



Material Safety Data Sheet Magnesium Sulphate

Edition: 29/02/2012
In compliance with Regulation (EC)453/2010

1) Identification of substance/preparation and of the company undertaking

1.1) Product Identifier

Material	Magnesium Sulphate
CAS No	10034-99-8
REACH registration No	01-2119486789-11
Company	Inoxia Ltd 45.7 Dunsfold Park Stovolds Hill Cranleigh Surrey GU6 8TB Tel: 02032 909990 safety@inoxia.co.uk www.inoxia.co.uk

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

1.2.1) Relevant identified uses

Sector of Use

- SU0 Other
- SU1 Agriculture, forestry, fishery
- SU5 Manufacture of textiles, leather, fur
- SU6a Manufacture of wood and wood products 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)
- SU20 Health services
- SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- SU24 Scientific research and development

Product category

- PC0 Other
- PC1 Adhesives, sealants
- PC3 Air care products
- PC8 Biocidal products (e.g. Disinfectants, pest control)
- PC12 Fertilizers
- PC13 Fuels

- PC18 Ink and toners
- PC19 Intermediate
- PC20 Products such as ph-regulators, flocculants, precipitants, neutralization agents
- PC21 Laboratory chemicals
- PC23 Leather tanning, dye, finishing, impregnation and care products
- PC26 Paper and board dye, finishing and impregnation products: including bleaches and other processing aids
- PC29 Pharmaceuticals
- PC31 Polishes and wax blends
- PC34 Textile dyes, finishing and impregnating products; including bleaches and other processing aids
- PC35 Washing and cleaning products (including solvent based products)
- PC37 Water treatment chemicals
- PC39 Cosmetics, personal care products

Process category

- PROC0: Other
- 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 processes (synthesis) where opportunity for exposure arises
- PROC5 Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)
- PROC7 Industrial spraying
- PROC8a Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities
- PROC8b Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities
- PROC9 Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
- PROC10 Roller application or brushing
- PROC11 Non industrial spraying
- PROC13 Treatment of articles by dipping and pouring
- PROC14 Production of preparations or articles by tableting, compression, extrusion, palletisation
- PROC15 Use as laboratory reagent
- PROC19 Hand-mixing with intimate contact and only PPE available
- PROC24 High (mechanical) energy work-up of substances bound in materials and/or articles
- PROC26 Handling of solid inorganic substances at ambient temperature

Environmental release category

- ERC1 Manufacture of substances
- ERC2 Formulation of preparations
- 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)

- 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
- ERC8c Wide dispersive indoor use resulting in inclusion into or onto a matrix
- ERC8e Wide dispersive outdoor use of reactive substances in open systems
- ERC9b Wide dispersive outdoor use of substances in closed systems
- ERC11b Wide dispersive indoor use of long-life articles and materials with high or intended release (including abrasive processing)

Article category

- AC0 Other
- AC5 Fabrics, textiles and apparel
- AC6 Leather articles
- AC8 Paper articles

Application of the substance/the preparation

- Used in medicinal products and in various chemical processes. It is also used as a food additive (518: minerals salt, acidity regulator, firming agent)

2) Hazard Identification

2.1) Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

- Physical and chemical hazards: Not classified
- Human health: Not classified
- Environment: Not classified

Full text of H-phrases: see section 16

Classification according to Directive 67/548/EEC or 1999/45/EC

- Not classified

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

- No information

2.2) Label elements

Labelling according to Regulation (EC) No. 1272/2008 (CLP)

- None

2.3) Other hazards

This substance/mixture does not meet the PBT criteria of REACH, annex XIII.

3) Composition/Information on ingredients

- **Chemical characterization:** Substances
- **CAS No. Description:** 10034-99-8 Magnesium sulphate hexahydrate
- **Identification number(s):-** N/A

4) First Aid Measures

4.1) Description of first aid measures

- **General information:** Take affected persons out into the fresh air.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints. If necessary, restore normal breathing through standard first aid measures.
- **After skin contact:** Generally, the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** Rinse out mouth and then drink plenty of water. If symptoms persist consult doctor. Induce vomiting only, if affected person is fully conscious.

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

No further relevant information available.

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

No further relevant information available.

5) Firefighting Measures

5.1) Extinguishing media

- **Suitable extinguishing agents:** Not flammable. Use appropriate extinguishing media for the combustible material involved in the fire.
- **For safety reasons unsuitable extinguishing agents:** None.

5.2) Special hazards arising from the substance or mixture

Not combustible. Gives off corrosive and toxic fumes (or gases) in a fire

5.3) Advice for firefighters

Protective equipment: Wear fully protective suit. Firefighters should use self-contained breathing apparatus.

6) Accidental Release Measures

6.1) Personal precautions, protective equipment and emergency procedures

General measures: Keep public away from danger area. See section 8.2.

6.1.1) For non-emergency personnel

No additional information available

6.1.2) For emergency responders

No additional information available

6.2) Environmental precautions

Prevent entry to sewers and soil. Notify authorities if product enters sewers or public waters.

6.3) Methods and material for containment and cleaning up

Methods for cleaning up: Sweep or shovel spills into appropriate container for disposal. Avoid dust production..

6.4. Reference to other sections

See section 8 and 13 for more information.

7) Handling and Storage

7.1) Precautions for safe handling

- **Precautions for safe handling:** Do not breathe dust. Wash hands plentifully and other exposed areas with water after handling. Remove contaminated clothing and shoes. Wash clothing before re-using.
- **Packagings:** Even those that have been emptied, will retain product residue. Always obey safety warnings and handle empty packages as if they were full. Avoid all contact with this substance.
- **Hygiene measures:** When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eat, drink or smoke and when leaving work. Remove contaminated clothing and shoes

7.2) Conditions for safe storage, including any incompatibilities

Storage conditions: Store in dry, cool, well-ventilated area. Keep away from food, drink and animal feeding stuffs

7.3) Specific end use(s)

The identified uses for this product are detailed in section 1.2

8) Exposure Controls/Personal Protection

Additional information about design of technical facilities:

Mechanical ventilation may be required to maintain exposure levels below limits.

8.1) Control Parameters

Ingredients with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs

Workers: Long-term exposure - systemic effects

- Dermal DN(M)EL : 21.3 mg/kg bw/day
- Inhalation DN(M)EL : 37.6 mg/m³

General population: Long-term exposure - systemic effects:

- Dermal DN(M)EL : 12.8 mg/kg bw/day
- Inhalation DN(M)EL : 11.1 mg/m³
- Oral DN(M)EL : 12.8 mg/kg bw/day

PNECs

- PNEC aqua (freshwater): 0.68mg/L
- PNEC aqua (marine water): 0.068mg/L

- PNEC aqua (intermittent releases): 6.8mg/L
- PNEC STP 10mg/L
- PNEC sediment (freshwater): No or insufficient data available at present
- PNEC sediment (marine water): No or insufficient data available at present
- PNEC soil: No or insufficient data available at present
- PNEC oral: No or insufficient data available at present

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

8.2) Exposure controls

Appropriate engineering controls:

- Use as far as possible in a closed system. Provide a regular control of the atmosphere. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Local exhaust and general ventilation must be adequate to meet exposure standards. Please refer to the annex (exposure scenarios).
- **Hand protection:** Use gloves resistant to chemical products corresponding to EN 374:3. Take advice to gloves' manufacturer. Wash hands before breaks and at end of work.
- **Eye protection:** Wear safety glasses with side shields according EN 166.
- **Skin and body protection:** Wear closed protective clothing.
- **Respiratory protection:** Use respiratory protection mask according to EN 140 or EN 405 with filter type P3 according to EN 143:2000 or FFP3 according to EN 149:2001.
- **Environmental exposure controls:** Avoid release to the environment

9) Physical/Chemical Properties

Physical state	Solid.
Colour	White.
Odour	Odourless.
Odour threshold	Not applicable
pH	5.0 – 8.0 (50g/l at 20 °C)
Relative evaporation rate (butylacetate=1)	No data available
Melting point	>1,000(decomp) °C
Freezing point	No data available
Boiling point	No data available
Flash point	Not flammable
Self-ignition temperature	Not applicable
Decomposition temperature	No data available
Flammability (solid, gas)	Not flammable
Vapour pressure	Not applicable
Vapour density	No data available
Density at 20 °C	1.67g/cm ³
Bulk density	No data available
Solubility in/ Miscibility with water at 20°C	710g/l.
Log Pow	Not applicable
Log Kow	Not applicable
Viscosity, kinematic	Not applicable
Viscosity, dynamic	Not applicable
Explosive properties	Not explosive.

Oxidising properties Explosive limits	Non oxidizing material according to EC criteria. Not applicable
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9.1) Other Information

No additional information available

10) Stability/Reactivity**10.1) Reactivity**

No specific reactivity hazards associated with this product.

10.2) Chemical stability

Stable under normal conditions of handling and storage.

10.3) Possibility of hazardous reactions

Not relevant

10.4) Conditions to avoid

Not relevant

10.5) Incompatible materials

No specific, or groups of materials, are likely to react to produce a hazardous situation.

10.6) Hazardous decomposition products

Sulphur oxides (SO_x)

11) Toxicological Information**11.1) Information on toxicological effects****Acute toxicity:**

LD/LC50 values relevant for classification: 10034-99-8 Magnesium sulphate heptahydrate

Oral LD50	>2,000mg/kg (rat)
Acute toxicity Dermal LD50)	>2,000mg/kg (rat)

Primary irritant effect:

- **Skin contact-** no irritant effect
- **Eye contact-** no irritating effect
- **Sensitisation-** no sensitising 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.

Routes of exposure: The substance can be absorbed into the body by inhalation of its aerosol and by ingestion.

Inhalation risk: A harmful concentration of airborne particles can be reached quickly especially if powdered.

Effects of short-term exposure: The substance is mildly irritating to the eyes and the respiratory tract.

12) Ecological Information

Toxicity

12.1) Aquatic toxicity

No further relevant information available

12.2) Persistence and degradability

No further relevant information available

12.3) Bioaccumulative potential

Product is not expected to bioaccumulate

12.4) Mobility in soil

No further relevant information available

12.5) 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.
- **vPvB:** Not applicable.

Other adverse effects: No further relevant information available.

13) Disposal Consideration

13.1) Waste treatment methods

Recommendation:

Any disposal practice must be in compliance with all local and national laws and regulations. Do not dump into any sewers, on the ground, or into any body of water. Contact waste processors for recycling information. This product is a non-hazardous waste material suitable for approved solid waste landfills.

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

14.1) UN number

The product is not covered by international regulation on transport of dangerous goods (IMDG, IATA, ADR/RID).

14.2) UN proper shipping name

Not classified for transportation

14.3) Transport hazard class(es)

Not classified for transportation

14.4) Packing group

Not classified for transportation

14.5) Environmental hazards

Other information: Not environmental hazards known with this product.

14.6) Special precautions for user

Not classified for transportation.

14.7) Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable.

15) Regulatory Information

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

- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void

15.2) 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.

Abbreviations and acronyms:

- RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- ICAO: International Civil Aviation Organization
- ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- IMDG: International Maritime Code for Dangerous Goods
- IATA: International Air Transport Association
- GHS: Globally Harmonized System of Classification and Labelling of Chemicals
- EINECS: European Inventory of Existing Commercial Chemical Substances
- CAS: Chemical Abstracts Service (division of the American Chemical Society)
- LC50: Lethal concentration, 50 percent
- LD50: Lethal dose, 50 percent
- NOAEL: Non-Observed Adverse Effects Level
- LOAEC: Lowest Observable Adverse Effect Concentration
- EC50: Maximal effective concentration, 50 percent

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

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