



# magnesium sulphate

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Date of issue: 4/2/2019 Revision date: 4/2/2019 Supersedes: 7/28/2016 Version: 4.1

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form	: Substance
Trade name	: ESTA® Kieserit M ESTA® Kieserit fine ESTA® Kieserit 26 fine ESTA® Kieserit gran.
Chemical name	: magnesium sulphate
EC-No.	: 231-298-2
CAS-No.	: 7487-88-9

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Fertilizer

##### 1.2.2. Uses advised against

No additional information available

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

##### Supplier

K+S KALI GmbH  
Bertha-von-Suttner-Str. 7  
34131 Kassel - Germany  
T (+49) 561 9301-0 - F (+49) 561 9301-1753

##### Email competent person

sds@kft.de

#### 1.4. Emergency telephone number

Emergency number : For Hazardous Materials [or Dangerous Goods] Incidents  
Spill, Leak, Fire, Exposure, or Accident  
Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300  
Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Not classified

##### Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

#### 2.2. Label elements

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

No labelling applicable

#### 2.3. Other hazards

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

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Name	Product identifier	%
magnesium sulphate	(CAS-No.) 7487-88-9 (EC-No.) 231-298-2	> 80

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### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general	: In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media	: The product is not flammable. Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	: No information available.

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

Hazardous decomposition products in case of fire	: Toxic fumes may be released. Sulphur oxides. Metal oxides.
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### 5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### 6.1.1. For non-emergency personnel

Emergency procedures	: Ventilate spillage area.
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#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
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### 6.2. Environmental precautions

Do not allow into drains or water courses. Avoid sub-soil penetration. Prevent entry to sewers and public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Mechanically recover the product. Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.
Other information	: Dispose of materials or solid residues at an authorized site. Disposal must be done according to official regulations.

### 6.4. Reference to other sections

Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8. For further information refer to section 13.

## SECTION 7: Handling and storage

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### 7.1. Precautions for safe handling

Precautions for safe handling	: Ensure good ventilation of the work station. Wear personal protective equipment.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	: Store in a well-ventilated place. Keep cool.
Information about storage in one common storage facility	: Keep away from food, drink and animal feeding stuffs.

### 7.3. Specific end use(s)

Fertilizer.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

magnesium sulphate (7487-88-9)	
<b>DNEL/DMEL (Workers)</b>	
Long-term - systemic effects, dermal	21.3 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	37.6 mg/m <sup>3</sup>
<b>DNEL/DMEL (General population)</b>	
Long-term - systemic effects, oral	12.8 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	11.1 mg/m <sup>3</sup>
Long-term - systemic effects, dermal	12.8 mg/kg bodyweight/day
<b>PNEC (Water)</b>	
PNEC aqua (freshwater)	0.68 mg/l
PNEC aqua (marine water)	0.068 mg/l
PNEC aqua (intermittent, freshwater)	6.8 mg/l
<b>PNEC (STP)</b>	
PNEC sewage treatment plant	10 mg/l

### 8.2. Exposure controls

#### Appropriate engineering controls:

Ensure good ventilation of the work station.

#### Hand protection:

In case of repeated or prolonged contact wear gloves. Nitrile rubber. EN 374. Gloves must be replaced after each use and whenever signs of wear or perforation appear. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer

#### Eye protection:

Safety glasses. EN 166

#### Skin and body protection:

Wear suitable protective clothing. EN 340

#### Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. Dust production: dust mask with filter type P2. EN 143

#### Environmental exposure controls:

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

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Physical state	: Solid
Appearance	: Crystalline powder.
Colour	: Light grey.
Odour	: odourless.
Odour threshold	: No data available
pH	: 8 - 10 (25 °C, Aqueous solution)
Relative evaporation rate (butylacetate=1)	: Not applicable
Melting point	: Not applicable
Freezing point	: Not applicable
Boiling point	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: > 700 °C
Flammability (solid, gas)	: Not flammable Non flammable.
Vapour pressure	: Not applicable
Relative vapour density at 20 °C	: Not applicable
Relative density	: Not applicable
Density	: 2.6 g/cm <sup>3</sup>
Solubility	: Water: 342 g/l Soluble
Log Pow	: Not applicable
Viscosity, kinematic	: No data available
Viscosity, dynamic	: Not applicable
Explosive properties	: Product is not explosive.
Oxidising properties	: Not applicable.
Explosive limits	: Not applicable

### 9.2. Other information

Bulk density : 1280 - 1380 kg/m<sup>3</sup>

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Product is stable.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

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### magnesium sulphate (7487-88-9)

LD50 oral rat	> 2000 mg/kg
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LD50 dermal rat	> 2000 mg/kg
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Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)  
pH: 8 - 10 (25 °C, Aqueous solution)

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)  
pH: 8 - 10 (25 °C, Aqueous solution)

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Not relevant)

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Acute aquatic toxicity : Not classified (Based on available data, the classification criteria are not met)

Chronic aquatic toxicity : Not classified (Based on available data, the classification criteria are not met)

### magnesium sulphate (7487-88-9)

LC50 fish 1	680 mg/l (static; 96 h; Pimephales promelas)
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EC50 Daphnia 1	720 mg/l (static; 48 h; daphnia magna)
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### 12.2. Persistence and degradability

### magnesium sulphate (7487-88-9)

Persistence and degradability	Not applicable.
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### 12.3. Bioaccumulative potential

### magnesium sulphate (7487-88-9)

Log Pow	Not applicable
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Bioaccumulative potential	Not applicable.
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### 12.4. Mobility in soil

### magnesium sulphate (7487-88-9)

Ecology - soil	Not applicable.
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### 12.5. Results of PBT and vPvB assessment

### magnesium sulphate (7487-88-9)

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

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

### 12.6. Other adverse effects

Other adverse effects : No additional information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

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Waste treatment methods	: Disposal must be done according to official regulations. European waste catalogue. Do not dispose of with domestic waste. Do not discharge into drains or the environment.
Product/Packaging disposal recommendations	: Entrust the uncontaminated packaging to a licensed waste contractor. Comply with local regulations for disposal. Do not re-use empty containers without proper cleaning or reconditioning.
European List of Waste (LoW) code	: 02 01 09 - agrochemical waste other than those mentioned in 02 01 08

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.2. UN proper shipping name</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.3. Transport hazard class(es)</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.4. Packing group</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
<b>14.5. Environmental hazards</b>				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Not applicable

#### Transport by sea

Not applicable

#### Air transport

Not applicable

#### Inland waterway transport

Not applicable

#### Rail transport

Not applicable

### 14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

### SECTION 15: Regulatory information

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

##### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

magnesium sulphate is not on the REACH Candidate List

magnesium sulphate is not on the REACH Annex XIV List

magnesium sulphate is not subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

magnesium sulphate is not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC

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Other information, restriction and prohibition regulations

: A safety data sheet is not required for this product under Article 31 of REACH. This Product Safety Information Sheet has been created on a voluntary basis. REGULATION (EC) No 2003/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 October 2003 relating to fertilisers.

### 15.1.2. National regulations

No additional information available

## 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Indication of changes:			
General revision.			
Section	Changed item	Change	Comments
8.1	DNEL	Added	
8.1	PNEC	Added	
13.1	European List of Waste (LoW) code	Added	
Abbreviations and acronyms:			
IMDG	International Maritime Dangerous Goods		
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road		
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways		
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail		
IATA	International Air Transport Association		
GHS	Globally Harmonised System of Classification and Labelling of Chemicals		
CAS	Chemical Abstract Service		
LD50	Median lethal dose		
LC50	Median lethal concentration		
PBT	Persistent Bioaccumulative Toxic		
vPvB	Very Persistent and Very Bioaccumulative		
ATE	Acute Toxicity Estimate		
BCF	Bioconcentration factor		
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008		
DMEL	Derived Minimal Effect level		
DNEL	Derived-No Effect Level		
EC50	Median effective concentration		
IARC	International Agency for Research on Cancer		
IATA	International Air Transport Association		
LOAEL	Lowest Observed Adverse Effect Level		
NOAEC	No-Observed Adverse Effect Concentration		
NOAEL	No-Observed Adverse Effect Level		
NOEC	No-Observed Effect Concentration		
OECD	Organisation for Economic Co-operation and Development		
PNEC	Predicted No-Effect Concentration		
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006		
SDS	Safety Data Sheet		
STP	Sewage treatment plant		

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TLM	Median Tolerance Limit
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Data sources : Information provided by the manufacturer. ECHA (European Chemicals Agency).

Department issuing data : KFT Chemieservice GmbH  
specification sheet: Im Leuschnerpark, 3 64347 Griesheim  
Postfach 1451 64345 Griesheim  
Germany

Phone: +49 6155-8981-400 Fax: +49 6155 8981-500  
Safety Data Sheet Service: +49 6155 8981-522

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KFT SDS EU 07

*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.*