

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Revision Date 17.09.2018

Version 1.2

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

Catalogue No.	106067
Product name	Magnesium sulfate anhydrous for analysis EMSURE®
REACH Registration Number	01-2119486789-11-XXXX
CAS-No.	7487-88-9

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

Identified uses	Reagent for analysis For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).
-----------------	--

1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt *Germany* Telefon:+49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com
Regional representation	Merck Sdn. Bhd. (Co. No: 178145), No. 4, Jalan U1/26, Section U1, Hicom Glenmarie Industrial Park, 40150 Shah Alam, Selangor. Tel: 03-74943688 Fax: 03-74910850

1.4 Emergency telephone number	Customer Call Centre: + 62 0800 140 1253 (Toll Free)
---	---

SECTION 2. Hazards identification**2.1 Classification of the substance or mixture**

This substance is not classified as dangerous according to European Union legislation.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. 106067
Product name Magnesium sulfate anhydrous for analysis EMSURE®

2.2 Label elements

Labelling according to CLASS regulations 2013

Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

Formula	MgSO ₄	MgO ₄ S (Hill)
EC-No.	231-298-2	
Molar mass	120.37 g/mol	

Remarks	No disclosure requirement according to Regulation (EC) No. 1907/2006.
---------	---

3.2 Mixture

Not applicable

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/
shower.

After eye contact: rinse out with plenty of water. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	106067
Product name	Magnesium sulfate anhydrous for analysis EMSURE®

4.2 Most important symptoms and effects, both acute and delayed

Diarrhoea, Nausea, Vomiting

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters

In the event of fire, wear self-contained breathing apparatus.

Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	106067
Product name	Magnesium sulfate anhydrous for analysis EMSURE®

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Hygiene measures

Change contaminated clothing. Wash hands after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. 106067
Product name Magnesium sulfate anhydrous for analysis EMSURE®

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0.11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. 106067
Product name Magnesium sulfate anhydrous for analysis EMSURE®

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).

Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances

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 let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	solid
Colour	white
Odour	odourless
Odour Threshold	No information available.
pH	ca. 7.9 at 50 g/l 25 °C
Melting point	1,124 °C (Lit.)

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	106067
Product name	Magnesium sulfate anhydrous for analysis EMSURE®

Boiling point	No information available.
Flash point	does not flash
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure	No information available.
Relative vapour density	No information available.
Density	2.66 g/cm ³ at 20 °C
Relative density	No information available.
Water solubility	300 g/l at 20 °C
Partition coefficient: n- octanol/water	Not applicable for inorganic substances
Auto-ignition temperature	No information available.
Decomposition temperature	1,124 °C

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	106067
Product name	Magnesium sulfate anhydrous for analysis EMSURE®

Viscosity, dynamic	No information available.
--------------------	---------------------------

Explosive properties	Not classified as explosive.
----------------------	------------------------------

Oxidizing properties	none
----------------------	------

9.2 Other data

Ignition temperature	not combustible
----------------------	-----------------

Bulk density	ca.600 kg/m ³
--------------	--------------------------

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

no information available

10.4 Conditions to avoid

Heating (decomposition).

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

in the event of fire: See section 5.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. 106067
Product name Magnesium sulfate anhydrous for analysis EMSURE®

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50 Rat: > 2,000 mg/kg

OECD Test Guideline 425

Symptoms: After uptake of large quantities:, Nausea, Vomiting, Diarrhoea

Acute inhalation toxicity

This information is not available.

Acute dermal toxicity

This information is not available.

Skin irritation

This information is not available.

Eye irritation

This information is not available.

Sensitisation

Local lymph node assay (LLNA) Mouse

Result: negative

Method: OECD Test Guideline 429

Germ cell mutagenicity

Genotoxicity in vitro

In vitro mammalian cell gene mutation test

Mouse lymphoma test

Result: negative

Method: OECD Test Guideline 476

Carcinogenicity

This information is not available.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	106067
Product name	Magnesium sulfate anhydrous for analysis EMSURE®

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

This information is not available.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

Toxic effects are only to be expected at very high doses.

However, when the product is handled appropriately, hazardous effects are unlikely to occur.

Therapeutically used substance.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish

LC50 *Gambusia affinis* (Mosquito fish): 15,500 mg/l; 96 h

(IUCLID)

Toxicity to daphnia and other aquatic invertebrates

EC50 *Daphnia magna* (Water flea): 1,700 mg/l; 24 h

(IUCLID)

Toxicity to algae

IC50 *Desmodesmus subspicatus* (green algae): 2,700 mg/l; 72 h

(IUCLID)

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	106067
Product name	Magnesium sulfate anhydrous for analysis EMSURE®

Toxicity to bacteria

EC50 Photobacterium phosphoreum: 84,000 mg/l; 30 min

(IUCLID)

12.2 Persistence and degradability

Biodegradability

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

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

Not applicable for inorganic substances

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Discharge into the environment must be avoided.

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. 106067
Product name Magnesium sulfate anhydrous for analysis EMSURE®

SECTION 13. Disposal considerations

Waste treatment methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

According to Quality Environment Regulation (Scheduled Waste) 2005, waste need to be sent to designated premise for recycle, treatment or disposal. Please contact Kualiti Alam for waste classification and correct disposal method.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

Sea transport (IMDG)

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No.	106067
Product name	Magnesium sulfate anhydrous for analysis EMSURE®

14.1 - 14.6 Not classified as dangerous in the meaning of transport regulations.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

SECTION 15. Regulatory information

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

All national and local regulations, including Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013, if applicable to the use, should be observed.

National legislation

Storage class 10 - 13

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Training advice

Provide adequate information, instruction and training for operators.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

Merck Sdn. Bhd. (Co. No: 178145), No. 4, Jalan U1/26, Section U1, Hicom Glenmarie Industrial Park, 40150 Shah Alam, Selangor. Tel: 03-74943688 Fax: 03-74910850

SAFETY DATA SHEET

according to Occupational Safety And Health (Classification,
Labelling And Safety Data Sheet Of Hazardous Chemicals)
Regulations 2013 (CLASS 2013)

Catalogue No. 106067

Product name Magnesium sulfate anhydrous for analysis EMSURE®

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.