

Safety data sheet

according to Regulation (EC) No. 1907/2006

Printing date 05.03.2014

Version number 2

Revision: 05.03.2014

1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name: Magnesium Powder $\geq 99.8\%$, $< 75\ \mu\text{m}$

Article number: CP20

CAS Number:

7439-95-4

EC number:

231-104-6

Index number:

012-002-00-9

Registration number 01-2119537203-49-XXXX

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

Application of the substance / the mixture

Laboratory chemical

Application of the substance / the mixture Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Carl Roth GmbH + Co.KG

Schoemperlenstraße 3-5

76185 Karlsruhe

Germany

Telefon: +49/(0)721 5606-0

Telefax: +49/(0)721 5606-149

e-mail: sicherheit@carlroth.de

Further information obtainable from: Department Health, Safety and Environment

1.4 Emergency telephone number:

Poison Centre Munich

Telefon +49/(0)89 19240

2 Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

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 gases.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

F; Highly flammable

R15-17: Contact with water liberates extremely flammable gases. Spontaneously flammable in air.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS02

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Signal word Danger**Hazard statements**

H228 Flammable solid.

H252 Self-heating in large quantities; may catch fire.

H261 In contact with water releases flammable gases.

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.

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

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

P420 Store away from other materials.

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

Additional information:

-

2.3 Other hazards

All chemicals are potentially dangerous. They are therefore only be handled by specially trained personnel with the necessary care.

Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.

3 Composition/information on ingredients

3.1 Chemical characterization: Substances**CAS No. Description**

7439-95-4 Magnesium (not stabilized)

Identification number(s)**EC number:** 231-104-6**Index Number:** 012-002-00-9**Formula:** Mg**Molar mass [g/mol]:** 24,31

4 First aid measures

**4.1 Description of first aid measures****General information:**

Remove any clothing soiled by the product.

After inhalation:

Supply fresh air and to be sure call for a doctor.

After skin contact:

Brush off loose particles from skin.

Wash with water and soap.

If there is any trouble seek medical help.

After eye contact:

To be sure rinse opened eye under running water. If there is any trouble seek medical help.

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After swallowing:

Rinse out mouth and drink a glass of water. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayedAfter inhalation:

Coughing

Mucosal irritations

Dyspnoea

After contact with the eyes

Irritations

After swallowing:

Gastric or intestinal disorders

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Firefighting measures**5.1 Extinguishing media****Suitable extinguishing agents:**

Use fire extinguishing methods suitable to surrounding conditions.

Cement

Sand

Special powder for metal fires. Do not use water.

For safety reasons unsuitable extinguishing agents:

Foam

Water

5.2 Special hazards arising from the substance or mixture

In the event of fire development of hazardous combustion gases or vapours possible.

In case of fire, the following can be released:

metal oxides

Carbon monoxide and carbon dioxide

5.3 Advice for firefighters**Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

6 Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation

Keep away from ignition sources.

Avoid formation of dust.

Wear personal protective equipment.

Avoid contact with the eyes and skin.

Do not breathe dust.

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

6.2 Environmental precautions

Do not allow to enter sewers/ground water or penetrate the soil.

6.3 Methods and material for containment and cleaning up

Pick up mechanically.

Dispose of the material collected according to regulations.

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Do not flush with water or aqueous cleansing agents

6.4 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

7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Keep receptacles tightly sealed.

Do not spray on an open flame or other ignition source.

Keep containers, equipment and working place clean.

Handling corresponding to laboratory safety guidelines.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.

Information about storage in one common storage facility:

Store away from foodstuffs.

Store away from water.

Further information about storage conditions:

Keep container tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Recommended storage temperature: 15 - 25 °C**7.3 Specific end use(s)**

No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical facilities:

No further data; see item 7.

8.1 Control parameters**Ingredients with limit values that require monitoring at the workplace:** Not required.**DNELs****Worker****Long-term exposure - systemic effects:**Inhalative DNEL > 10 mg/m³ (worker)**PNECs**

PNEC 0.41 mg/l (Marine water)

268 mg/kg (Fresh Water sediment)

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0.41 mg/l (Fresh Water)

Additional information:

The lists valid during the making were used as basis.

8.2 Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

Do not eat, drink or smoke while working.

Do not breathe dust.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Respiratory protection:

Required when dusts are generated.

Filter P2 (colour code: white)

Protection of hands:

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of glovesNitrile, thickness: $\geq 0.11\ \text{mm}$

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove materialValue for the permeation: Level ≥ 6

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

As protection from splashes gloves made of the following materials are suitable:Nitrile rubber, thickness: $\geq 0.11\ \text{mm}$ Value for the permeation: Level ≥ 6 **Eye protection:**

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Tightly sealed goggles

Body protection:

Protective work clothing

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties**General Information****Appearance:**

Form:	Powder
Colour:	Grey
Odour:	Odourless
Odour threshold:	Not determined.

pH-value: Not applicable.

Change in condition

Melting point/Melting range:	~650 °C
Boiling point/Boiling range:	1107 °C

Flash point: > 450 °C

Flammability (solid, gaseous): Flammable solid.
Contact with water liberates extremely flammable gases.

Ignition temperature: >450 °C

Decomposition temperature: Not determined.

Self-igniting: Spontaneously flammable in air.

Danger of explosion: The product is not explosive. However, dust may form an explosive mixture with air.

Explosion limits:

Lower: Not determined.
No information available.

Upper: Not determined.
No information available.

Oxidizing properties: No information available.

Vapour pressure at 20 °C: 0 hPa

Density at 20 °C: 1.74 g/cm³

Bulk density at 20 °C: 300-400 kg/m³
Relative density Not determined.
Vapour density Not applicable.
Evaporation rate Not applicable.

Solubility in / Miscibility with water:

Decomposition.
No information available.

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

Viscosity:

Dynamic: Not applicable.
Kinematic: Not applicable.

9.2 Other information No further relevant information available.

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**Trade name: Magnesium Powder $\geq 99.8\%$, $< 75\ \mu\text{m}$**

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10 Stability and reactivity**10.1 Reactivity**

See section 10.3

10.2 Chemical stability**Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

Contact with water releases flammable gases.

Contact with acids releases flammable gases.

Danger of explosion with:

Oxidizing agents

ammonium nitrate

chlorates

perchlorates

Halogenated hydrocarbons

Strong reaction possible with:

halogens

hydrogen peroxide

halogen-halogen compounds

nitrogen dioxide

nitrates

10.4 Conditions to avoid

Heat, flames and sparks

10.5 Incompatible materials:

No information available.

10.6 Hazardous decomposition products:

Hydrogen

In case of fire: see item 5.

11 Toxicological information**11.1 Information on toxicological effects****Acute toxicity:****LD/LC50 values relevant for classification:**

Quantitative data on the toxicity of this product are not available.

Specific symptoms in biological assay:

No information available.

Primary irritant effect:**on the skin:**

No information available.

on the eye:

No information available.

after inhalation:

No information available.

Sensitization:

No sensitizing effects known.

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CMR effects:**Germ cell mutagenicity:**

No known significant effects or critical hazards.

Carcinogenicity:

No known significant effects or critical hazards.

Reproductive toxicity:

No known significant effects or critical hazards.

Aspiration hazard:

Not applicable.

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

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

Additional toxicological information:After inhalation:

coughing

Dyspnoea

mucosal irritations

After contact with the eyes

Irritations

After swallowing:

gastrointestinal complaints

Further information:

The product should be handled with the care usual when dealing with chemicals.

12 Ecological information

12.1 Toxicity**Aquatic toxicity:****Fish toxicity:**

LC ₅₀	541 mg/l/96 h (Pimephales promelas) (3rd party MSDS)
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12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects:**Remark:**

Do not allow to enter waters, waste water, or soil!

12.5 Results of PBT and vPvB assessment**PBT:** Not applicable.**vPvB:** Not applicable.**12.6 Other adverse effects**

No further relevant information available.

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13 Disposal considerations

Waste treatment methods

Recommendation

This material and its container must be disposed of as hazardous waste.

The disposal is regionally differently regulated, therefore the kind of disposal is to be inquired at the responsible authorities.

Uncleaned packaging:

Recommendation:

Disposal according to official regulations.

14 Transport information

14.1 UN-Number

ADR, IMDG, IATA

UN1418

14.2 UN proper shipping name

ADR
IMDG, IATA1418 MAGNESIUM POWDER
MAGNESIUM POWDER

14.3 Transport hazard class(es)

ADR, IMDG, IATA



Class

4.3 Substances which, in contact with water, emit flammable gases.

Label

4.3+4.2

14.4 Packing group

ADR, IMDG, IATA

II

14.5 Environmental hazards:

Marine pollutant:

No

14.6 Special precautions for user

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

Danger code (Kemler):

423

EMS Number:

F-G, S-O

Segregation groups

Powdered metals

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

Not applicable.

Transport/Additional information:

ADR

Limited quantities (LQ)

0

Transport category

2

Tunnel restriction code

D/E

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UN "Model Regulation":

UN1418, MAGNESIUM POWDER, 4.3 (4.2), II

15 Regulatory information

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

National regulations:

Information about limitation of use:

In dealing with chemicals the national laws must be observed.
Employment restrictions concerning juveniles must be observed.

Breakdown regulations:

Waterhazard class:

Generally not hazardous for water (German regulation).

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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.

Department issuing MSDS: Department: Health, Safety and Environment

Contact: Herr Dr. Hagel

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

LD50*: Lethal Dose, 50 percent (Not relevant for classification)

LD50*: Lethal Concentration, 50 percent (Not relevant for classification)

Flam. Sol. 1: Flammable solids, Hazard Category 1

Self-heat. 2: Self-Heating Substances and Mixtures, Hazard Category 2

Water-react. 2: Substances and Mixtures which, in contact with water, emit flammable gases, Hazard Category 2

* Data compared to the previous version altered.