



SAFETY DATA SHEET SYMBIO KIESERITE

SDS COMPLETED 8TH JUNE 2015

VERSION 01
REVISION NUMBER: N/A

1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Name of the substance	Magnesium Sulphate
Identification number	7487-88-9
Registration number	-
Synonyms	Kieserite, monohydrate,

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

Identified uses	Fertiliser.
Uses advised against	None known.

1.3. Details of the supplier of the safety data sheet

Company name:

Eco Solutions (C&R) Ltd T/a Symbio
Unit 8
Coopers Place
Combe Lane
Wormley
Surrey
GU8 5SZ

Tel: +44 (0) 1428 685762

Fax: +44 (0)1428 685702

Email: info@symbio.co.uk

1.4. Emergency telephone number

Emergency phone No. +44 (0) 1428 685762

2: Hazards identification

2.1. Classification of the substance or mixture

The substance has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

Classification according to Directive 67/548/EEC or 1999/45/EC as amended

This substance does not meet the criteria for classification according to Directive 67/548/EEC as amended.

Classification according to Regulation (EC) No 1272/2008 as amended

This substance does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

Hazard summary

Physical hazards Not classified for physical hazards.

Health hazards Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects.

Environmental hazards Not classified for hazards to the environment.

Specific hazards Dust may irritate the respiratory tract, skin and eyes. Magnesium sulfate is excreted by the kidneys at a rate that varies from one patient to another but that is directly proportional to the serum concn and glomerular filtration. Ingestion: Since magnesium salts are slowly absorbed, abdominal pain, vomiting and diarrhea may be the only symptoms. However, if elimination is blocked by bowel blockage or other reasons, CNS depression, lack of reflexes, hypocalcemia (deficiency of calcium in the blood) may occur.

Main symptoms Signs and symptoms may include: May cause redness and pain. Abdominal cramps. Diarrhoea. Coughing.



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2.2. Label elements

Label according to Regulation (EC) No. 1272/2008 as amended

Contains:	Magnesium sulphate
Identification number	7487-88-9
Hazard pictograms	
Signal word	None.
Hazard statements	The substance does not meet the criteria for classification.
Precautionary statements	
Prevention	Observe good industrial hygiene practices.
Response	Wash hands after handling.
Storage	Store away from incompatible materials.
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulations.
Supplemental label information	Not applicable.

2.3. Other hazards

Not assigned.

3. Composition/information on ingredients

3.1. Substances

General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Magnesium sulphate	99-100	7487-88-9	-	-	
Classification:	DSD: -	231-298-2			
	CLP: -				

Composition comments The full text for all R- and H-phrases is displayed in section 16. All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First aid measures

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

4.1. Description of first aid measures

Inhalation	Move person to fresh air. Get medical attention if any discomfort continues.
Skin contact	Wash off with plenty of water. Get medical attention if irritation develops or persists.
Eye contact	Do not rub eye. Flush thoroughly with water. If irritation occurs, get medical assistance.
Ingestion	Rinse mouth thoroughly if dust is ingested. Get medical attention if any discomfort occurs.

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

Signs and symptoms may include: May cause redness and pain. Abdominal cramps. Diarrhoea. Coughing.

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

Calcium directly antagonizes neuromuscular and cardiovascular effects of magnesium. Use for patients with symptomatic hypermagnesemia that is causing cardiac effects or respiratory distress.



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8. Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits No exposure limits noted for ingredient(s).
Biological limit values No biological exposure limits noted for the ingredient(s).
Recommended monitoring procedures Not available.
Derived no-effect level (DNEL)

Components	Type	Route	Value	Form
Magnesium sulphate (CAS 7487-88-9)	General Population	Dermal	12.8 mg/kg/day	Long-term - systemic effects
		Inhalation	11.1 mg/m ³	Long-term - systemic effects
		Oral	12.8 mg/kg/day	Long-term - systemic effects
	Workers	Dermal	21.3 mg/kg/day	Long-term - systemic effects
		Inhalation	37.6 mg/m ³	Long-term - systemic effects

Predicted no effect concentrations (PNECs)

Components	Type	Route	Value	Form
Magnesium sulphate (CAS 7487-88-9)	Aqua (freshwater)	Water	0.68 mg/l	
	Aqua (intermittent releases)	Water	6.8 mg/l	
	Aqua (marine water)	Water	0.068 mg/l	
	Sewage Treatment Plant	N/A	10 mg/l	

8.2. Exposure controls

Appropriate engineering controls

Provide adequate ventilation. The risk of inhalation of dust must be minimised as much as possible.

Individual protection measures, such as personal protective equipment

General information Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection Risk of contact: Wear dust goggles.

Skin protection

- Hand protection Risk of contact: Wear protective gloves. Rubber gloves are recommended. Suitable gloves can be recommended by the glove supplier.

- Other No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Respiratory protection In case of inadequate ventilation use suitable respirator. Use respiratory equipment with particle filter, type P2.

Thermal hazards Not available.

Hygiene measures Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Environmental exposure controls Environmental manager must be informed of all major spillages.

9. Physical and chemical properties



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9.1.1 Information on basic physical and chemical properties

Appearance	Grey granules
Physical state	Solid.
Form	Granules
Colour	Grey
Odour	Odourless.
Odour threshold	Not available.
pH	5.4 - 10 (5% solution) Aqueous solution is neutral or slightly acid.
Melting point/freezing point	1124 °C (2055.2 °F) Decomposes. Loses all waters of hydration @ 250C (482F) / 1067 °C (1952.6°F)
Initial boiling point and boiling range	Not applicable.
Flash point	Not applicable.
Evaporation rate	No information found.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	No information found.
Vapour density	No information found.
Relative density	Not available.
Solubility(ies)	Very soluble.
Partition coefficient (n-octanol/water)	Not available.
Decomposition temperature	Not available.
Viscosity	Not applicable.
Explosive properties	Not available.
Oxidizing properties	Not available.

9.2. Other information

Density	1.67 g/ml (4°C)
Molecular formula	MgSO ₄
Molecular weight	120.4
VOC (Weight %)	0 % v/v (21°C)

10. Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

Stable at normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Avoid dust formation. The substance is hygroscopic and will absorb water by contact with the moisture in the air.

10.5. Incompatible materials

Strong oxidising agents.



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10.6. Hazardous decomposition products

Sulphur oxides.
Magnesium oxides.

11. Toxicological information

General information Occupational exposure to the substance or mixture may cause adverse effects.

Information on likely routes of exposure

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.

Inhalation Dust may irritate throat and respiratory system and cause coughing.

Skin contact May cause irritation through mechanical abrasion.

Eye contact May cause irritation through mechanical abrasion.

Symptoms May cause redness and pain. Abdominal cramps. Diarrhoea. Coughing.

11.1. Information on toxicological effects

Acute toxicity	Dust may irritate the respiratory tract, skin and eyes. Ingestion: Since magnesium salts are slowly absorbed, abdominal pain, vomiting and diarrhea may be the only symptoms. However, if elimination is blocked by bowel blockage or other reasons, CNS depression, lack of reflexes, hypocalcemia (deficiency of calcium in the blood) may occur.
Skin corrosion/irritation	May cause irritation through mechanical abrasion.
Serious eye damage/irritation	Product dust or powder may cause mechanical eye irritation.
Respiratory sensitisation	Not classified.
Skin sensitisation	Not classified.
Germ cell mutagenicity	Not classified.
Carcinogenicity	Not classified.
Reproductive toxicity	Not classified.
Specific target organ toxicity -single exposure	Not classified.
Specific target organ toxicity -repeated exposure	Not classified.
Aspiration hazard	Not classified.
Mixture versus substance information	Not available.
Other information	Magnesium sulfate is excreted by the kidneys at a rate that varies from one patient to another but that is directly proportional to the serum concn and glomerular filtration.

12. Ecological information

12.1. Toxicity

The product components are not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Components		Species	Test results
Magnesium sulphate (CAS 7487-88-9)			
Aquatic			
Crustacea	EC50	Tubificid worm (Tubifex tubifex)	149.6 - 191.36 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	2610 - 3080 mg/l, 96 hours

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

No data available.

Partition coefficient n-octanol/water (log Kow) Not available.



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Bioconcentration factor (BCF) Not available.

12.4. Mobility in soil

Not available.

12.5. Results of PBT and vPvB assessment

Not a PBT or vPvB substance or mixture.

12.6. Other adverse effects

Not available.

13. Disposal considerations

13.1. Waste treatment methods

Residual waste	Dispose of in accordance with local regulations.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied.
EU waste code	06 13 99
Disposal methods/information	Dispose in accordance with all applicable regulations.

14. Transport information

ADR	The product is not covered by international regulation on the transport of dangerous goods.
RID	The product is not covered by international regulation on the transport of dangerous goods.
AND	The product is not covered by international regulation on the transport of dangerous goods.
IATA	The product is not covered by international regulation on the transport of dangerous goods.
IMDG	The product is not covered by international regulation on the transport of dangerous goods.

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

This substance/mixture is not intended to be transported in bulk.

15. Regulatory information

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

EU regulations Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I Not listed.
Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex II - Not listed.
Regulation (EC) No. 850/2004 On persistent organic pollutants, Annex I as amended - Not listed.
Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1 as amended - Not listed.
Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2 as amended - Not listed.
Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3 as amended - Not listed.
Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V as amended - Not listed.
Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry - Not listed.
Regulation (EC) No. 1907/2006, REACH Article 59(1) Candidate List as currently published by ECHA - Not listed.
Authorisations
Regulation (EC) No. 143/2011 Annex XIV Substances Subject to Authorisation - Not listed.
Restrictions on use
Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended - Not listed.



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Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work - Not regulated.

Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding - Not regulated.

Other EU regulations

Directive 96/82/EC (Seveso II) on the control of major-accident hazards involving dangerous substances - Not regulated.

Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work - Not listed.

Directive 94/33/EC on the protection of young people at work - Not listed.

Other regulations This product does not meet the criteria for classification according to Regulation (EC) 1272/2008 (CLP Regulation) and Directive 1999/45/EC and their amendments respectively. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006 as amended.

National regulations Not available.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

16. Other information

List of abbreviations DNEL: Derived No-Effect Level.

PNEC: Predicted No-Effect Concentration. CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

PBT: Persistent, bioaccumulative and toxic.

vPvB: Very Persistent and very Bioaccumulative.

References ECHA CHEM

Information on evaluation method leading to the classification of mixture

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

The mixture is classified based on test data for physical hazards. The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available. For details, refer to Sections 9, 11 and 12.

None.

Training information Follow training instructions when handling this material.

Disclaimer

The information in this SDS was obtained from sources which we believe to be reliable. Symbio provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate handling of the product by properly trained and qualified personnel. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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