

Magnesium Chloride Hexahydrate

Safety Data Sheet

Revision 21.07.2023
supersedes all earlier versions

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

1.1. Product identifier

Magnesium Chloride; Magnesium Chloride Hexahydrate; Magnesium Chloride Flake.
REACH Registration Notes: Exempted in accordance with Annex V.7

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

Identified uses: Manufacture of cosmetics, fertilisers, drilling fluids, de-icer, dust control.

1.3. Details of the supplier

RS Minerals Ltd, PO Box 85, Guisborough TS14 9AR, United Kingdom
info@rsminerals.co.uk

1.4. Emergency telephone number

+ 44 (0)1287 631530 (Office hours)

+44(0)7305 009746 (Out of hours)

2. HAZARD IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (EC 1272/2008)

Physical and Chemical Hazards: Not classified.

Human health: Not classified.

Environment: Not classified.

Classification (67/548/EEC): Not classified.

Human health

This product does not meet the criteria for classification as hazardous as defined in the Regulation EC 1272/2008 and in Directive 67/548/EEC.

Environment

The product is not expected to be hazardous to the environment.

Physical and Chemical Hazards

This product is an inorganic substance and does not meet the criteria for PBT or vPvB in accordance with Annex XIII of REACH. This product should be handled with care to avoid dust generation.

2.2. Label elements

Label In Accordance With (EC) No. 1272/2008

No pictogram required.

2.3. Other hazards

Not Classified as PBT/vPvB by current EU criteria.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Magnesium Chloride MgCl₂ 46.5 – 47.5% CAS No: 7791-18-6

Classification (67/548/EEC; 1999/45/EC): R36 – Irritating to eyes.

4. FIRST AID MEASURES

4.1. Description of first aid measures

Inhalation

May cause irritation to mucous membranes. Move the exposed person to fresh air. Seek medical attention if irritation or symptoms persist.

Ingestion

Since magnesium salts are absorbed slowly, abdominal pain, vomiting and diarrhoea may be the only symptoms. However, if elimination is blocked, CNS depression, lack of reflexes and hypocalcaemia (low blood calcium levels) may occur. This product may cause irritation to mucous membranes. Rinse mouth thoroughly. Have patient drink several glasses of water to dilute. Seek medical attention if symptoms develop, or if large quantities have been consumed.

Skin contact

May cause irritation to skin. Wash immediately with soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist. Use suitable lotion to moisturise skin.

Eye contact

May cause irritation to the eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.

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

General information

The severity of the symptoms described will vary depending of the quantity and the length of exposure.

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

No further first aid measures noted.

5. FIRE FIGHTING MEASURES

5.1. Extinguishing media

Extinguishing media

The product is non-combustible. No specific extinguishing media is needed.

5.2. Special hazards arising from the substance or mixture

Specific hazards

Burning produces irritating, toxic and obnoxious fumes.

5.3. Advice for firefighters

Special Fire Fighting Procedures: Wear suitable respiratory equipment when necessary. Use an extinguishing agent suitable for the surrounding fire.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment in compliance with national legislation.

6.2. Environmental precautions

Do not allow large spillages to enter drains.

6.3. Methods and material for containment and cleaning up

Scoop up spillages and place in a container. Clean spillage area thoroughly with plenty of water. Wear appropriate respiratory protection, safety glasses and overalls as a precaution.

6.4. Reference to other sections

For personal protection, see section 8. For waste disposal, see section 13.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Avoid contact with eyes and skin. Ensure adequate ventilation. Handle packaged products carefully to prevent accidental bursting. Do not eat, drink and smoke in work areas; wash hands after use; remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Store in a dry, covered area. Keep containers closed and store packaged products so as to prevent accidental bursting.

7.3. Specific end use(s)

If you require advice on specific uses, please contact your supplier.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

None specified.

8.2. Exposure Controls

Engineering Measures

Ensure adequate ventilation of the working area.

Hand Protection

Use suitable protective gloves. PVC or rubber gloves are recommended.

Eye Protection

Use eye protection. Goggles/face shield are recommended.

Hygiene Measures

When using do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid (crystalline flakes)

Colour: White

pH: 8.7

Bulk Density: 0.80 - 0.90 MT/m³

Melting Point: 118°C

Solubility: 167g/100ml water at 20°C

10. STABILITY AND REACTIVITY

10.1. Reactivity

No specific reactivity hazards associated with this product.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Addition to furan-2-peroxycarboxylic acid will cause the acid to explode.

10.4. Conditions to avoid

Moisture; heat.

10.5. Incompatible materials

Materials To Avoid: Oxidising agents.

10.6. Hazardous decomposition products

None under normal conditions. If heated, magnesium oxide and fumes of hydrogen chloride gas will be produced.

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Germ Cell Mutagenicity

No data is available.

Carcinogenicity

No carcinogenic effects have been reported.

Ingestion

Oral Rat LD₅₀: 8100 mg/kg

Oral Mouse LD₅₀: 7600 mg/kg.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Magnesium Chloride is a component of seawater.

13. DISPOSAL CONSIDERATIONS

General information

Whatever cannot be saved for recovery or recycling may be disposed of to landfill at an approved site. It should be noted that contamination may occur during use and it is the responsibility of the user to assess an appropriate disposal method in this situation.

14. TRANSPORT INFORMATION

General

No special precautions. The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

No information required.

14.2. UN proper shipping name

No information required.

14.3. Transport hazard class(es)

No information required.

14.4. Packing group

No information required.

14.5. Environmental hazards

Not an Environmentally Hazardous Substance / Marine Pollutant

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No information required.

15. REGULATORY INFORMATION

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

1. Health and Safety at Work Act 1974. The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.
2. The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).
3. Safety Data Sheets for Substances and Preparations. Classification and Labelling of Substances and Preparations Dangerous for Supply.
4. REACH – Exempted in accordance with Annex V.7
5. Workplace Exposure Limits 2005 (EH40)

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

16. OTHER INFORMATION

(i) Indication of changes

Changes made to data sheet to comply with changes to regulation (EC) No 1272/2008 on the classification, labelling and packaging of substances and mixtures.

(ii) Abbreviations and acronyms

WEL TWA 8 HRS – Workplace Exposure Limit Time Weighted Average – 8 Hours

UVCB - unknown or variable composition, complex reaction products or biological materials.

(iii) Key Literature References and Sources of Data

Guidance Note EH40 Occupational Exposure Limits is published annually by the Health and Safety Executive. The latest relevant limits should be observed.

HS(G) 37 1993 "An introduction to Local Exhaust Ventilation" and Guidance Note EH44 2013 "Dust in the Work Place" are both available from HM Stationery Office.

Advice on respiratory protective equipment is also given in BS EN 529:200.

EN166: 2002 Personal Eye Protection.

(iv) Classification and procedure used to derive the classification for mixtures according to Regulation (EC) No 1272/2008 CLP

This material is not classified under this regulation; respirable quartz content <0.1% of the product.

(v) Training Advice

All employees should be given adequate training in the proper use and handling of this product and any precautions and protective equipment required under applicable regulations.

End of Safety Data Sheet