

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

1.1. Product identifier

Product form : Substance
 Trade name : MgCl₂ , MgCl₂ tech, MgCl₂ feed, MgCl₂ food
 EC-No. : 232-094-6
 CAS-No. : 7791-18-6
 Type of product : Magnesium chloride flakes/pellets
 Product group : Solid particles (low dusting)

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

1.2.1. Relevant identified uses

Main use category : Industrial use
 Industrial/Professional use spec : Raw material for the chemical-technical industry:
 Cement
 Drilling fluids
 Textiles
 Animal feed
 Cleaning/washing agents
 De-icing and anti-icing applications
 Food additive
 Agriculture
 Dust suppressant

1.2.2. Uses advised against

Restrictions on use : No uses have been identified that are advised against

1.3. Details of the supplier of the safety data sheet

NEDMAG B.V.
 Billitonweg 1 Postbus 241
 9640 AE Veendam
 Nederland
 T +31 598 651 911
sds@nedmag.nl

1.4. Emergency telephone number

Country	Organisation/Company	Address / Emergency Number	Comment
USA	CHEMTREC	1-800-424-9300	Only for healthcare professionals

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to GHS US classification

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to GHS US regulation

No labelling applicable. Not classified as hazardous chemical.

2.3. Other hazards

The methods for determining biodegradability are not applicable to inorganic substances

The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

Unknown acute toxicity (GHS US): not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Magnesium chloride hexahydrate	CAS-No.: 7791-18-6 EC-No.: 232-094-6	100	Not classified

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Do not induce vomiting. Rinse mouth out with water. Drink plenty of water. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: May cause irritation to the respiratory tract.
Symptoms/effects after skin contact	: May cause moderate irritation.

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Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: May cause stomach cramps and vomiting. Diarrhea.
Chronic symptoms	: Not expected.

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

In case of doubt or persistent symptoms, consult always a physician. Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: The product itself does not burn. Use extinguishing media appropriate for surrounding fire. Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire	: None.
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5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Clean up any spills as soon as possible, using an absorbent material to collect it. Avoid creating or spreading dust.
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6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.
Measures in case of dust release	: Do not breathe.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Mechanically recover the product. Shovel or sweep up and put in a closed container for disposal. Avoid dust to spread. Clean contaminated surfaces with an excess of water.
Other information	: Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment.
Handling temperature	: < 180 °C
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Storage temperature	: Room temperature
Heat and ignition sources	: Store away from direct sunlight or other heat sources.
Storage area	: Store away from heat/moisture.
Special rules on packaging	: Keep only in original container.
Packaging materials	: Do not store in corrodable metal.

7.3. Specific end use(s)

See section(s) : 1.2. Recommended use of the chemical and restrictions on use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Not required for normal conditions of use. In case of dust production: protective goggles

Eye protection			
Type	Field of application	Characteristics	Standard
Safety goggles	Dust, Fine dust	With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:

Not required for normal conditions of use. Handle in accordance with good industrial hygiene and safety practice

Hand protection:

Prolonged or repeated contact may dry skin and cause irritation. In case of repeated or prolonged contact wear gloves. Hand protection : skin cream may be used.

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Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Butyl rubber	Consult supplier for specific recommendations	0.5	Consult supplier for specific recommendations	EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions. In case of dust formation use respirator with filter: P2

Respiratory protection			
Device	Filter type	Condition	Standard
Dust mask, Half-mask, Approved dust respirator	Type P2	Dust protection	EN 136, EN 140

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White to off-white.
Appearance	: Flakes. pellets.
Odour	: Odourless.
Odour threshold	: Not available
Melting point	: ≈ 117 °C
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive properties	: Not explosive.
Oxidising properties	: Non oxidizing.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: 8,5
pH solution concentration	: 10 %
Viscosity, kinematic	: Not applicable
Solubility	: Soluble in: water. alcohol.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 800 – 900 kg/m ³ Bulk density
Relative density	: Not available
Relative vapour density at 20°C	: ≈ 0
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available

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Particle specific surface area : Not available
Particle dustiness : Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). On exposure to high temperature, may decompose, releasing : hydrochloric acid. toxic vapours.

10.5. Incompatible materials

Oxidizing materials. Metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified (Conclusive but not sufficient for classification)
Acute toxicity (dermal) : Not classified (Conclusive but not sufficient for classification)
Acute toxicity (inhalation) : Not classified (Conclusive but not sufficient for classification)

Magnesium chloride hexahydrate (7791-18-6)

LD50 oral rat	8100 mg/kg
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Skin corrosion/irritation : Not classified (Conclusive but not sufficient for classification)
pH: 8.5

Serious eye damage/irritation : Not classified (Conclusive but not sufficient for classification)
pH: 8.5

Respiratory or skin sensitisation : Not classified (Conclusive but not sufficient for classification)

Germ cell mutagenicity : Not classified (Conclusive but not sufficient for classification)

Carcinogenicity : Not classified (Conclusive but not sufficient for classification)

Reproductive toxicity : Not classified (Conclusive but not sufficient for classification)

STOT-single exposure : Not classified (Conclusive but not sufficient for classification)

STOT-repeated exposure : Not classified (Conclusive but not sufficient for classification)

Aspiration hazard : Not classified (Conclusive but not sufficient for classification)

Magnesium chloride hexahydrate (7791-18-6)

Viscosity, kinematic	Not applicable
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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Naturally occurring substance. The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute) : Not classified (Conclusive but not sufficient for classification)
Hazardous to the aquatic environment, long-term (chronic) : Not classified (Conclusive but not sufficient for classification)

12.2. Persistence and degradability

Magnesium chloride hexahydrate (7791-18-6)

Persistence and degradability	The methods for determining biodegradability are not applicable to inorganic substances.
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12.3. Bioaccumulative potential

Magnesium chloride hexahydrate (7791-18-6)

Bioaccumulative potential	Material highly soluble in water. Low bioaccumulation potential.
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12.4. Mobility in soil

Magnesium chloride hexahydrate (7791-18-6)

Ecology - soil	Soluble in water. Very mobile.
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12.5. Results of PBT and vPvB assessment

Magnesium chloride hexahydrate (7791-18-6)

The methods for determining biodegradability are not applicable to inorganic substances

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having 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

Other adverse effects : No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Ecology - waste materials : Recycle the material as far as possible.

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European List of Waste (LoW) code : Waste code can't be determined according to the European Waste Catalogue (EWC), since it depends on the use of the product
15 01 02 - plastic packaging
15 01 05 - composite packaging

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID/ DOT

In accordance with DOT (Department of Transportation). Not regulated.

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

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REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

Magnesium chloride hexahydrate is a hydrate, and as such not listed on the United States TSCA (Toxic Substances Control Act) Inventory. The anhydrous form of $MgCl_2$ (CAS number 7786-30-3), consisting of 99% pure magnesium chloride, is listed in the TSCA inventory.

15.2. Chemical safety assessment

Naturally occurring mineral.

Exempted from REACH registration.

No chemical safety assessment has been carried out.

SECTION 16: Other information

NFPA health hazard: 0 – Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials

NFPA fire hazard: 0 – Materials that will not burn under typical fire conditions, including intrinsically non-combustible materials such as concrete, stone and sand.
0 – Materials that in themselves are normally stable, even under fire conditions.



NFPA reactivity:

Hazard Rating Health: 0 – Minimal Hazard – No significant risk to health.

Flammability: 0 – Minimal Hazard – Materials that will not burn.

Physical: 0 – Minimal Hazard – Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection: A – Safety glasses.

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Indication of changes:

Update. SDS EU format according to COMMISSION REGULATION (EU) 2020/878.

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
Not classified by IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level

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Abbreviations and acronyms:	
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources	: Supplier information.
Training advice	: Ensure personnel is aware of the potential hazards of the load and knows what to do in the event of an accident or an emergency.
Other information	: A safety data sheet is not required for this product under Article 31 of REACH. This Product Safety Information Sheet has been created on a voluntary basis. Normal use of this product shall imply use in accordance with the instructions on the packaging.
Safety Data Sheet applicable for regions	: GB - United Kingdom

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental management only. It should not therefore be construed as guaranteeing any specific property of the product.