

Section 1 - Product and company identification

1.1 Product Identifier

Magnesium sulphate n-hydrate ($\text{MgSO}_4, n\text{H}_2\text{O}$)

CAS No [7487-88-9] – EINECS No [231-298-2]

REACH Registration number: 01-2119486789-11-xxxx

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

Chemical basic material

Recommended uses:

1. Manufacture, processing and distribution of substances and mixtures
2. Use in laboratories
3. Use as an intermediate
4. Use in adhesives and sealants
5. Raw material for the fertilizer
6. Raw material for the pharmaceuticals
7. Raw material for the ink and toners
8. Raw material for the Cosmetics, personal care products
9. Additive for feed industry

1.3 Details of the supplier of the safety data sheet

Importer : MILLENIS SAS - 23, rue Jeanne d'Arc, 44000 NANTES, France

Tel : + 33 2 40 89 94 35 @ : fds@millenis.com

1.4 Emergency telephone number

ORFILA (INRS): +33 (0)1 45 42 59 59

Section 2- Hazards identification

2.1 Classification of the substance or mixture

According to EC regulation EC 1272/2008: classified as not hazardous

2.2 Label elements

Not applicable

2.3 Other hazards

Due to his powder form, it should be handle with precaution to avoid dust formation.

Section 3 - Composition/information on ingredients

3.1 Substances

Main constituant : Magnesium sulphate

Product	Approximate % by weight	Chemical formula	Molecular weight (g/mol)	CAS Number	EINECS Number
Magnesium sulphate anhydrous	98-100%	MgSO_4	120.4	7487-88-9	231-298-2
Magnesium sulphate monohydrate	80-100%	$\text{MgSO}_4 \cdot \text{H}_2\text{O}$	138.3	14168-73-1	
Magnesium sulphate heptahydrate	98-100%	$\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$	246.5	10034-99-8	

3.2 Mixtures

Not applicable

Section 4 -First aid measures

4.1 Description of first aid measures

If inhaled: Move to fresh air. If breathing is difficult, give oxygen and get for a medical advice.

If on skin: Wash off with water and soap. Remove contaminated clothing.

If in eyes: Rinse with plenty of water for several minutes. Get a medical advice if necessary.

If ingested: Do not induce vomiting. Rinse mouth, drink water. Get medical advice in case of troubles.

4.2 Most important symptoms and effects, both acute and delayed

No data available

4.3 Indication of any immediate medical attention and special treatment needed

No special measures are required

Section 5 - Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media: non combustible, use extinguishing media appropriate for the surrounding fire.

For safety reasons do not used: CO2 or halon.

5.2 Special hazards arising from the substance or mixture

The substance is not flammable and not combustible but dangerous vapors may be generated: sulphur oxides.

5.3 Advice for firefighters

Wear a self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and protective clothing. Suppress gases/vapors/mists with water spray jet. Do not allow water used to extinguish fire to enter drains, ground or waterways.

Section 6 - Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Avoid the formation of dust. Do not breathe dust. Use personal protective equipment.

6.2 Environmental precautions

Do not allow to penetrate into soil or drains. Avoid release to the environment.

6.3 Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid the formation of dust.

6.4 Reference to other sections

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Section 7: Handling and storage

7.1 Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Avoid contact with the substance and the formation of dust. Do not eat, drink and fume while handling product.

7.2 Conditions for safe storage, including any incompatibilities

Store in closed container; in a fresh, dry and well ventilated place.

7.3 Specific end use(s)

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Section 8: Exposure controls/personal protection**8.1 Control parameters**

Does not contain substances with Occupational Exposure Limits (OELs).

DNEL Workers, Long Term:

Inhalative: 37,6 mg/m³

Dermal: 21,3 mg/kg/bw/d

DNEL Consumers, Long Term:

Inhalative: 11,1 mg/m³

Dermal: 12,8 mg/kg/bw/d

Oral: 12,8 mg/kg/bw/d

8.2 Exposure controls

Respiratory protection: in case of dust, use particulates filter P1 according to EN143.

Hand protection: Protective gloves according to EN374 – Nitrile rubber – layer thickness: 0,11mm. Breakthrough time > 480min

Eye protection: Tightly sealed safety glasses according to EN166.

Skin protection: Wear suitable protective clothing.

Industrial measures: Use adequate exhaust ventilation. Work place should be equipped with a shower and an eye rinsing apparatus.

No smoking, eating and drinking at workplace. Washing hands before breaks and after works. Take a shower after work.

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

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|------------------------------|--|
| ▪ Aspect | : Solid – White powder |
| ▪ Odour | : odourless |
| ▪ pH | : 7.9 at 25°C, 50g/L |
| ▪ Melting point | : decomposes at ~ 1127°C |
| ▪ Relative density | : 2.66 |
| ▪ Solubility in water (20°C) | : Very soluble in water – 360g/L at 20°C |
| ▪ Flammability | : Non flammable |
| ▪ Explosive properties | : Not explosive |
| ▪ Oxidising properties | : No oxidising properties |

9.2 Other information

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Section 10: Stability and reactivity**10.1 Reactivity**

Hygroscopic

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

No particularly hazards known

10.4 Conditions to avoid

Incompatible materials, high temperatures, moisture.

10.5 Incompatible materials

Strong oxidising or reducing agents, acid halides and anhydrides, ethoxy ethyl alcohols, arsenates, phosphorus halides, tartrates, thionyl chloride...

10.6 Hazardous decomposition products

In the presence of high temperature, carbon dioxide, sulphur dioxide and sulphur trioxide can be generated.

Section 11: Toxicological information**11.1 Information on toxicological effects**

Acute toxicity:

LD50 Rat, oral: > 2000mg/kg

LD50 Rat, dermal: > 2000mg/kg

After swallowing of large amounts: Nausea, vomiting, diarrhea

NOAEL dermal : 256mg/kg bw/d

NOAEL inhalative: 222mg/m³

NOAEL oral: 256mg/kg bw/d

Section 12: Ecological information**12.1 Toxicity**

Aquatic toxicity: IC50 *Desmodesmus subspicatus*: 2700mg/L/72h

Bacterial toxicity: EC50 *Photobacterium phosphoreum*: 8400mg/L/30min

Daphnia toxicity: EC50 *Daphnia magna*: 1700 mg/L/24h

Fish toxicity: LC50 *Gambusia affinis*: 15500mg/L/96h

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available – avoid release into the environment

12.5 Results of PBT and vPvB assessment

The substance is not PBT / vPvB.

12.6 Other adverse effects

No data available

Section 13 – Disposal considerations

13.1 Waste treatment methods

Product: 06 03 14 = Wastes from the MFSU of salts and their solutions and metallic oxides.
Dispose of waste and contaminated packaging according to applicable legislation.

Section 14 – Transport information

14.1 UN number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not regulated for transport

14.4 Packing group

Not regulated for transport

14.5 Environmental hazards

Not regulated for transport

14.6 Special precautions for user

Refer to chapter 7 and 8.

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

Not applicable

Section 15 – Regulatory information

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

Germany: Storage class = 13 "Non-combustible solids"

Water Hazard Class = 1 "Slightly hazardous to water (WGK catalog number 366)"

15.2 Chemical safety assessment

A chemical safety assessment has been carried out.

Section 16 – Other information

Modifications from previous version are indicated in colour in the text.

All information and instructions provided in this Safety data sheet (SDS) are based on the current state of scientific and technical knowledge at the date indicated on the present SDS. The information applies to the product as such. It is the responsibility of the person receiving this SDS to ensure that the information contains here is properly read and understood by all people who may use, handle, dispose or any way come in contact with the product.