

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 06.11.2012

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

· **Product identifier**

· **Trade name:** Magnesium Chloride Hexahydrate

· **Article number:** 50-2701-01

· **CAS Number:**

7791-18-6

· **EC number:**

232-094-6

· **Registration number** 01-2119485597-19

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

Manufacture of basics metal; Manufacture of chemicals; Foundry flux; Catalyst use; Flocculant and coagulant in water and waste water treatment; Use of magnesium chloride as chemical intermediate; Manufacturing of processing aids; Manufacture of fertilisers; Manufacture of precipitants; Manufacture of fine chemicals; road services.

· **Sector of Use**

SU0 Other

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU4 Manufacture of food products

SU5 Manufacture of textiles, leather, fur

SU6b Manufacture of pulp, paper and paper products

SU8 Manufacture of bulk, large scale chemicals (including petroleum products)

SU9 Manufacture of fine chemicals

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

SU11 Manufacture of rubber products

SU12 Manufacture of plastics products, including compounding and conversion

SU13 Manufacture of other non-metallic mineral products, e.g. plasters, cement

SU15 Manufacture of fabricated metal products, except machinery and equipment

SU16 Manufacture of computer, electronic and optical products, electrical equipment

SU17 General manufacturing, e.g. machinery, equipment, vehicles, other transport equipment

SU18 Manufacture of furniture

SU19 Building and construction work

SU20 Health services

SU23 Electricity, steam, gas water supply and sewage treatment

· **Product category**

PC2 Adsorbents

PC3 Air care products

PC4 Anti-Freeze and de-icing products

PC7 Base metals and alloys

PC12 Fertilizers

PC14 Metal surface treatment products, including galvanic and electroplating products

PC16 Heat transfer fluids

PC20 Products such as ph-regulators, flocculants, precipitants, neutralization agents

PC21 Laboratory chemicals

PC27 Plant protection products

PC29 Pharmaceuticals

PC35 Washing and cleaning products (including solvent based products)

PC37 Water treatment chemicals

PC39 Cosmetics, personal care products

· **Process category**

PROC1 Use in closed process, no likelihood of exposure

PROC2 Use in closed, continuous process with occasional controlled exposure

PROC3 Use in closed batch process (synthesis or formulation)

PROC4 Use in batch and other process (synthesis) where opportunity for exposure arises

PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)

PROC6 Calendering operations

PROC7 Industrial spraying

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 06.11.2012

Trade name: Magnesium Chloride Hexahydrate

(Contd. of page 1)

PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

PROC11 Non industrial spraying

PROC14 Production of preparations or articles by tableting, compression, extrusion, pelletisation

PROC15 Use as laboratory reagent

PROC19 Hand-mixing with intimate contact and only PPE available

PROC21 Low energy manipulation of substances bound in materials and/or articles

PROC22 Potentially closed processing operations with minerals/metals at elevated temperature - Industrial setting

PROC23 Open processing and transfer operations with minerals/metals at elevated temperature

PROC24 High (mechanical) energy work-up of substances bound in materials and/or articles

PROC25 Other hot work operations with metals

PROC26 Handling of solid inorganic substances at ambient temperature

· **Environmental release category**

ERC1 Manufacture of substances

ERC2 Formulation of preparations

ERC3 Formulation in materials

ERC4 Industrial use of processing aids in processes and products, not becoming part of articles

ERC5 Industrial use resulting in inclusion into or onto a matrix

ERC6a Industrial use resulting in manufacture of another substance (use of intermediates)

ERC6b Industrial use of reactive processing aids

ERC7 Industrial use of substances in closed systems

ERC8a Wide dispersive indoor use of processing aids in open systems

ERC8b Wide dispersive indoor use of reactive substances in open systems

ERC10a Wide dispersive outdoor use of long-life articles and materials with low release

ERC11a Wide dispersive indoor use of long-life articles and materials with low release

· **Article category**

AC1 Vehicles

AC2 Machinery, mechanical appliances, electrical/electronic articles

AC7 Metal articles

· **Application of the substance / the preparation**

The substance has many industrial and professional applications.

· **Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Severn Biotech Ltd.

Unit 2,

Park Lane,

Kidderminster,

Worcestershire.

DY11 6TJ

UK

Tel: 0044 1562 825286

Fax: 0044 1562 825284

email: info@severnbiotech.com

· **Further information obtainable from:** Product safety department.

· **Emergency telephone number:** Tel: 0044 1562 825286 (not 24 hours)

2 Hazards identification

· **Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

The substance is not classified according to the CLP regulation.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 06.11.2012

Trade name: Magnesium Chloride Hexahydrate

(Contd. of page 2)

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.

- **Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Substances**
- **CAS No. Description**
7791-18-6 Magnesium chloride (hydrate)
- **Identification number(s)**
- **EC number:** 232-094-6

4 First aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Seek immediate medical advice.
- **Information for doctor:** Treat symptomatically and supportively.
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture**
Not combustible.
Gives off irritating or toxic fumes (or gases) in a fire.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 06.11.2012

Trade name: Magnesium Chloride Hexahydrate

(Contd. of page 3)

Do not inhale explosion gases or combustion gases.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

- Avoid formation of dust.

- Ensure adequate ventilation

- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

- **Methods and material for containment and cleaning up:**

- Pick up mechanically.

- Send for recovery or disposal in suitable receptacles.

- **Reference to other sections** No dangerous substances are released.

7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

- Prevent formation of dust.

- Ensure good ventilation/exhaustion at the workplace.

- **Information about fire - and explosion protection:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:** No special requirements.

- **Information about storage in one common storage facility:** Store away from foodstuffs.

- **Further information about storage conditions:**

- Store in cool, dry conditions in well sealed receptacles.

- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Control parameters**

- **Ingredients with limit values that require monitoring at the workplace:** Not required.

- **DNELs**

- WORKERS

- Long-term exposure - systemic effects

- Oral DN(M)EL

- DNEL (Derived No Effect Level): 7 mg/kg bw/day

- **PNECs**

- PNEC aqua (freshwater): 3.21 mg/L

- PNEC aqua (marine water): 0.32 mg/L

- PNEC aqua (intermittent releases): 5.48 mg/L

- PNEC STP: 90 mg/L

- PNEC sediment (freshwater): 288.9 mg/kg sediment dw

- PNEC sediment (marine water): 28.89 mg/kg sediment dw

- PNEC soil: 662.77 mg/kg soil dw

- PNEC oral: No potential for bioaccumulation

- **Additional information:** The lists valid during the making were used as basis.

- **Exposure controls**

- **Personal protective equipment:**

- Select PPE appropriate for the operations taking place taking into account the product properties.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 06.11.2012

Revision: 06.11.2012

Trade name: Magnesium Chloride Hexahydrate

(Contd. of page 4)

- **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
Avoid close or long term contact with the skin.
Do not eat, drink, smoke or sniff while working.
Do not breath dust
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
If there is a risk of inhaling dust and/or fumes, wear an FFP3-type mask.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Solid
Colour:	White
Odour:	Odourless
- **pH-value (50 g/l) at 20 °C:** 7
- **Change in condition**

Melting point/Melting range:	712 °C
Boiling point/Boiling range:	Undetermined.
- **Flash point:** Not applicable.
- **Flammability (solid, gaseous):** Product is not flammable.
- **Danger of explosion:** Product does not present an explosion hazard.
- **Density at 20 °C:** 1.57 g/cm³
- **Solubility in / Miscibility with water:** Easily soluble.
- **Other information** No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
The substance decomposes when slowly heated to 300 °C producing toxic and corrosive fumes including chlorine.

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

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Revision: 06.11.2012

Trade name: Magnesium Chloride Hexahydrate

(Contd. of page 5)

- **Possibility of hazardous reactions**
Anhydrous form dissolves in water liberating a considerable amount of heat.
Attacks metals in the presence of moisture.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:**
Finely powdered metals.
Chlorates.
Hydrocarbons (fuels).
Peroxycarboxy-2-furan (explosion).
- **Hazardous decomposition products:**
Chlorine
Magnesium oxide, chlorine, chlorine oxides.
When heated to high temperatures, may release toxic hydrogen chloride fumes; when heated slowly, releases chlorine at 300 °C.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values relevant for classification:**

7791-18-6 Magnesium chloride

Oral	LD50	>2000 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rabbit)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.
The substance is not subject to classification according to the latest version of the EU lists.

INHALATION RISK: A nuisance-causing concentration of airborne particles can be reached quickly when dispersed, especially if powdered

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

7791-18-6 Magnesium chloride

EC50	140 mg/kg (daphnia)
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- **Persistence and degradability** No further relevant information available.
- **Behaviour in environmental systems:**
- **Bioaccumulative potential** Product is not expected to bioaccumulate.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

(Contd. on page 7)

Safety data sheet

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Revision: 06.11.2012

Trade name: Magnesium Chloride Hexahydrate

(Contd. of page 6)

- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
- **European waste catalogue**
Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· UN-Number	
· ADR, ADN, IMDG, IATA	Void
· UN proper shipping name	
· ADR, ADN, IMDG, IATA	Void
· Transport hazard class(es)	
· ADR, ADN, IMDG, IATA	
· Class	Void
· Packing group	
· ADR, IMDG, IATA	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	-

15 Regulatory information

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

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:** Product safety department.