



MATERIAL SAFETY DATA SHEET

according to the (US) Hazard Communication Standard (29 CFR 1910.1200)

Date of issue: 03/11/2013

Version 1.0

SECTION 1. Identification

Product identifier

Product number 818506
Product name Magnesium powder (particle size < 0.1 mm) for synthesis

Relevant identified uses of the substance or mixture and uses advised against

Identified uses Chemical for synthesis

Details of the supplier of the safety data sheet

Company EMD Millipore Corporation | 290 Concord Road, Billerica, MA 01821,
United States of America | SDS Phone Support: +1-978-715-1335 |
General Inquiries: +1-978-715-4321 | Monday to Friday, 9:00 AM to
4:00 PM Eastern Time (GMT-5)

e-mail: mm_sds@merckgroup.com

Emergency telephone 800-424-9300 CHEMTREC (USA)
+1-703-527-3887 CHEMTREC (International)
24 Hours/day; 7 Days/week

SECTION 2. Hazards identification

GHS Classification

Pyrophoric solid, Category 1, H250
Substances which in contact with water emit flammable gases, Category 1, H260
For the full text of the H-Statements mentioned in this Section, see Section 16.

GHS-Labeling

Hazard pictograms



Signal Word
Danger

Hazard Statements

H260 In contact with water releases flammable gases which may ignite spontaneously.
H250 Catches fire spontaneously if exposed to air.

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Precautionary Statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P370 + P378 In case of fire: Use metal fire powder for extinction.

P402 + P404 Store in a dry place. Store in a closed container.

OSHA Hazards

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Other hazards

None known.

SECTION 3. Composition/information on ingredients

Formula	Mg (Hill)
CAS-No.	7439-95-4
Molar mass	24.31 g/mol

Hazardous ingredients

Chemical Name (Concentration)

CAS-No.

magnesium powder (pyrophoric, not stabilised) (>= 90 % - <= 100 %)

7439-95-4

SECTION 4. First aid measures

Description of first-aid measures

Inhalation

After inhalation: fresh air.

Skin contact

After skin contact: wash off with plenty of water. Remove contaminated clothing.

Eye contact

After eye contact: rinse out with plenty of water with the eyelid held wide open. Call in ophthalmologist if necessary.

Ingestion

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

irritant effects, Stomach/intestinal disorders

Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Special powder against metal fire, Sand, Cement

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Unsuitable extinguishing media

Water, Foam, Carbon dioxide (CO₂)

Special hazards arising from the substance or mixture

Combustible.

Development of hazardous combustion gases or vapors possible in the event of fire.

Risk of dust explosion.

Caution! in contact with water product releases:

Hydrogen, Risk of explosion.

Potential for spontaneous combustion.

Advice for firefighters

Special protective equipment for fire-fighters

In the event of fire, wear self-contained breathing apparatus.

SECTION 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid substance contact. Avoid inhalation of dusts.

Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders: Protective equipment see section 8.

Environmental precautions

Do not empty into drains. Risk of explosion.

Methods and materials for containment and cleaning up

Observe possible material restrictions (see sections 7 and 10).

Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

SECTION 7. Handling and storage

Precautions for safe handling

Keep workplace dry. Do not allow product to come into contact with water.

Observe label precautions.

Conditions for safe storage, including any incompatibilities

Tightly closed. Dry. Keep away from heat and sources of ignition.

Store at +15°C to +25°C (+59°F to +77°F).

SECTION 8. Exposure controls/personal protection

Exposure limit(s)

Contains no substances with occupational exposure limit values.

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

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Individual protection measures

Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled. The chemical resistance of the protective equipment should be inquired at the respective supplier.

Hygiene measures

Immediately change contaminated clothing. Apply skin- protective barrier cream. Wash hands and face after working with substance.

Eye/face protection

Safety glasses

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Other protective equipment:

protective clothing

Respiratory protection

required when dusts are generated.

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9. Physical and chemical properties

Physical state	solid
Color	light gray
Odor	odorless
Odor Threshold	No information available.
pH	No information available.
Melting point	651 °C
Boiling point/boiling range	2,025 °F (1,107 °C) at 1,013 hPa
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.

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Vapor pressure	0.00013 hPa at 617 °F (325 °C)
Relative vapor density	No information available.
Relative density	1.74 g/cm ³ at 68 °F (20 °C)
Water solubility	at 68 °F (20 °C) (slow decomposition)
Partition coefficient: n-octanol/water	not applicable
Autoignition temperature	Catches fire spontaneously if exposed to air.
Decomposition temperature	No information available.
Viscosity, dynamic	No information available.
Explosive properties	No information available.
Ignition temperature	> 842 °F (> 450 °C)
Particle size	Particle size ca. 0.06 - 0.3 mm

SECTION 10. Stability and reactivity

Reactivity

Self-ignition possible due to air moisture.
Risk of dust explosion.

Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapors with:

Water, Peroxides, Cyanides, halogens, carbides, halogen-halogen compounds, hydrogen iodide, carbon dioxide, nitrogen dioxide, hydrogen peroxide

Halogenated hydrocarbon, heat

Nitric acid, heat

Risk of explosion with:

Generates dangerous gases or fumes in contact with:

Ammonium salts, metallic oxides, alkalines, Alcohols, Halogenated compounds, sulfur, Acids, Oxidizing agents, sulfates, phosphates, silicon compounds, perchlorates, nitrates, chlorates, Potassium carbonate, ferric oxide, Chloroform, calcium carbonate, halogen compounds

Conditions to avoid

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Exposure to moisture.

Incompatible materials

no information available

Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

Information on toxicological effects

Likely route of exposure

Eye contact, Skin contact, Ingestion

Acute oral toxicity

Symptoms: Stomach/intestinal disorders

Acute inhalation toxicity

Symptoms: Irritation symptoms in the respiratory tract.

Acute dermal toxicity

Symptoms: Tendency of poor wound-healing after penetration of the substance.

Eye irritation

Possible damages: slight irritation

Specific target organ systemic toxicity - single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ systemic toxicity - repeated exposure

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration hazard

Regarding the available data the classification criteria are not fulfilled.

Carcinogenicity

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Further information

After uptake of large quantities:

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lack of appetite, change in weight

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

Ecotoxicity

No information available.

Persistence and degradability

Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

Bioaccumulative potential

Partition coefficient: n-octanol/water

not applicable

Mobility in soil

No information available.

Other adverse effects

Additional ecological information

Harmful effect due to pH shift.

No ecological problems are to be expected when the product is handled and used with due care and attention.

SECTION 13. Disposal considerations

The information presented only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. Disposal should be in accordance with applicable regional, national and local laws and regulations.

SECTION 14. Transport information

Land transport (DOT)

UN number

UN 1418

Proper shipping name

MAGNESIUM POWDER

Class

4.3 (4.2)

Packing group

II

Environmentally hazardous

--

Air transport (IATA)

UN number

UN 1418

Proper shipping name

MAGNESIUM POWDER

Class

4.3 (4.2)

Packing group

II

Environmentally hazardous

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Special precautions for user	yes
IATA (Passenger)	Not permitted for transport
Sea transport (IMDG)	
UN number	UN 1418
Proper shipping name	MAGNESIUM POWDER
Class	4.3 (4.2)
Packing group	II
Environmentally hazardous	--
Special precautions for user	yes
EmS	F-G S-O

SECTION 15. Regulatory information

United States of America

OSHA Hazards

Water Reactive

This information is based on 29 CFR 1910.1200 criteria prior to adoption of the GHS, and may deviate from the GHS information on the label and in section 2.

SARA 311/312 Hazards

Reactivity Hazard

SARA 313

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 302

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

DEA List I

Not listed

DEA List II

Not listed

Massachusetts Right To Know

Ingredients

magnesium powder (pyrophoric, not stabilised)

Pennsylvania Right To Know

Ingredients

magnesium powder (pyrophoric, not stabilised)

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New Jersey Right To Know

Ingredients

magnesium powder (pyrophoric, not stabilised)

Notification status

TSCA: On TSCA Inventory

DSL: All components of this product are on the Canadian DSL.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Full text of H-Statements referred to under sections 2 and 3.

H250

Catches fire spontaneously if exposed to air.

H260

In contact with water releases flammable gases which may ignite spontaneously.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Date of issue:03/11/2013

The information contained herein is based on the present state of our knowledge. It characterizes the product with regard to appropriate safety precautions. It does not represent a warranty of any product properties and we assume no liability for any loss or injury which may result from the use of this information. Users should conduct their own investigations to determine the suitability of the information.

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