



# Safety Data Sheet

## Magnesium Chloride Flakes

Date of issue: 09/14/2020

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Magnesium chloride flakes

Product name: Magnesium chloride flakes,  $MgCl_2$  feed  
Chemical name/ synonyms: Magnesium chloride hexahydrate,  $MgCl_2 \cdot 6H_2O$   
CAS number: 7791-18-6  
REACH registration number: not applicable, product exempted from REACH registration (Annex V) as natural mineral not modified chemically

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

Most common uses for magnesium chloride flakes are: raw material for industrial applications such as oxychloride cement, drilling fluids, textiles, sponges, detergents, animal feed, de-icing, dust-control.

No uses advised against are identified.

#### 1.3 Details of the supplier of the safety data sheet

Name: Chemistry Connection  
Address: 253 Sturgis Road  
Conway, AR 72034  
United States  
Telephone: (501) 470-9689  
E-mail: [contact@thechemistryconnection.com](mailto:contact@thechemistryconnection.com)

#### 1.4. Emergency telephone number

During business hours (8am - 5pm Mon-Fri): (888) 583-7738

After business hours: CHEMTREC (800) 424-9300

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture

According to GHS US classification:

Not classified.

#### 2.2 Label elements

According to GHS US regulation:

Not classified as a hazardous chemical.

Other hazards not contributing to classification: none under normal conditions.

#### 2.3 Unknown acute toxicity (GHS US)

Not applicable.

### SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS



## Safety Data Sheet Magnesium Chloride Flakes

### 3.1 Substances

Constituent	CAS-number	Concentration w/w	GHS US classification
Magnesium chloride hexahydrate (MgCl <sub>2</sub> ·6H <sub>2</sub> O)	7791-18-6	100 %	Not classified

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

Inhalation: In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air. Apply artificial respiration if necessary and get medical attention.

Skin contact: Wash with plenty of soap and water.

Eye contact: Remove contact lenses. Rinse copiously with water for at least 10-15 minutes. If eye irritation persists, get medical advice and (if needed) medical attention.

Ingestion: Rinse mouth and drink plenty of water afterwards. Do not induce vomiting. In case large quantities have been swallowed, get medical advice.

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

Inhalation: Respiratory tract irritation

Skin contact: Irritation

Eye contact: Irritation

Ingestion: If large quantities are swallowed, rarely irritation, nausea and gastrointestinal upset may occur.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Magnesium chloride is not combustible. Choose extinguishing media depending on surrounding conditions. All extinguishing media are allowed.

### 5.2 Special hazards arising from the substance or the mixture

No special hazards.

### 5.3 Advise for fire fighters

Protective actions and/or special protective equipment depending on surrounding conditions. Use protective clothing and self-contained breathing apparatus.



## Safety Data Sheet Magnesium Chloride Flakes

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with eyes and skin. Use personal protection (see section 8).

#### 6.2 Environmental precautions

Environmental precaution: Prevent uncontrolled discharges into the environment (rivers, water courses, sewers etc.).

Clean-up procedure: Carefully scoop up spilt product and flush remnant away with water.

### SECTION 7: HANDLING AND STORAGE

#### 7.1 Precautions for safe handling

- Avoid contact with eyes and skin.
- Ensure suitable personal protection equipment (see section 8)
- Do not eat, drink or smoke when handling the product.
- Wash hands after finishing working with the product.
- Do not inhale dust.
- Avoid dust formation and ensure sufficient ventilation or extraction in the work area.

#### 7.2 Conditions for safe storage, including any incompatibilities

- Keep packaging tightly sealed.
- Store in a dry area.
- Avoid contact with metals because of possible corrosion
- Protect from humidity and water
- Protect from heat and direct sunlight

#### 7.3 Specific end use(s)

No specific end uses

### SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

#### 8.1 Control parameters

Exposure limits: Not determined

#### 8.2 Exposure controls

Appropriate Engineering Controls: Good general ventilation.

Respiratory protection: Under normal circumstances, no special protective equipment required. In case of significant or accidental dust or fumes emissions, dust mask should be worn.

Hand protection: Wear protective (butyl) rubber gloves. Use a high fat protective cream after cleaning skin.



## Safety Data Sheet Magnesium Chloride Flakes

Eye protection:	Safety glasses with side shields.
Skin and body protection:	Wear protective clothing.
Hygienic measures:	When using do not eat, drink or smoke.
Protective measures:	Avoid contact with eyes, skin and clothing.
Environmental exposure controls:	Prevent the material from entering rivers, water courses and sewers.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties

Appearance:	Solid flakes or half spheres
Colour:	White to pale yellow/grey
Odour:	Odourless
pH:	ca. 8.5 (aqueous solution 10%)
Melting point/range:	ca. 117°C
*Boiling point/range:	Not applicable
Flash point:	Not applicable
Flammability:	Not flammable
Auto-flammability:	Not applicable
Explosion hazards:	Not explosive
Combustive properties:	Not combustible
Vapour pressure:	Not applicable
Vapour density:	Not applicable (not volatile)
Relative density:	Bulk density 800-900 kg/m <sup>3</sup>
Solubility(ies):	Soluble in water and alcohol
Partition coefficient:	
n-octanol/water:	Not applicable
Auto ignition temperature:	None
Ignition temperature:	Not applicable
Viscosity:	Not determined
Explosive properties:	None
Oxidizing properties:	None. The product can facilitate corrosion of steel.

#### 9.2 Other information

Not applicable

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity

Not applicable.

#### 10.2 Chemical stability

Magnesium chloride is stable under normal conditions.



## Safety Data Sheet Magnesium Chloride Flakes

### 10.3 Possibility of hazardous reactions

No dangerous reactions known under conditions of normal use.

### 10.4 Conditions to avoid

None known.

### 10.5 Incompatible materials

Avoid oxidizing agents. In contact with metals corrosion can occur.

### 10.6 Hazardous decomposition products

No decomposition is used as directed. If Magnesium chloride is heated above 180°C harmful vapours can develop (hydrochloric acid). Above 300°C toxic chloride vapours are formed.

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity:

By Oral route: Rat, Oral, LD50: 8100 mg/kg

By Inhalation: No data available.

#### Chronic toxicity:

Germ cell mutagenicity: No known studies. Not considered to be mutagenic in general.

Carcinogenicity: Substance is not classified as carcinogenic under ACGIH, NIOSH, IARC, NTP or OSHA.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Magnesium chloride is an inorganic naturally occurring product that will not accumulate quickly in the environment under normal conditions of use. Significantly higher chloride concentrations in the soil and groundwater can harm plants and other vegetation.

### 12.2 Persistence and degradability

Not applicable for inorganic substances.

### 12.3 Bioaccumulation potential

Bioaccumulation is unlikely: inorganic substance.

### 12.4 Mobility in soil

Magnesium chloride easily dissolves in water. Dependent on the pH and the ions available in natural surface water it can be involved in precipitation reactions (for example as magnesium sulphate).

### 12.5 Results of PBT and vPvB assessment

Magnesium chloride is not classified as PBT or vPvB substance



## Safety Data Sheet Magnesium Chloride Flakes

### SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of substance in suitable containers in accordance with local, regional, national or international regulation. Do not dispose of in waterways or together with household waste.


### SECTION 14: TRANSPORT INFORMATION

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

### SECTION 15: REGULATORY INFORMATION

Magnesium chloride hexahydrate is not listed on the United States TSCA (Toxic Substances Control Act) Inventory.

### 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.	
NFPA reactivity:	0 – Materials that in themselves are normally stable, even under fire conditions.	
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.	