

MAGNESIUM CHLORIDE

1. Chemical Product and Company Identification:

Product identifier

Identification of the substance

Magnesium chloride hexahydrate
≥98 %, Ph.Eur., USP, BP

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

Relevant identified uses: Laboratory chemical Laboratory and analytical use

Uses advised against: Do not use for private purposes (household).
Food, drink and animal feeding stuffs.

Details of the supplier of the safety data sheet

ENTAJ FEED & RAW MATERIALS MANUFACTURING CO.

ADDRESS: AMMAN – BUILDING 2477, OFFICE 118210

LICENSE NO.: 202618787

2. Hazard(s) identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 (CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

not required

Other hazards

Results of PBT and vPvB assessment

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

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of ≥ 0,1%.

Substances



3. Composition/information on ingredients

SUBSTANCES

Name of substance	Magnesium chloride hexahydrate
Molecular formula	$\text{MgCl}_2 \cdot 6 \text{H}_2\text{O}$
Molar mass	203,3 g/mol
REACH Reg. No	01-2119485597-19-xxxx
CAS No	7791-18-6
EC No	232-094-6

4. First aid measures

Description of first aid measures

General notes

Take off contaminated clothing.

Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

Following skin contact

Rinse skin with water/shower.

Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

Following ingestion

Rinse mouth. Call a doctor if you feel unwell.

Most important symptoms and effects, both acute and delayed

Symptoms and effects are not known to date.

Indication of any immediate medical attention and special treatment needed

none.

5. Fire Fighting Measures

Extinguishing media

Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings!
water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

Unsuitable extinguishing media

water jet

Special hazards arising from the substance or mixture

Non-combustible.

Hazardous combustion products

In case of fire may be liberated: Hydrogen chloride (HCl)

Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.



6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No special measures are necessary.

Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains. Take up mechanically.

Advice on how to clean up a spill

Take up mechanically.

Other information relating to spills and releases

Place in appropriate containers for disposal.

Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8.

Incompatible materials: see section 10. Disposal considerations: see section 13.

7. Handling and storage

Precautions for safe handling

No special measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feeding stuffs.

Conditions for safe storage, including any incompatibilities

Store in a dry place. Hygroscopic solid.

Incompatible substances or mixtures

Observe hints for combined storage. Incompatible materials: see section 10.

Protect against external exposure, such as
high temperatures, humidity

Consideration of other advice:

Specific designs for storage rooms or vessels

Recommended storage temperature: 25 – 15 °C

Specific end use(s)

No information available.



8. Exposure controls/personal protection

Control parameters National

limit values

Occupational exposure limit values (Workplace Exposure Limits)

This information is not available.

Environmental values

Relevant PNECs and other threshold levels				
End- point	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	3,21 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0,32 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	90 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	288,9 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	28,89 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	662,8 mg/kg	terrestrial organisms	soil	short-term (single instance)

Exposure controls



Individual protection measures (personal protective equipment) Eye/face protection

Use safety goggle with side protection.



Skin protection

•hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374.

•type of material

NBR (Nitrile rubber)

•material thickness

>0,11 mm

•breakthrough times of the glove material

>480 minutes (permeation: level 6)



•other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.



Respiratory protection

Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P1 (filters at least 80 % of airborne particles, colour code: White).

Environmental exposure controls

Keep away from drains, surface and ground water.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state	solid
Color	whitish
Odour	odorless
Melting point/freezing point	>100 °C (Release of crystal water)

Boiling point or initial boiling point and boiling range not determined

Flammability	non-combustible
Lower and upper explosion limit	not relevant (solid)
Flash point	not applicable
Auto-ignition temperature	not determined
Decomposition temperature	>100 °C
pH (value)	7 – 4,5 (in aqueous solution: 50 g/l, 20 °C)
Kinematic viscosity	not relevant

Solubility(ies)

Water solubility	468,7 g/l at 20 °C (ECHA)
------------------	---------------------------

Partition coefficient

Partition coefficient n-octanol/water (log value):	not relevant (inorganic)
--	--------------------------

Vapor pressure	not determined
----------------	----------------

Density and/or relative density

Density	1,57 g/cm ³ at 20 °C
Relative vapor density	not relevant (solid)
Particle characteristics	No data available. Other safety parameters
Oxidizing properties	none
	Other information

Information with regard to physical hazard classes:

hazard classes acc. to GHS (physical hazards):	not relevant
Other safety characteristics:	There is no additional information.



10. Stability and reactivity

Reactivity

This material is not reactive under normal ambient conditions.

Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of tem- premature

Possibility of hazardous reactions

No known hazardous reactions.

Conditions to avoid

Keep away from heat. Decomposition takes place from temperatures above: >100 °C.

Incompatible materials

There is no additional information.

Hazardous decomposition products

Hazardous combustion products: see section 5.

11. Toxicological information

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

Classification according to GHS (2008/1272/EC, CLP)

This substance does not meet the criteria for classification in accordance with Regulation No 2008/1272/EC.

Acute toxicity

Shall not be classified as acutely toxic.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	>5.000 mg/kg	rat	anhydrous	ECHA
dermal	LD50	>2.000 mg/kg	rat	anhydrous	ECHA

Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization

Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity

Shall not be classified as germ cell mutagenic.



Carcinogenicity

Shall not be classified as carcinogenic.

Reproductive toxicity

Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

Symptoms related to the physical, chemical and toxicological characteristics

•If swallowed

diarrhea, vomiting, nausea, gastrointestinal complaints

•If in eyes

Data are not available.

•If inhaled

Data are not available.

•If on skin

Data are not available.

•Other information

none

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0.1\%$.

Information on other hazards

There is no additional information.

12. Ecological information

Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)					
Endpoint	Value	Species	Source	Exposure time	Source
LC50	541 mg/l	fish	ECHA	96 h	ECHA



Aquatic toxicity (chronic)				
Endpoint	Value	Species	Source	Exposure time
EC50	>900 mg/l	microorganisms	ECHA	3 h
NOEC	100 mg/l	algae	ECHA	3 d

Persistence and degradability

Data are not available.

Bio accumulative potential

Data are not available.

Mobility in soil

Data are not available.

Results of PBT and vPvB assessment

Data are not available.

Endocrine disrupting properties

Does not contain an endocrine disruptor (ED) at a concentration of $\geq 0.1\%$.

Other adverse effects

Data are not available.

13. Disposal considerations

Waste treatment methods

Consult the appropriate local waste disposal expert about waste disposal.

Sewage disposal-relevant information

Do not empty into drains.

Waste treatment of containers/packaging's

Handle contaminated packages in the same way as the substance itself. Completely emptied packages can be recycled.

Waste treatment methods

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.

Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions. Non-terminated packages may be recycled.



14. Transport information

UN number or ID number	not subject to transport regulations
UN proper shipping name	not assigned
Transport hazard class(es)	none
Packing group	not assigned
Environmental hazards	non-environmentally hazardous acc. to the dangerous goods regulations

Special precautions for user

There is no additional information.

Maritime transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

[Information for each of the UN Model Regulations](#)

International Maritime Dangerous Goods Code (IMDG) - Additional information

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Not subject to ICAO-IATA.

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture Relevant provisions of the European Union (EU)

Restrictions according to REACH, Annex XVII

not listed

List of substances subject to authorization (REACH, Annex XIV)/SVHC - candidate list

not listed

Seveso Directive

18/2012/EU (Seveso III)			
No	Dangerous substance/hazard categories	Qualifying quantity (tons) for the application of lower and upper-tier requirements	Notes
	not assigned		

Deco-Paint Directive

VOC content	0 %
VOC content	0 g/l



Industrial Emissions Directive (IED)

VOC content	0 %
VOC content	0 g/l

Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

Water Framework Directive (WFD)

List of pollutants (WFD)				
Name of substance	Name acc. to inventory	CAS No.	Listed in	Remarks
Magnesium chloride hexahydrate	Metals and their compounds		a)	

Legend

a) Indicative list of the main pollutants

Regulation on the marketing and use of explosives precursors

not listed

Regulation on drug precursors

not listed

Regulation on substances that deplete the ozone layer (ODS)

not listed

Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

Regulation on persistent organic pollutants (POP)

not listed

16. Other information

This Material Safety Data Sheet (MSDS) has been prepared in accordance with internationally recognized standards and is based on the best information available at the time of issue. It provides a summary of the health and safety hazards of the material and general guidance for its safe handling in the workplace. As the actual conditions of use are beyond our control, each user is responsible for assessing the risks associated with their specific application and implementing appropriate control measures.

END OF MSDS

