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MAGNESIUM INGOTS AND CUT-END PIECES

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Safety Information Sheet

This document must not be considered a safety data sheet according to art. 31 of Regulation (EC) no. 1907/2006 (REACH)

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

1.1. Product identifier

Substance name:	Magnesium massive form
EC number	231-104-6
CAS number	7439-95-4
Registration Number	01-2119537203-49-0022
Chemical formula:	Mg
Molecular weight:	24.30 g/mol
Product name:	Magnesium ingots, and cut-end pieces

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

Intended use	Melting, alloying, casting (MAC) Particulates production & handling (PP&H) Fine particulates production (FPP) Metallurgical uses (MU) Solid forming processes (SFP) - incl. production of welding electrodes Corrosion protection (CP) Welding in industrial settings (W) Exposure during etching of magnesium dies Welding in professional settings (W) Professional use of magnesium powder in signal flares, signal rockets, marking ammunition, signalling and simulation ammunition and illumination Consumer use of pyrotechnical products (FW) Service life of magnesium-containing articles by workers Etching of magnesium dies Service life of magnesium -containing articles by consumers
Uses advised against	Uses other than as recommended above.

1.3. Details of the supplier of the safety data sheet

Name of Manufacturer

Name	Société pour la Fabrication du Magnésium SA
Full address	Rue des Sablons 9
District and Country	1920 Martigny Switzerland

tel. +41 (0) 27 721 75 90

fax +41 (0) 27 721 75 95

e-mail address of the competent person responsible for the Safety Data Sheet

info@sfm-magnesium.ch

Société pour la Fabrication du Magnésium SA

Name of REACH registered EU importer:

Name	WIMEX Handelsges.m.b.H.
Full address	Theresiengasse 67
District and Country	1180, Wein Austria

1.4. Emergency telephone number.

For urgent inquiries refer to.

Company Emergency telephone number:

SFM SA: Tel. +41 (0) 58 911 0200 (SOS Surveillance Company 24 hours)



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SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is not classified as hazardous pursuant to the provisions set forth in EC Regulation 1272/2008 (CLP) (and subsequent amendments and supplements).

Hazard classification and indication: --

2.2. Label elements

Hazard pictograms: --

Signal words: --

Hazard statements: --

Precautionary statements: --

This product is not subject to hazard labeling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

2.3. Other hazards

The product is supplied in massive form, but during mechanical processing, it is possible for hazardous powder and/or fumes to be released.

These products in their original massive form do not generate direct risks.

Subsequent mechanical operations can return the powder to the form of powdered and therefore, bring back the relevant risks to operators. According to the current legal classification magnesium powder (pyrophoric) should be labelled as flammable in contact with air and magnesium, powder or turnings as auto-flammable.

No other hazards identified for human health and the environment.

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

SECTION 3. Composition/information on ingredients

3.1. Substances

Magnesium massive form

CAS 7439-95-4

CE 231-104-6

Nr. Reg. 01-2119537203-49-0022

Classification 1272/2008 (CLP)

Not classified.

SECTION 4. First aid measures

4.1. Description of first aid measures

No episodes of harm to the staff authorised to use the product have been reported. The following general measures should be adopted as necessary:

INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

INGESTION: Get medical advice/attention. Induce vomiting only if indicated by the doctor. Do not give anything by mouth to an unconscious person.

EYES and SKIN: Wash with plenty of water. In the event of persistent irritation, get medical advice/attention.

PROTECTIVE MEASURES FOR THE FIRST RESCUE WORKERS: for PPE (personal protection equipment) required for first aid refer to section 8.2 of this informative sheet.

4.2. Most important symptoms and effects, both acute and delayed

The substance if ingested can cause diarrhea.



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4.3. Indication of any immediate medical attention and special treatment needed

Advices are given in section 4.1; No special treatment needed.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Use dry extinguishing materials (e.g. dry sand, fluxes, iron chips, cement, class D fire extinguisher).

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use water.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Risk of dust ignition/explosion exists. Keep away from any possible contact with water.

Avoid formation of dust also in case of handling massive objects.

5.3. Advice for firefighters

GENERAL INFORMATION

Avoid contact with water. Use dry extinguishing materials (e.g. dry sand, fluxes, iron chips, cement, class D fire extinguisher).

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of processes involving formation of dust, keep away from any possible contact with water, because of violent reaction and possible flash fire. Brush off loose particles from skin. These indications apply for both processing staff and those involved in emergency procedures.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

No special precautions must be considered. Magnesium is abundantly present in all environmental compartments.

6.3. Methods and material for containment and cleaning up

Avoid dust formation. Pick up the product mechanically in a dry way. Magnesium waste should be recycled as much as possible. Make sure the leakage site is well aired. Evaluate the compatibility of the container to be used, by checking section 10. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

In case of processes involving formation of dust, there is a risk of a dust explosion if the following conditions are met:

- The substance is given in very finely distributed form (powder, dust).
- The substance is whirled up in sufficient quantity in the air.
- An ignition source is present (flame, spark, electrostatic discharge, etc.)



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Therefore it is important to ensure an adequate earthing system for the equipment and personnel. In order to avoid the risk of fires and explosions, never use compressed air when handling. Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Avoid leakage of the product into the environment. Avoid contact with eyes and skin. Do not breathe powders. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Store in a dry place.

Avoid generation of condensed water (outer and inner surfaces of ingot) due to harsh temperature changes in-between different storages/stocks or as a consequence of thermal difference between transportation and storage conditions.

7.3. Specific end use(s)

No use other than as indicated in section 1.2 of this informative sheet.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

During the risk assessment process, it is essential to take into consideration the ACGIH occupational exposure levels for inert particulate not otherwise classified (PNOC respirable fraction: 3 mg/m³; PNOC inhalable fraction: 10 mg/m³), in case of processes involving formation of dust.

PNEC value (dissolved magnesium) for European Union/Member state, based on added Mg concentrations

Country	Freshwater mg Mg/l	Marine water mg Mg/l	Freshwater, intermittent releases mg Mg/l	STP mg Mg/l	Freshwater sediment mg Mg/kg dw	Marine sediment mg Mg/kg dw	Soil mg Mg/kg dw
PNECadded (Predicted No Effect Concentration)	0.41	0.41	1.4	≥10.8	268	268	268
Typical natural background concentration	7.1	1290	7.1	No data	6918	No data	3930

All PNEC values are based on added magnesium concentrations (PNECadded), without taking into account the natural background in the exposure media. The PNECtotal can be calculated as the sum of PNECadded and the background concentration for Mg in the corresponding environmental compartment.

DNELs for workers

Magnesium is a non-soluble inert powder with an MMAD of 25.6 µm and GSD of 1.72 µm, and the derived DNEL for inhalation is above 10 mg/m³ for the inhalable airborne fraction which is the general dust limit for the inhalable airborne fraction. Therefore, this general dust limit will be applied for exposure scenarios with exposure to magnesium oxide dust.

DNELs for general population

Magnesium is a non-soluble inert powder with an MMAD of 25.6 µm and GSD of 1.72 µm, and the derived DNEL for inhalation is above 10 mg/m³ for the inhalable airborne fraction which is the general dust limit for the inhalable airborne fraction. Therefore, this general dust limit will be applied for exposure scenarios with exposure to magnesium oxide dust.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

The general practice of hygiene at work involves certain measures (for example, showering and changing clothes at the end of the work shift) in order to avoid any type of third party contamination and appropriate cleaning practices (i.e. regular cleaning with suitable cleaning devices), do not eat and smoke in the workplace. In general, inhalation and ingestion must be avoided. Unless stated otherwise, certified work shoes and clothing must be worn. Contaminated work clothing should not be taken out of the workplace. Good ventilation in the workplace must be ensured. Local forced ventilation (LEV) is required in the case of processes that generate metal dust. The dust must not be removed (for example from dry sprays) by means of compressed air. Regular training on hygiene practices in the workplace and correct use of personal protective equipment (PPE) is required.



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HAND PROTECTION

In the case of prolonged contact with the product, protect the hands with penetration-resistant work gloves (see standard EN 374).

Currently there is no information available regarding suitable glove materials.

Experience says that polychloroprene, nitrile rubber, butyl rubber, fluoro-caoutchouc, and polyvinyl chloride are suitable as glove materials for protection against un-dissolved solids.

Work glove material must be chosen according to the use process and the products that may form. Latex gloves may cause sensitivity reactions.

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

Use a type P filtering facemask, whose class (1, 2 or 3) and effective need, must be defined according to the outcome of risk assessment (see standard EN 149).

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Solid	
Colour	Silvery-white	
Odour	Odourless	
Odour threshold	Not available	
pH	Not available	
Melting point / freezing point	650 °C	handbook data
Initial boiling point	1095 °C	handbook data
Boiling range	Not available	
Flash point	not applicable (inorganic solid)	
Evaporation Rate	not applicable (inorganic solid with a melting point at 650°C)	
Flammability of solids and gases	highly flammable as powder (study result, EU method A.10)	
Lower inflammability limit	Not available	
Upper inflammability limit	Not available	
Lower explosive limit	non-explosive (the substance is void of any chemical structures commonly associated with explosive properties)	
Upper explosive limit	non-explosive (the substance is void of any chemical structures commonly associated with explosive properties)	
Vapour pressure	Not available	
Vapour density	Not available	
Relative density	176 23°C	Method:OECD TG 109
Solubility	6.7 mg/L (21°C, pH ca. 10.8) (EU method A.6, OECD 105)	
Partition coefficient: n-octanol/water	not applicable	Reason for missing data:Non applicable (inorganic substance)
Auto-ignition temperature	not self-heating substance (study result, UN-Test N.4)	
Decomposition temperature	not applicable	
Viscosity	not applicable (solid with a melting point at 650°C)	
Explosive properties	non-explosive (the substance is void of any chemical structures commonly associated with explosive properties)	
Oxidising properties	no oxidising properties (substance does not contain a surplus of oxygen or any structural groups known to be correlated with a tendency to react exothermally with combustible material)	

9.2. Other information

None



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SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

In the course of hydrolysis slowly releases flammable/explosive hydrogen gas. Generation rate is greatly increased with smaller particles.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage. See point 10.1 "Reactivity"

10.4. Conditions to avoid

Avoid the accumulation of dust in the environment.

Avoid overheating. Do not allow moisture or water to enter the containers.

10.5. Incompatible materials

Incompatible materials:

Chips, fines, dust and molten metal are considerably more reactive with the following:

- Strong oxidizers: Violent reaction with considerable heat generation. Can react explosively with nitrates (e.g., ammonium nitrate and fertilizers containing nitrate) when heated or molten.
- Acids and alkalis: Reacts to generate flammable/explosive hydrogen gas. Generation rate is greatly increased with smaller particles (e.g., fines and dusts).
- Halogenated compounds: Many halogenated hydrocarbons, including halogenated fire extinguishing agents, can react violently with finely divided or molten aluminum.
- Iron oxide (rust) and other metal oxides (e.g., copper and lead oxides): A violent thermite reaction generating considerable heat can occur. Reaction with aluminum fines and dusts requires only very weak ignition sources for initiation. Molten aluminum can react violently with iron oxide without external ignition source.
- Iron powder and water: Explosive reaction forming hydrogen gas when heated above 1470°F (800°C).

10.6. Hazardous decomposition products

In contact with water, hydrogen is formed which is a highly flammable gas. The generation rate increases considerably with the reduction of the particle size.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

The information provided in this section is consistent with the information provided in the REACH chemical safety report (CSR) for magnesium. During development of the CSR all available toxicological data have been considered and evaluated for relevance and reliability. Non-reliable data have not been considered in the assessment.

**MAGNESIUM INGOTS AND CUT-END PIECES**

Toxicity endpoints	Outcome of the effects assessment
a. Acute toxicity	<p>Magnesium powder is not acutely toxic via the oral, dermal, or inhalation route.</p> <p><u>Oral, rat, gavage</u> (Read-across - MgCl₂ * 6H₂O) LD₅₀ > 2000 mg/kg bw (OECD 423)</p> <p><u>Dermal</u> Following the HERAG guidance for metals and metal salts, a dermal absorption rate in the range of maximally 0.1-1.0 % can be anticipated. Dermal absorption in this order of magnitude is not considered to be "significant".</p> <p><u>Inhalation:</u> (Read-across - MgO) No acute inhalation toxicity. Exposure to respirable MgO did not produce any measurable pulmonary inflammation.</p>
b. Skin corrosion / irritation	<p>Based on available data, the classification criteria for skin irritation are not met.</p> <p>(Read across - MgCl₂ hexahydrate)</p> <p><u>Skin irritation:</u> not irritating (in vitro study, equivalent or similar to EU method B.46, reconstructed human epidermis)</p>
c. Serious eye damage / irritation	<p>Based on available data, the classification criteria for eye irritation are not met.</p> <p>(Read across - MgCl₂ hexahydrate)</p> <p><u>Eye irritation:</u> not irritating (OECD 405, rabbit)</p>
d. Respiratory or skin sensitisation	<p>Based on available data, the classification criteria for sensitisation are not met.</p> <p>(Read across - magnesium alloys (with a total magnesium content between 89.2 – 96.8%)).</p> <p>Skin sensitisation: not sensitising (OECD 406, GMPT)</p>
e. Germ cell mutagenicity	<p>Based on available data, the classification criteria for mutagenicity are not met. Read across to various magnesium substances.</p> <p>(i) Bacterial reverse mutation assay (S.typhimurium, E.coli): (Ames test; OECD 471) negative</p> <p>(ii) Gene mutation (OECD 476, mouse lymphoma): negative</p> <p>(iii) in vitro mammalian chromosome aberration test (Chinese hamster lung fibroblast cell line) (OECD 473): negative</p>
f. Carcinogenicity	<p>Based on available data, the classification criteria for carcinogenicity are not met.</p> <p>(Read across - MgCl₂ hexahydrate)</p> <p><u>oral, mice, 96 weeks</u> No evidence of a carcinogenic potential was found</p>
g. Reproductive toxicity	<p>Based on available data, the classification criteria for reproductive toxicity are not met.</p> <p>Data published by the opinion of the Scientific Committee on Food, 2001 stated a lack of effects during the intake of high amounts of magnesium on the reproductive function in humans. The information are sufficient for risk characterisation.</p>
h. STOT-single exposure	<p>Based on available data, the classification criteria for STOT-single exposure are not met. The classification criteria according to regulation (EC) 1272/2008 as specific target organ toxicant (STOT) – single exposure, oral, inhalation are not met since no reversible or irreversible adverse health effects were observed immediately or delayed after exposure.</p>

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Toxicity endpoints	Outcome of the effects assessment
i. STOT-repeated exposure	Based on available data, the classification criteria for STOT-repeated exposure are not met. The only effect observed is that magnesium causes diarrhoea if ingested in high doses. According to the scientific committee on food, 2001 it can be assumed that the no-effect level of daily magnesium intake is 250 mg/day. It is explicitly note that this value does not include Mg normally present in foods and beverages. This effect could be regarded as non "significant" or non "severe", and does not indicate functional disturbance or morphological changes of toxicological relevance.
j. Aspiration hazard	No hazard expected.
Further remarks	
Summary CMR effects	Magnesium does not fulfil the criteria for CMR (carcinogen, mutagen, toxic to reproduction) Cat. 1 and Cat. 2 according to regulation (EC) 1272/2008.
Information on the likely route of exposure	The primary routes of human exposure to magnesium are from inhalation of aerosols and ingestion of food and drinking water containing magnesium.

SECTION 12. Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1. Toxicity

Acute toxicity

No data are available on ecotoxicity of Mg metal. Read-across from MgSO₄ and MgCl₂ (and their hydrated forms). All tests were conducted according to international test guidelines (e.g., OECD) or scientifically acceptable methods.

Test Organism	End-point	Value	Reference
Freshwater fish: <i>Pimephales promelas</i>	96h-LC ₅₀	541 mg Mg/l	Mount et al. 1997
Freshwater invertebrates: <i>Daphnia magna</i>	48h-LC ₅₀	140 mg Mg/l	Pillard et al. 2000
Freshwater algae: <i>Scenedesmus subspicatus</i>	72h-ErC ₅₀ (growth rate)	>12 mg Mg/l	Biesinger and Christensen 1972
Marine fish: <i>Menidia beryllina</i>	48h-LC ₅₀	2800 mg Mg/l	Dengler 2010a
Marine invertebrates: <i>Mysidopsis bahia</i>	48h-LC ₅₀	2650 mg Mg/l	Dengler 2010a

Chronic toxicity

No data are available on ecotoxicity of Mg metal. Read-across from MgSO₄ and MgCl₂ (and their hydrated forms).

All tests were conducted according to international test guidelines (e.g., OECD) or scientifically acceptable methods.

Test organisms	End-point	Value	Reference
Aquatic toxicity data			
Freshwater invertebrates: <i>Daphnia magna</i>	21-day EC ₁₆ for reproduction	82 mg Mg/l	Pillard et al. 2000
Freshwater algae: <i>Scenedesmus subspicatus</i>	72h-NOEC for growth rate	≥12 mg Mg/l	Biesinger and Christensen 1972
No reliable data are available for chronic toxicity of Mg to fish. According to the available toxicity data for aquatic organisms, there is no need for classification of Mg as dangerous to the aquatic environment, and based on the acute toxicity data, fish are less sensitive compared to aquatic invertebrates. The low toxic potential of Mg to aquatic organisms is also illustrated by the fact that Mg is a major essential element for aquatic organisms and that Mg is abundantly present in the aquatic environment with typical natural background concentrations of 7.1 mg Mg/l and 1290 mg Mg/l for freshwater and marine water, respectively.			
Chronic sediment toxicity			



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No reliable data are available for the acute or chronic toxicity of magnesium to sediment organisms. PNEC derivation was based on the equilibrium partitioning method, taking into account the PNEC for freshwater or marine water and the sediment K_d-value given in section 12.4.

Chronic terrestrial toxicity

No reliable data are available for the acute or chronic toxicity of magnesium to soil organisms. PNEC derivation was based on the equilibrium partitioning method, taking into account the PNEC for freshwater and the sediment K_d-value given in section 12.4.

Toxicity to micro-organisms e.g. bacteria

No data are available on toxicity of Mg metal. Read-across from MgCl₂ hexahydrate.

Test Organism	End-point	Value	Reference
Domestic activated sludge population	3h-EC ₁₀ for respiration inhibition (according to OECD 209)	≥108 mg Mg/l	Dengler 2010b

Toxicity to birds

There is no potential for bioaccumulation and no risk of secondary poisoning for magnesium below the PNEC for direct toxicity in the various environmental compartments.

Conclusion on environmental classification and labelling

Magnesium is not hazardous to the aquatic environment as:

- The lowest acute reference values for fish, invertebrates and algae are > 100 mg Mg/l.
- The lowest aquatic NOEC for these three trophic levels is > 1 mg Mg/l (i.e., 41 mg Mg/l for *Daphnia magna*; no data are available for fish but based on the acute toxicity data, fish are less sensitive compared to aquatic invertebrates).
- There is no evidence for bioaccumulation or biomagnification in the environment.

12.2. Persistence and degradability

Magnesium is naturally occurring and ubiquitous in the environment. Upon contact with water, magnesium metal dissolves and behaves as magnesium naturally present in the environment. Biodegradation is not relevant for Mg metal, which is considered as not biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation of magnesium in aquatic/terrestrial organisms is considered to be of no concern since magnesium is an essential element for aquatic and terrestrial organisms. The uptake of essential elements is generally under strict homeostatic control. Under these conditions, the internal concentration of these elements is maintained over a wide concentration range in the environment and rises only dramatically under conditions that are toxic for aquatic and terrestrial organisms.

12.4. Mobility in soil

Magnesium metal is soluble in water. A log K_d value of 2.82 l/kg dw has been determined for freshwater sediment and no data are available for soil. Based on this relatively low K_d value, the Mg²⁺ ions can leach through normal soil and are relatively mobile in sediment. Results of PBT and vPvB assessment

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage greater than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Neat product residues should be considered special non-hazardous waste.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Solid residues may be suitable for disposal in an authorised landfill site.

CONTAMINATED PACKAGING



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Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1. UN number

Not applicable

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC:

None

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

None

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage greater than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Information not available

15.2. Chemical safety assessment

A chemical safety assessment has been carried out for this substance and is provided within the technical dossier, submitted to ECHA in October 2010.



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SECTION 16. Other information

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
 3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
 4. Regulation (EU) 2015/830 of the European Parliament
 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
 10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
 13. Regulation (EU) 2017/776 (X Atp. CLP)
 14. Regulation (EU) 2018/669 (XI Atp. CLP)
 15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
 16. Regulation (EU) 2019/521 (XII Atp. CLP)
- The Merck Index. - 10th Edition
 - Handling Chemical Safety
 - INRS - Fiche Toxicologique (toxicological sheet)
 - Patty - Industrial Hygiene and Toxicology
 - N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
 - IFA GESTIS website
 - ECHA website
 - Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Key literature references

The information provided in this SIS is consistent with the information provided in the REACH chemical safety report (CSR) for magnesium. The CSR contains a complete reference list for all data used. Non confidential data from the REACH registration dossier is published by the European Chemicals Agency ECHA, see <http://apps.echa.europa.eu/registered/registered-sub.aspx>.

Changes to previous review:

The following sections were modified:

01 / 02 / 03 / 04 / 05 / 06 / 07 / 08 / 09 / 10 / 11 / 12 / 13 / 14 / 15 / 16 (new issue).



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Validated for 2024

Note for the recipient of the Safety Information Sheet (SIS):

The recipient of this SIS shall make sure of reading and understanding the information included by all people who handle, store, use, or otherwise come into contact in any way with the substance or mixture to which this SIS is referred to. In particular, the recipient shall provide adequate training to the personnel for the use of hazardous substances and/or mixtures. The recipient shall verify the suitability and completeness of the provided information according to the specific use of the substance or mixture.

However, the substance or mixture referred to by this IS shall not be used for uses other than those specified in Section 1. The Supplier don't assume responsibility for improper uses. Since the use of the product does not fall under the direct control of the Supplier, the user shall, under his own responsibility, fulfill national and EU regulations concerning health and safety.

The information included in this SIS are provided in good faith and are based on the current state of scientific and technical knowledge, at the revision date indicated, available to the Supplier indicated in Section 1 of this SIS. It shall not be meant that the SIS is a guarantee of any specific property of the substance or mixture. The information concern only to the substance or mixture specifically designated in Section 1 and it could not be valid for the substance or mixture used in combination with other materials or in any process not specified in the text. This version of the SIS substitutes all the previous versions.