa (77 °F (25 °C))

Vapor density Not available.

Density 1.74 g/cm³ estimated at 20 °C

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Evaporation rate Not available.

Other data

Dynamic viscosity 1.25 mPa.s

Explosive properties Not explosive.

Kinematic viscosity 0.7193 mm²/s estimated

Molecular formula Mg

Molecular weight 24.3 g/mol

Oxidizing properties	Not oxidizing.
Specific gravity	1.74 at 20 °C
Surface tension	563 mN/m (68 °F (20 °C))

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Exposure to moisture. Exposure to air. Contact with water liberates flammable gas. Moisture. Contact with incompatible materials.
Incompatible materials	Air. None known.
Hazardous decomposition products	Hydrogen chloride.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Due to lack of data the classification is not possible.
Skin contact	Due to lack of data the classification is not possible.
Eye contact	Due to lack of data the classification is not possible.
Ingestion	Due to lack of data the classification is not possible.

Symptoms Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Due to lack of data the classification is not possible.
Serious eye damage/eye irritation	Due to lack of data the classification is not possible.
Respiratory or skin sensitization	
Respiratory sensitization	Due to lack of data the classification is not possible.
Skin sensitization	Due to lack of data the classification is not possible.
Germ cell mutagenicity	Due to lack of data the classification is not possible.
Carcinogenicity	Due to lack of data the classification is not possible.
Reproductive toxicity	Due to lack of data the classification is not possible.
Specific target organ toxicity - single exposure	Due to lack of data the classification is not possible.
Specific target organ toxicity - repeated exposure	Due to lack of data the classification is not possible.
Aspiration hazard	Due to lack of data the classification is not possible.
Chronic effects	Not available.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulation	No data available.
Mobility in soil	No data available.
Other hazardous effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Consult authorities before disposal. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Residual waste	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.
Local disposal regulations	Dispose in accordance with all applicable regulations.

14. Transport information

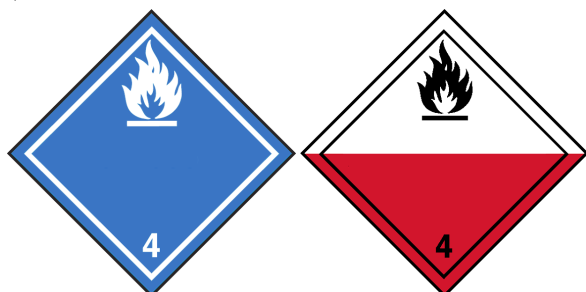
IATA

UN number	UN1418
UN proper shipping name	Magnesium alloys powder
Transport hazard class(es)	
Class	4.3
Subsidiary risk	4.2
Packing group	III
Environmental hazards	No.
ERG Code	4SW
Special precautions for user	Not available.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1418
UN proper shipping name	MAGNESIUM POWDER or MAGNESIUM ALLOYS POWDER
Transport hazard class(es)	
Class	4.3
Subsidiary risk	4.2
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-G, S-O
Special precautions for user	Not available.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

IATA; IMDG



15. Regulatory information

Applicable regulations	This material safety data sheet was prepared in accordance with the Regulation of Labeling and Hazard Communication of Hazardous Chemicals.
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Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste

Not listed.

Priority Management Chemical List (Regulations on Handling Priority Managed Chemicals), as amended

Magnesium Powder (CAS 7439-95-4)

Toxic Chemical Substances (TCS) List (EPA Toxic Substances Notice No. 0960095331E, Tables 1-3, Dec. 17, 2007, as amended)

Not listed.

Hazardous Substances and Flammable Pressurized Gases Establishment Standards and Safety Control Regulations

Magnesium Powder (CAS 7439-95-4)

Class 2: Flammable Solids

GHS Classification List: GHS implementation phase 1, 2 and 3 (CLA No. 0980145063, 0990146707, and 1020146801)

Magnesium Powder (CAS 7439-95-4)

Rules on Road Transportation Safety

Regulated.

International regulations**Stockholm Convention**

Not applicable.

Rotterdam Convention

Not applicable.

Montreal Protocol

Not applicable.

Kyoto protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information**References**

ACGIH
 EPA: AQUIRE database
 NLM: Hazardous Substances Data Base
 US. IARC Monographs on Occupational Exposures to Chemical Agents
 Taiwan. Dangerous Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)
 Taiwan. Industrial Precursor Chemicals (Categories and Regulations Governing Inspection and Declaration of Industrial Precursor Chemicals, MOEA Decree No. 87, as amended)
 Taiwan. OELs. (Standards on Workplace Atmosphere of Dangerous and Hazardous Materials)
 Taiwan. Toxic Chemical Substances (TCS) (List of Toxic Chemical Substances announced by the Environmental Protection Administration)
 Taiwan. Toxic Materials (Rules on Hazard Communication of Dangerous Materials and Toxic Materials)

Disclaimer

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Prepared by

Not available.