

SAFETY DATA SHEET



according to Regulation (EC) No 1907/2006 (REACH) as amended

Magnesium chloride / Sodium chloride

Creation date 01st June 2021
Revision date 30th August 2024 Version 1.3

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

1.1. Product identifier Magnesium chloride / Sodium chloride
Substance / mixture mixture

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

Mixture's intended use

Food additive.

Mixture uses advised against

1.3. Details of the supplier of the safety data sheet

Manufacturer

Name or trade name Macco Organiques, s.r.o.
Address Zahradní 1938/46c, Bruntál 1, 792 01
Czech Republic
Identification number (CRN) 26819210
VAT Reg No CZ26819210
Phone +420 555 530 300
E-mail macco@macco.cz

Competent person responsible for the safety data sheet

Name Petr Ševčík
E-mail petr.sevcik@macco.cz

1.4. Emergency telephone number

European emergency number: 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification of the mixture in accordance with Regulation (EC) No 1272/2008

The mixture is not classified as dangerous according to Regulation (EC) No 1272/2008.

Most serious adverse physico-chemical effects

Not specified.

Most serious adverse effects on human health and the environment

Not specified.

2.2. Label elements

Signal word

none

2.3. Other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605. Mixture does not contain any substance meet the criteria for PBT or vPvB in accordance with Annex XIII of Regulation (EC) No. 1907/2006 (REACH) as amended.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixture of substances and non-hazardous additives specified below.

Mixture contains these hazardous substances and substances with the highest permissible concentration in the working environment

Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 7791-18-6 EC: 232-094-6 Registration number: 01-2119485597-19-0001	Magnesium chloride hexahydrate	20-80	not classified as dangerous	

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Identification numbers	Substance name	Content in % weight	Classification according to Regulation (EC) No 1272/2008	Note
CAS: 7647-14-5 EC: 231-598-3 Registration number: -----	Sodium chloride	20-80	not classified as dangerous	
CAS: 546-93-0 EC: 208-915-9 Registration number: -----	Magnesite	0.3	not classified as dangerous	

Full text of all classifications and hazard statements is given in the section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

Take care of your own safety. In the event of unconsciousness, do not provide food by mouth. If any health problems are manifested or if in doubt, inform a doctor and show him information from this safety data sheet.

If inhaled

Terminate the exposure immediately; move the affected person to fresh air.

If on skin

Remove contaminated clothes. Wash the affected area with plenty of water, lukewarm if possible. Soap, soap solution or shampoo should be used if there is no skin injury.

If in eyes

Rinse eyes immediately with a flow of running water, open the eyelids (also using force if needed); remove contact lenses immediately if worn by the affected person. No neutralization should be performed in any case!

If swallowed

Rinse out the mouth with clean water. In the event of issues, find medical help.

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

If inhaled

Not expected. Mucous membranes may be irritated.

If on skin

Not expected. Possible irritation.

If in eyes

Not expected. Possible irritation.

If swallowed

Not expected. Irritation, nausea.

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

Symptomatic treatment. The effects of acute magnesium toxicity are partially offset by the use of calcium tartrate. Ventricular support along with Calcium Chloride infusion and forced urination by means of mannitol can also be successful.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Accommodate extinguishing components to the location of fire. Alcohol-resistant foam, carbon dioxide, powder, water spray jet, water mist.

Unsuitable extinguishing media

Water - full jet.

5.2. Special hazards arising from the substance or mixture

Non-flammable. Upon heating, decomposition occurs with the release of hydrogen chloride or chlorine.

5.3. Advice for firefighters

Self-Contained Breathing Apparatus (SCBA) with chemical resistant gloves. Use a self-contained breathing apparatus and full-body protective clothing.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Follow the instructions in the Sections 7 and 8. Prevent contact with skin and eyes. Provide sufficient ventilation. Avoid dust formation. Do not inhale dust.

6.2. Environmental precautions

Prevent contamination of the soil and entering surface or ground water. Do not allow to enter drains. In the event of substantial pollution, contact respective authorities and wastewater treatment plants.

6.3. Methods and material for containment and cleaning up

Place the product mechanically in an appropriate manner. Dispose of the collected material according to the instructions in the section 13. After removal of the product, wash the contaminated site with plenty of water.

6.4. Reference to other sections

See the Section 7, 8 and 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use personal protective equipment as per Section 8. Observe valid legal regulations on safety and health protection. Do not eat, drink or smoke when using this product. Prevent contact with skin and eyes. Do not inhale dust.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers in cold, dry and well ventilated areas designated for this purpose.

7.3. Specific end use(s)

not available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

The mixture contains no substances for which occupational exposure limits are set.

8.2. Exposure controls

Do not eat, drink and smoke during work. Follow the usual measures intended for health protection at work and especially for good ventilation. Wash your hands thoroughly with water and soap after work and before breaks for a meal and rest. Provide showers and eye wash possibility.

Eye/face protection

Protective goggles or face shield (based on the nature of the work performed).

Skin protection

When handling in long-term or repeatedly, use protective gloves. EN ISO 374-1.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Respirator.

Thermal hazard

Not available.

Environmental exposure controls

Observe usual measures for protection of the environment, see Section 6.2.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	solid
Colour	colourless, white
Odour	without fragrance
Melting point/freezing point	117 °C
Boiling point or initial boiling point and boiling range	cannot be determined - decomposition occurs
Flammability	non-flammable
Lower and upper explosion limit	not applicable
Flash point	not applicable
Auto-ignition temperature	not applicable
Decomposition temperature	120 °C
pH	5.5-7 (5% solution at 20 °C)
Kinematic viscosity	not applicable

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Solubility in water soluble
Partition coefficient n-octanol/water (log value) data not available
Vapour pressure not applicable
Density and/or relative density not determined
Relative vapour density not applicable
Particle characteristics not determined
Form solid: crystalline, powder

9.2. Other information

Oxidising properties It is not oxidising.

SECTION 10: Stability and reactivity

10.1. Reactivity

not available

10.2. Chemical stability

The product is stable under normal conditions.

10.3. Possibility of hazardous reactions

Unknown.

10.4. Conditions to avoid

The product is stable and no degradation occurs under normal use. Heat. Humid air.

10.5. Incompatible materials

Strong oxidizing agents releasing chlorine.

10.6. Hazardous decomposition products

Not developed under normal uses. At high temperatures, irritating or toxic gases may be formed. Above 135°C hydrogen chloride, above 300°C chlorine. Reaction with metals may release hydrogen.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

No toxicological data is available for the mixture.

Acute toxicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Magnesite								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	LD ₅₀	OECD 420	>2000 mg/kg bw		Rat (Rattus norvegicus)	F		

Magnesium chloride hexahydrate								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	LD ₅₀	OECD 423	>5000 mg/kg bw		Rat (Rattus norvegicus)	F/M	Experimentally	CSR
Dermal	LD ₅₀	OECD 402	>2000 mg/kg bw	24 hours	Rat (Rattus norvegicus)	F/M	Experimentally	CSR

Sodium chloride								
Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Oral	LD ₅₀		3550 mg/kg		Rat (Rattus norvegicus)	M		
Dermal	LD ₅₀		>10000 mg/kg		Rabbit			

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Sodium chloride

Route of exposure	Parameter	Method	Value	Exposure time	Species	Sex	Value determination	Source
Inhalation (aerosols)	LC ₅₀		>42 mg/l	1 hour	Rat (Rattus norvegicus)	M		

Skin corrosion/irritation

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Magnesite

Route of exposure	Result	Method	Exposure time	Species	Source
Skin	Not irritating	EU B.46	15 minutes	Human	

Magnesium chloride hexahydrate

Route of exposure	Result	Method	Exposure time	Species	Source
Skin	Not irritating	OECD 404	15 minutes	Human	CSR

Sodium chloride

Route of exposure	Result	Method	Exposure time	Species	Source
Skin	Not irritating			Rabbit	

Serious eye damage/irritation

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Magnesite

Route of exposure	Result	Method	Exposure time	Species	Source
Eye	Not irritating	in vivo	10 minutes		

Magnesium chloride hexahydrate

Route of exposure	Result	Method	Exposure time	Species	Source
Eye	Not irritating	OECD 405	72 hours	Rabbit	CSR

Respiratory or skin sensitisation

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Magnesium chloride hexahydrate

Route of exposure	Result	Method	Exposure time	Species	Sex	Source
Dermal	No effect	OECD 406	48 hours	Guinea-pig (Cavia aperea f. porcellus)	F	CSR

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Germ cell mutagenicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Magnesium chloride hexahydrate					
Result	Method	Exposure time	Specific target organ	Species	Sex
Negative	OECD 476			Mouse (lymphoma)	
Negative	OECD 474	24 hours		Mouse	M

Carcinogenicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Magnesium chloride hexahydrate							
Route of exposure	Parameter	Method	Value	Exposure time	Result	Species	Sex
Oral	NOAEL	OECD 453	3370 mg/kg bw/day	96 weeks (7 days/week)	No effect	Rat (Rattus norvegicus)	F/M

Sodium chloride							
Route of exposure	Parameter	Method	Value	Exposure time	Result	Species	Sex
Oral	LOAEL	OECD 453	2533 mg/kg bw/day	2 years (7 days/week)	Not carcinogenic	Rat (Rattus norvegicus)	M

Reproductive toxicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Magnesium chloride hexahydrate							
Effect	Parameter	Method	Value	Exposure time	Result	Species	Sex
Effects on fertility	NOAEL (P/F ₁)	OECD 422	1000 mg/kg bw/day	28 days (7 days/week)	No effect	Rat (Rattus norvegicus)	F/M
Developmental toxicity	NOAEL	OECD 414	800 mg/kg bw/day	20 days (7 days/week)	No effect	Rat (Rattus norvegicus)	F

Toxicity for specific target organ - single exposure

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

Toxicity for specific target organ - repeated exposure

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Repeated dose toxicity

Magnesite							
Route of exposure	Parameter	Result	Method	Value	Exposure time	Species	Sex
Oral	NOAEL	No effect	OECD 422	414 mg/kg bw/day	28 days (7 days/week)	Rat (Rattus norvegicus)	F/M

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Aspiration hazard

No data are available for either the mixture or the components. Based on the available data, the criteria for classification of the mixture are not met.

11.2. Information on other hazards

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 12: Ecological information

12.1. Toxicity

Data for the mixture are not available. Based on the available data, the criteria for classification of the mixture are not met.

Acute toxicity

Magnesite							
Parameter	Method	Value	Exposure time	Species	Environment	Value determination	Source
LC ₅₀		1875 mg/l	96 hours	Fish (Pimephales promelas)			
LC ₅₀		1127 mg/l	48 hours	Crustaceans (Daphnia magna)			
NOEC	OECD 201	65 mg/l	72 hours	Algae			
EC ₅₀	OECD 209	>372 mg/l	3 hours	Aquatic microorganisms			

Magnesium chloride hexahydrate							
Parameter	Method	Value	Exposure time	Species	Environment	Value determination	Source
LC ₅₀		4525 mg/l	96 hours	Fish (Pimephales promelas)	Fresh water	Experimentally	CSR
LC ₅₀	EPA OPPTS 850.1075	23420 mg/l	48 hours	Fish	Salt water	Experimentally	CSR
EC ₅₀		1171 mg/l	48 hours	Daphnia (Daphnia magna)	Fresh water	Experimentally	CSR
LC ₅₀		6959 mg/l	48 hours	Invertebrates (Americamysis bahia)	Salt water	Experimentally	CSR
NOEC	OECD 209	900 mg/l	3 hours	Aquatic microorganisms	Activated sludge		

Sodium chloride							
Parameter	Method	Value	Exposure time	Species	Environment	Value determination	Source
LC ₅₀		5840 mg/l	96 hours	Fish (Lepomis macrochirus)	Fresh water		
EC ₅₀		1900 mg/l	48 hours	Daphnia (Daphnia magna)			
EC ₅₀		6870 mg/l	96 hours	Algae and other aquatic plants (Lemna gibba)	Fresh water		
NOEC		5000 mg/l		Microorganisms	Activated sludge		
EC ₅₀		2430 mg/l	120 hours	Algae			

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Chronic toxicity

Magnesium chloride hexahydrate							
Parameter	Method	Value	Exposure time	Species	Environment	Value determination	Source
NOEC		341 mg/l	21 days	Daphnia (Daphnia magna)	Fresh water	Experimentally	CSR
NOEC	OECD 201	213.5 mg/l	72 hours	Algae (Desmodesmus subspicatus)	Fresh water	Experimentally	CSR

Sodium chloride							
Parameter	Method	Value	Exposure time	Species	Environment	Value determination	Source
NOEC		252 mg/l	33 days	Fish (Pimephales promelas)	Fresh water		
NOEC		314 mg/l	21 days	Daphnia (Daphnia magna)			

12.2. Persistence and degradability

No data are available for either the mixture or the components.

12.3. Bioaccumulative potential

No data are available for either the mixture or the components.

12.4. Mobility in soil

No data are available for either the mixture or the components.

12.5. Results of PBT and vPvB assessment

Product does not contain any substance meeting the criteria for PBT or vPvB in accordance with the Annex XIII of Regulation (EC) No 1907/2006 (REACH) as amended.

12.6. Endocrine disrupting properties

The mixture does not contain substances with endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7. Other adverse effects

Not available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Hazard of environmental contamination; dispose of the waste in accordance with the local and/or national regulations. Proceed in accordance with valid regulations on waste disposal. Any unused product and contaminated packaging should be put in labelled containers for waste collection and submitted for disposal to a person authorised for waste removal (a specialized company) that is entitled for such activity. Do not empty unused product in drainage systems. The product must not be disposed of with municipal waste. Empty containers may be used at waste incinerators to produce energy or deposited in a dump with appropriate classification. Perfectly cleaned containers can be submitted for recycling.

Waste management legislation

Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste, as amended. Decision 2000/532/EC establishing a list of wastes, as amended.

Waste type code

06 03 14 solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13

Packaging waste type code

06 03 00 wastes from the MFSU of salts and their solutions and metallic oxides

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SECTION 14: Transport information

- 14.1. UN number or ID number**
not subject to transport regulations
- 14.2. UN proper shipping name**
not relevant
- 14.3. Transport hazard class(es)**
not relevant
- 14.4. Packing group**
not relevant
- 14.5. Environmental hazards**
not relevant
- 14.6. Special precautions for user**
Reference in the Sections 4 to 8.
- 14.7. Maritime transport in bulk according to IMO instruments**
not relevant

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**
Regulation (EC) No. 1907/2006 of the European Parliament and of the Council of 18th December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing the European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No. 793/93 and Commission Regulation (EC) No. 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC, as amended. REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- 15.2. Chemical safety assessment**
A chemical safety assessment has not been carried out (mixture).

SECTION 16: Other information

Other important information about human health protection

The user is responsible for adherence to all related health protection regulations.

Key to abbreviations and acronyms used in the safety data sheet

ADR	European agreement concerning the international carriage of dangerous goods by road
BCF	Bioconcentration Factor
CAS	Chemical Abstracts Service
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of substance and mixtures
EC	Identification code for each substance listed in EINECS
EC ₅₀	Concentration of a substance when it is affected 50 % of the population
EINECS	European Inventory of Existing Commercial Chemical Substances
EmS	Emergency plan
EU	European Union
EuPCS	European Product Categorisation System
IATA	International Air Transport Association
IBC	International Code For The Construction And Equipment of Ships Carrying Dangerous Chemicals
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods
IMO	International Maritime Organization
INCI	International Nomenclature of Cosmetic Ingredients
ISO	International Organization for Standardization
IUPAC	International Union of Pure and Applied Chemistry

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LC ₅₀	Lethal concentration of a substance in which it can be expected death of 50% of the population
LD ₅₀	Lethal dose of a substance in which it can be expected death of 50% of the population
LOAEL	Lowest observed adverse effect level
log K _{ow}	Octanol-water partition coefficient
NOAEL	No observed adverse effect level
NOEC	No observed effect concentration
OEL	Occupational Exposure Limits
PBT	Persistent, bioaccumulative and toxic
ppm	Parts per million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Agreement on the transport of dangerous goods by rail
UN	Four-figure identification number of the substance or article taken from the UN Model Regulations
UVCB	Substances of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very persistent and very bioaccumulative

Training guidelines

Inform the personnel about the recommended ways of use, mandatory protective equipment, first aid and prohibited ways of handling the product.

Recommended restrictions of use

not available

Information about data sources used to compile the Safety Data Sheet

REGULATION (EC) No. 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL (REACH) as amended.
REGULATION (EC) No. 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL as amended. Data from the manufacturer of the substance / mixture, if available - information from registration dossiers.

The changes (which information has been added, deleted or modified)

The version 1.3 replaces the SDS version from Monday, 4 September 2023. Changes were made in sections 1, 11, 12 and 16.

More information

Classification procedure - calculation method.

Statement

The safety data sheet provides information aimed at ensuring safety and health protection at work and environmental protection. The provided information corresponds to the current status of knowledge and experience and complies with valid legal regulations. The information should not be understood as guaranteeing the suitability and usability of the product for a particular application.