

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND OF THE COMPANY / UNDERTAKING

Product Identifier:

Product Name: Magnesium Chloride Flake

Synonyms: Magnesium chloride hexahydrate, $\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$

REACH Registration Number: Not applicable, product exempted from REACH registration (Annex V) as natural mineral not modified chemically.

CAS Number: 7791-18-6

EC Number: 232-094-6

Index number CLP Annex VI: Not classified

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

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

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2. HAZARDS IDENTIFICATION

Classification of the substance or mixture:

Classification in accordance with Regulation (EC) No 1272/2008 (CLP/GHS): Not classified.

Classification in accordance with Directive 67/548/EEC, 1999/45/EC: Not classified.

Label elements: Not subject to labelling in accordance with Regulation (EC) No. 1272/2008 (CLP).

Other hazards: None.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances:

Constituent	EC No.	CAS No.	Concentration w/w	Classification Regulation (EC) No. 1272/2008
Magnesium chloride hexahydrate ($\text{MgCl}_2 \cdot 6\text{H}_2\text{O}$)	232-094-6	7791-18-6	100%	None

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4. FIRST AID MEASURES (SYMPTOMS)

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 the case of large quantities having been swallowed, get medical advice.

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.

5. FIRE-FIGHTING MEASURES

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

Special hazards arising from the substance or mixture: No special hazards.

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

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

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

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

Methods and material for containment and cleaning up: Carefully scoop up spilt product and flush remnant away with water.

7. HANDLING AND STORAGE

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.

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

Specific end use(s): No specific end uses.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Exposure limits: Not determined

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.

Eye/face protection: Safety glasses with side shields.

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

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

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: ca. 163°C

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/m³

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

Oxidising properties: None. The product can facilitate corrosion of steel.

Other information: Not applicable

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10. STABILITY AND REACTIVITY

Reactivity: Not applicable.

Chemical stability: Magnesium chloride is stable under normal conditions.

Possibility of hazardous reactions: No dangerous reactions known under conditions of normal use.

Conditions to avoid: None known.

Incompatible materials: Avoid oxidising agents. In contact with metals corrosion can occur.

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.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects:

Classification: Magnesium chloride was not classified according to Council Regulation 1272/2008/EC.

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.

12. ECOLOGICAL INFORMATION

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.

Persistence and degradability: Not applicable for inorganic substances.

Bio accumulative potential: Bioaccumulation is unlikely: inorganic substance.

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).

Results of PBT and vPvB assessment: Magnesium chloride is not classified as PBT or vPvB substance.

Other information: No further information.

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13. DISPOSAL CONSIDERATIONS

General Information: 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.

14. TRANSPORT INFORMATION

ADR/RID/IMDG/IATA: This product is not classified as dangerous for carriage.

15. REGULATORY INFORMATION

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

Not classified as dangerous according to Council Directive 1272/2008/EC.
Substance exempted from Regulation 1907/2006 (REACH): Annex V, paragraph 10.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

Note: The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all applicable national, international and local regulations or provisions.

16. OTHER INFORMATION

Legal disclaimer: The information contained in this SDS does not constitute a risk assessment, and should not replace the user's own assessment of risks as required by other health and safety legislation. This advice is given by Nexchem Ltd who accept no legal liability for it except otherwise provided by law. The information contained herein is based on the present state of our knowledge and is intended to describe our products from the point of view of safety requirements. It should not therefore be construed as guaranteeing specific properties.