

**Magnesium sulfate.7aq**

Revision: 03.11.2025

Product code: AC14.00964

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Magnesium sulfate.7aq

REACH Registration Number: 01-2119486789-11-XXXX

CAS No: 10034-99-8

EC No: 231-298-2

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

Reagents and laboratory chemicals

Only for laboratory and analysis purposes.

**Uses advised against**

Do not use for private purposes (household).

**1.3. Details of the supplier of the safety data sheet****Details of the supplier of the safety data sheet**

Company name: AnalytiChem Services, Unipessoal, Lda

Street: Rua de Júlio Dinis 676 7º

Place: N-4050-320 Porto

Telephone: +351 226002917

E-mail: info@analytichem.com

Contact person: SDS service department

E-mail: SDS@analytichem.com

Internet: www.analytichem.com

Responsible Department: SDS service department

**Supplier or manufacturer details**

Company name: AnalytiChem Belgium NV

Street: Industriezone "De Arend" 2

Place: B-8210 Zedelgem

Telephone: +32 50 28 83 20

E-mail: info.be@analytichem.com

Contact person: SDS service department

E-mail: SDS@analytichem.com

Responsible Department: AnalytiChem:

EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20

EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200

EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848

UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500

USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378

Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701

Australia: ORE Research &amp; Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333

**1.4. Emergency telephone number:**

+44 20 3807 3798 (CHEMTREC)

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**Further Information**

No data available

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

This substance is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

**2.2. Label elements****2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients****3.1. Substances**Sum formula:  $\text{MgSO}_4 \cdot 7 \text{H}_2\text{O}$ 

Molecular weight: 246,48 g/mol

**Relevant ingredients**

| CAS No     | Chemical name                                 |          |                       | Quantity |
|------------|---|----------|-----------------------|----------|
|            | EC No   | Index No | REACH No              |          |
|            | Classification (Regulation (EC) No 1272/2008) |          |                       |          |
| 10034-99-8 | Magnesium sulfate heptahydrate                |          |                       | 100 %    |
|            | 600-073-4                                     |          | 01-2119486789-11-XXXX |          |
|            |   |          |                       |          |

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

| CAS No     | EC No  | Chemical name                  | Quantity |
|------------|--|--------------------------------|----------|
|            | Specific Conc. Limits, M-factors and ATE               |                                |          |
| 10034-99-8 | 600-073-4  | Magnesium sulfate heptahydrate | 100 %    |
|            | dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 2000 mg/kg |                                |          |

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

No data available

**After inhalation**

Provide fresh air.

Call a doctor if you feel unwell.

**After contact with skin**

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

**After contact with eyes**

Rinse immediately carefully and thoroughly with eye-bath or water.

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**After ingestion**

Rinse mouth immediately and drink plenty of water.  
Call a doctor if you feel unwell.

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

Gastrointestinal complaints  
Vomiting

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

No data available

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**

Non-combustible solids  
Hazardous combustion products  
In case of fire may be liberated: Sulphur oxides

**5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.  
Avoid contact with skin, eyes and clothes.

**Additional information**

Suppress gases/vapours/mists with water spray jet.  
Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****For non-emergency personnel**

Provide adequate ventilation.  
Use personal protection equipment.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Consult an expert  
Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

No special environmental measures are necessary.

**6.3. Methods and material for containment and cleaning up****For containment**

Cover drains.  
Prevent spread over a wide area (e.g. by containment or oil barriers).  
Collect in closed and suitable containers for disposal.  
Take up carefully when dry. Take up dust-free and set down dust-free.

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

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**Other information**

- Provide adequate ventilation.
- Do not breathe dust/fume/gas/mist/vapours/spray.
- Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**6.4. Reference to other sections**

- Safe handling: see section 7
- Personal protection equipment: see section 8
- Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

- Handle and open container with care.
- Provide adequate ventilation.
- Avoid contact with skin, eyes and clothes.
- Avoid dust formation. Do not breathe dust.

**Advice on protection against fire and explosion**

- No special fire protection measures are necessary.

**Advice on general occupational hygiene**

- Take off contaminated clothing.
- Wash hands before breaks and after work.
- When using do not eat or drink.

**Further information on handling**

- Take off contaminated clothing and wash it before reuse.
- Wash hands before breaks and after work.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

- Keep container tightly closed and dry.

**Hints on joint storage**

- No special measures are necessary.

**Further information on storage conditions**

- storage temperature +5°C - +30°C

**7.3. Specific end use(s)**

- Laboratory chemicals

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters**

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**DNEL/DMEL values**

| CAS No                   | Substance                      |                |          |                   |
|--------------------------|--------------------------------|----------------|----------|-------------------|
| DNEL type                |                                | Exposure route | Effect   | Value             |
| 10034-99-8               | Magnesium sulfate heptahydrate |                |          |                   |
| Worker DNEL, long-term   |                                | inhalation     | systemic | 37,6 mg/m³        |
| Worker DNEL, long-term   |                                | dermal         | systemic | 21,3 mg/kg bw/day |
| Consumer DNEL, long-term |                                | inhalation     | systemic | 11,1 mg/m³        |
| Consumer DNEL, long-term |                                | dermal         | systemic | 12,8 mg/kg bw/day |
| Consumer DNEL, long-term |                                | oral           | systemic | 12,8 mg/kg bw/day |

**PNEC values**

| CAS No   | Substance                      |  |
|--|--------------------------------|--|
| Environmental compartment                        | Value                          |  |
| 10034-99-8                                       | Magnesium sulfate heptahydrate |  |
| Freshwater                                       | 0,68 mg/l                      |  |
| Freshwater (intermittent releases)               | 6,8 mg/l                       |  |
| Marine water                                     | 0,068 mg/l                     |  |
| Micro-organisms in sewage treatment plants (STP) | 10 mg/l                        |  |

**8.2. Exposure controls****Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Wear eye protection/face protection.

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) with the following specification (test according to EN 374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatrill® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatrill® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

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The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Skin protection**

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Filtering device with filter or ventilator filtering device of type: P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

|   |                        |
|---|------------------------|
| Physical state:   | solid                  |
| Colour:   | colourless             |
| Odour:  | odourless              |
| Odour threshold:  | not determined         |
| Melting point/freezing point:                             | not determined         |
| Boiling point or initial boiling point and boiling range: | not determined         |
| Flammability:   | not determined         |
| Lower explosion limits:                                   | not determined         |
| Upper explosion limits:                                   | not determined         |
| Flash point:  | X                      |
| Auto-ignition temperature:                                | not determined         |
| Decomposition temperature:                                | >150/1124 °C           |
| pH-Value (at 25 °C):                                      | 5,0 - 8,0 (50 g/l)     |
| Viscosity / kinematic:                                    | not determined         |
| Water solubility:<br>(at 20 °C)                           | 710 g/l                |
| Solubility in other solvents                              | not determined         |
| Dissolution rate:   | not determined         |
| Partition coefficient n-octanol/water:                    | not determined         |
| Dispersion stability:                                     | not determined         |
| Vapour pressure:  | not determined         |
| Vapour pressure:  | not determined         |
| Density (at 20 °C):                                       | 1,68 g/cm <sup>3</sup> |
| Relative density:   | not determined         |
| Bulk density:   | 900 kg/m <sup>3</sup>  |
| Relative vapour density:                                  | not determined         |
| Particle characteristics:                                 | not determined         |

**9.2. Other information**

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**Information with regard to physical hazard classes**

Explosive properties

not determined

Sustained combustibility:

No data available

Self-ignition temperature

Solid:

not determined

Gas:

not applicable

Oxidizing properties

Not oxidising.

**Other safety characteristics**

Evaporation rate:

not determined

Solvent separation test:

not determined

Solvent content:

not determined

Solid content:

100%

Sublimation point:

not determined

Softening point:

not determined

Pour point:

not determined

not determined:

Viscosity / dynamic:

not determined

Flow time:

not determined

**Further Information**

not determined

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No data available

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No data available

**10.4. Conditions to avoid**

Heat

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

In case of fire may be liberated:

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes**

**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

Based on available data, the classification criteria are not met.

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| CAS No     | Chemical name                  |                   |         |                     |                    |
|------------|--------------------------------|-------------------|---------|---------------------|--------------------|
|            | Exposure route                 | Dose              | Species | Source              | Method             |
| 10034-99-8 | Magnesium sulfate heptahydrate |                   |         |                     |                    |
|            | oral                           | LD50 > 2000 mg/kg | Rat     | Study report (2000) | OECD Guideline 425 |
|            | dermal                         | LD50 > 2000 mg/kg | Rat     | Study report (2010) | OECD Guideline 402 |

**Irritation and corrosivity**

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards****Endocrine disrupting properties**

No data available

**Other information**

No data available

**Further information**

Gastrointestinal complaints

Vomiting

**SECTION 12: Ecological information****12.1. Toxicity**

Based on available data, the classification criteria are not met.



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| CAS No     | Chemical name                  |               |           |                     |                    |                                      |
|------------|--------------------------------|---------------|-----------|---------------------|--------------------|--------------------------------------|
|            | Aquatic toxicity               | Dose          | [h]   [d] | Species             | Source             | Method                               |
| 10034-99-8 | Magnesium sulfate heptahydrate |               |           |                     |                    |                                      |
|            | Acute fish toxicity            | LC50 680 mg/l | 96 h      | Pimephales promelas | Publication (1997) | other: USEPA. 1991. EPA/600/4-90/027 |
|            | Acute crustacea toxicity       | EC50 720 mg/l | 48 h      | Daphnia magna       | Publication (1997) | other: USEPA. 1991. EPA/600/4-90/027 |

**12.2. Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of UK REACH.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**12.7. Other adverse effects**

No data available

**Further information**

Do not allow to enter into surface water or drains.

Discharge into the environment must be avoided.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Do not empty into drains.

**Contaminated packaging**

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**SECTION 14: Transport information****Land transport (ADR/RID)****14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

**14.2. UN proper shipping name:**

No dangerous good in sense of this transport regulation.

**14.3. Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

**14.4. Packing group:**

No dangerous good in sense of this transport regulation.

**Inland waterways transport (ADN)****14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

**14.2. UN proper shipping name:**

No dangerous good in sense of this transport regulation.

**14.3. Transport hazard class(es):**

No dangerous good in sense of this transport regulation.

**14.4. Packing group:**

No dangerous good in sense of this transport regulation.

**Marine transport (IMDG)****14.1. UN number or ID number:**

No dangerous good in sense of this transport regulation.

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**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.

**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.

**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** No dangerous good in sense of this transport regulation.

**14.2. UN proper shipping name:** No dangerous good in sense of this transport regulation.

**14.3. Transport hazard class(es):** No dangerous good in sense of this transport regulation.

**14.4. Packing group:** No dangerous good in sense of this transport regulation.

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

No dangerous good in sense of this transport regulation.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Information according to Directive 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 1,9,12.

**Abbreviations and acronyms**

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

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Provide appropriate information, instructions and training to users