

Product name: Solid Magnesium, 99.99% pure in various forms
Document Nr.: SDS00170MG5704

Date: October 5th 2022
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Section 1: Identification of the substance or mixture and the company

1.1. Product Identifier

Solid Magnesium (Mg) 99.99% pure in various forms. EC #: 231-104-6 CAS #: 7439-95-4
The substance is not subject to registration according to REACH
Index number in CLP Annex VI: 012-002-00-9

1.2 Relevant applications of the material and uses advised against

Target material for vacuum deposition (sputtering and evaporation)

1.3. Company details

Rave Scientific
100 Franklin Square Dr.
Suite 101
Somerset, NJ 08873
Telephone: 1-732-898-3828
Email: info@ravescientific.com
Web: www.ravescientific.com

1.4 Emergency telephone number

Rave Scientific: 1-732-898-3828

Section 2: Hazards identification

2.1. Classification of the substance or mixture according to Regulation EC Nr. 1272/2008

Physical:	Flammable solid, Category 1, H228
Health:	None
Flammability:	None
Environment:	Substance, in contact with water, emits flammable gas, Category 2, H261
Other hazards:	None

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2.2 Labeling elements

Labelling accordance to Regulation EC. Nr 1272/2008



Hazard pictogram(s):

GHS02

Signal word:

Danger

Hazard statements:

H228: Flammable solid

H261: In contact with water releases flammable gases

Precautionary statement(s)

Prevention:

P201: Keep out of reach of children.

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P370+P378: In case of fire: Use metal fire powder to extinguish – never use water

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

2.3 Other hazards

Results of PBT and vPvB assessment

According to the results of its assessment, the substance is not a PBT or a vPvB

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Section 3: Composition / information on components

3.1. Substances

Solid Magnesium (Mg) 99.99% pure in various forms. EC #: 231-104-6 CAS #: 7439-95-4
Index number in CLP Annex VI: 012-002-00-9

3.2 Mixtures

Not applicable

Section 4: First aid measures

4.1. Description of first aid measures

Contact with eyes:	Rinse cautiously with water for several minutes. If possible, remove contact lenses. Continue rinsing.
Contact with skin:	Wash with water and soap. Seek medical attention if irritation persists.
Inhalation:	Fresh air, keep warm and at rest. Seek medical attention if ill effects occur
Ingestion:	If swallowed, do not induce vomiting Seek immediate medical advice

4.2. Important symptoms and effects, either immediate or delayed

Inhalation:	Symptoms and effects are not known to date
Ingestion:	Symptoms and effects are not known to date
Skin contact:	Symptoms and effects are not known to date
Eye contact:	Symptoms and effects are not known to date

4.3. Indication of any immediate medical attention and special treatment

None

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Section 5: Firefighting Measures

5.1. Extinguishing media

Dry agent, D-powder, dry sand. Do not use water. Do not use CO₂.

5.2 Special hazards arising from the substance or mixture

Product may release hydrogen gas. Increased temperatures will accelerate this process. Water-reactive; in contact with water releases flammable gases.

5.3 Advice to firefighters

Fight fire from a safe distance, with adequate cover
In case of fire: do not breathe fumes
Wear self-contained breathing apparatus for fire fighting

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothes.

6.2 Environmental precautions

Keep away from drains, surface and ground water.

6.3 Methods and material for containment and clean up

Covering of drains. Pick up mechanically.
Place in appropriate, dry containers for disposal.

6.4 Reference to other sections

For further information see section 7, 8 and 13.

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Section 7: Handling and storage

7.1. Precautions for safe handling

Avoid creating or accumulating dust or fine particles
Wash hands before breaks and after work.
Keep away from food, drink and animal feeding stuffs.
When using do not smoke.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed, in a cool, well-ventilated place
Do not allow contact with water. Store in a dry place
Keep out of reach of children

7.3 Specific end uses(s)

Not required

Section 8: Exposure control and personal protection

8.1. Control parameters

Occupational exposure limits (OEL)

Ingredient	Material Name	Source	TWA	STEL	Ceiling -C	Notes
Magnesium	Magnesium (Mg)	EU	10 mg/m ³		Not available	Not available

8.2 Exposure controls

Control procedures: Avoid creating or accumulating dust or fine particles
Keep sources of ignition away. Keep water away.
Wash hands before breaks and at the end of the work
Maintain appropriate working environment

Personal protection: Protective work clothing

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10.3 Possibility of hazardous reactions

Material reacts vigorously with water, emitting flammable gases.
Violent reaction with: Alkali, Alcohols, Halogenated hydrocarbons, Oxidizing agents, Acids, Nitrate.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Protect from moisture.

10.5 Incompatible materials

Water. Release of flammable gases when in contact with water.

10.6 Hazardous decomposition products

Flammable gas.

Section 11: Toxicological information

11.1. Information on toxicological effects

Information hazard classes as defined in Regulation (EC) Nr. 1272/2008

Inhalation: Not classified
Skin contact: Not classified
Eye contact: Not classified
Sensitisation: Not classified
Germ cell mutagenicity: Not classified
Carcinogenicity: Not classified
Reproductive toxicity: Not classified
Specific target organ toxicity – single exposure: Not classified
Specific target organ toxicity – repeated exposure: Not classified

Toxicological data:

Ingredient	Toxicity	Irritation
Magnesium (Mg)	Oral (rat) LD50: >2000mg/kg	Not classified

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11.2. Endocrine disrupting properties

Not listed

11.3. Information on other hazards

There is no additional information

Section 12: Ecological information

12.1. Aquatic toxicity

Shall not be classified as hazardous to the aquatic environment.

Environmental data:

Ingredient	Aquatic toxicity
Magnesium (Mg)	LC50 fish 1: >541 mg/l after 96 h
	ErC50 algae: >12mg/l after 72 h
	EC50 aquatic invertebrates: 125 mg/l after 21 days

12.2 Persistence and degradability

No information available

12.3 Bio-accumulative potential

BCF fish 1; no bio accumulation

12.4 Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

Not applicable

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12.6 Hazardous decomposition products

No information available

Section 13: Disposal considerations

13.1. Waste treatment methods

Product: This material and its container must be disposed of as hazardous materials. Do not discharge into drains or the environment, dispose to an authorised waste collection point. Do not empty into drains.
National regulations: Disposal should be in accordance with local, state or national legislation.
Waste containers: It is dangerous waste; only use approved packaging.

13.2. Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Waste properties: HP 3 Flammable

Section 14: Transport information

14.1. UN number

UN-number: 1869

14.2 UN proper shipping name

Proper shipping name: MAGNESIUM

14.3 Transport hazard class(es)

Class: 4.1
ADR/RID-Classification code: F3

14.4 Packing group

Packing: III (Contd. on page 10)

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14.5 Environmentally hazards

ADR/RID- Environmentally hazardous: N/A
IMDG-Marine pollutant: N/A
IATA/ICAO-Environmentally hazardous: N/A

14.6 Special precautions for user

ADR/RID-Tunnel code: E
Hazard identification no.: 40
Special provisions (SP) 59
Excepted quantities (EQ): E1
Limited quantities (TC): 5 kg

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC code

Not applicable

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Dangerous substance with restrictions (REACH, Annex XVII). Flammable / Pyrophoric. Restriction R40.

15.2 Chemical safety assessment

List of substances subject to authorization (REACH, Annex XIV). SVHC – candidate list: not listed

Section 16: Other information

RoHS Directive Compliant

This product is fully compliant with the directive 2100/65/EU Annex II (RoHS). It does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's or PBDE's.

WEEE

This product is not a piece of electrical or electronic equipment, and it therefore not governed by Directive 2002/96/EC on waste electrical and electronic equipment (WEEE) (Contd. on page 11)

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Shipping label:



Abbreviations:

Asp. Tox	Aspiration hazard
Carc.	Carcinogenicity
ErC50	Concentration resulting in a 50% reduction in growth rate with 72 hrs exposure
EC50	Half maximal concentration which induces a response halfway between baseline and maximum effect
Exp.	Exposure
Flam.	Flammable
GHS	Global Harmonised System of Classification of Labelling Chemicals
Irrit.	Irritant
N/A	Not applicable
N/E	Not estimated
NOEC	No observed effect concentration
LC50	Lethal dose single exposure to causing 50% lethality
LD50	Lethal dose 50% corresponds to causing 50% lethality during a specific time
PBT	Persistent Bio accumulative and Toxic
WEL	Workplace Exposure Limit
Repr.	Reproductive toxicant
RoHS	Restriction of Hazardous Substance
SVHC	Substance of very high concern
VOC	Volatile organic compound
vPvB	very Persistent and very Bio accumulative
WEEE	Waste Electrical and Electronic Equipment

Relevant phrases

- H228: Flammable solid
- H261: In contact with water releases flammable gases

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Safety Data Sheet

Regulation EC Nr. 1907/2006 Art.31

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This product should be stored, handled and used in accordance with good industrial hygiene practices and in accordance with any legal regulation.

The information contained herewith is based on the present state of our knowledge and is intended to describe the product from the point of view of safety requirements. It does not guarantee any specific properties.

It is the responsibility of the user to query and verify any information seeming suspect or where doubt on the validity may exist. The buyer assumes all responsibility of using and handling the product in accordance with local, state, federal and international regulations.

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