



EPSO Top

Safety Data Sheet

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

Date of issue: 01/11/2019 Revision date: 01/11/2019 Version: 10.0

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

1.1. Product identifier

Product form	: Substance
Trade name	: EPSO Top
Chemical name	: Magnesium sulfate heptahydrate
EC-No.	: 231-298-2 (anhydrate)
CAS-No.	: 10034-99-8
REACH authorisation exemptions	: Exempted from REACH registration Annex V

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

Manufacturer/Supplier

K+S Minerals and Agriculture 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

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Name	Product identifier	%
Magnesium sulfate heptahydrate	(CAS-No.) 10034-99-8 (EC-No.) 231-298-2 (anhydrate)	> 99

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	: Use extinguishing media appropriate for surrounding fire. Water spray. Dry powder. Foam.
Unsuitable extinguishing media	: Strong water jet.

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.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	: Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal.
Other information	: 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.

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SECTION 7: Handling and storage

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

No additional information available

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. 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. Please follow the instructions related to the permeability and the penetration time provided by the manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

Eye protection:

In case of dust production: protective goggles. 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. Breathing equipment is only to be used in order to handle the residual risk of short term jobs if all other risk minimizing measures have been carried out e.g. retention and/or local exhaust

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid
Appearance : Crystalline powder.
Colour : white.
Odour : none to slight.
Odour threshold : No data available
pH : 8 - 11 (Aqueous solution)
Relative evaporation rate (butylacetate=1) : Not applicable
Melting point : 770 °C
Freezing point : Not applicable
Boiling point : Not applicable
Flash point : Not applicable
Auto-ignition temperature : Not applicable
Decomposition temperature : Not applicable
Flammability (solid, gas) : Not flammable
Non flammable

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Vapour pressure	: Not applicable
Relative vapour density at 20 °C	: Not applicable
Relative density	: Not applicable
Density	: 1.7 g/cm ³
Solubility	: Water: 342 g/l Soluble
Log Pow	: Not applicable
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: Product is not explosive.
Oxidising properties	: Non oxidizing.
Explosive limits	: Not applicable

9.2. Other information

Bulk density	: 980 kg/m ³
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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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

No additional information available

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)

Magnesium sulfate heptahydrate (10034-99-8)	
LD50 oral rat	> 2000 mg/kg ((OECD 425 method); Read-across)
LD50 dermal rat	> 2000 mg/kg ((OECD 402 method); Read-across CAS 7778-80-5)
Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 8 - 11 (Aqueous solution)
Additional information	: Read-across CAS 7778-80-5
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 8 - 11 (Aqueous solution)
Additional information	: Not irritating to rabbits on ocular application (OECD 405 method) Read-across CAS 7778-80-5
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: mouse (OECD 429 method) Read-across CAS 7487-88-9

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Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Additional information	: (OECD 476 method) Read-across CAS 7487-88-9
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)
Additional information	: (OECD 422 method) Read-across CAS 7778-80-5
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)
Additional information	: (OECD 422 method) (OECD 453 method) Read-across CAS 7778-80-5, CAS 7783-20-2
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.
Hazardous to the aquatic environment, short-term (acute)	: Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic)	: Not classified (Based on available data, the classification criteria are not met)

Magnesium sulfate heptahydrate (10034-99-8)

LC50 fish 1	680 mg/l (static; 96 h; Pimephales promelas; Read-across CAS 7778-80-5)
EC50 Daphnia 1	720 mg/l (static; 48 h; daphnia magna; Read-across)

12.2. Persistence and degradability

Magnesium sulfate heptahydrate (10034-99-8)

Persistence and degradability	Not applicable for inorganic substances.
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12.3. Bioaccumulative potential

Magnesium sulfate heptahydrate (10034-99-8)

Log Pow	Not applicable
Bioaccumulative potential	Not applicable for inorganic substances.

12.4. Mobility in soil

Magnesium sulfate heptahydrate (10034-99-8)

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

Magnesium sulfate heptahydrate (10034-99-8)

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.
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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. Product is used as a fertilizer. Check the possibility for agricultural use before landfilling. Do not dispose of with domestic waste.
Product/Packaging disposal recommendations	: Recycle or dispose of in compliance with current legislation.
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
14.1. UN number				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

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 sulfate heptahydrate is not on the REACH Candidate List

Magnesium sulfate heptahydrate is not on the REACH Annex XIV List

EPSO Top 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.

EPSO Top is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Other information, restriction and prohibition regulations

: REGULATION (EC) No 2003/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 October 2003 relating to fertilisers. 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.

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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

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
TLM	Median Tolerance Limit

Data sources : ECHA (European Chemicals Agency).

Department issuing data : KFT Chemieservice GmbH
specification sheet: Im Leuschnerpark. 3 64347 Griesheim
Germany

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

Contact person : Dr. Corinna Borner

Other information : The versioning of the safety data sheet for this product begins with the version number 10.0 due to a change of the company's name on November 1, 2019.

KFT SDS EU 07

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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.