

**SAFETY DATA SHEET  
SYMBIO KIESERITE**

SDS COMPLETED 8<sup>TH</sup> JUNE 2015  
REVIEWED 25<sup>TH</sup> FEBRUARY 2022

VERSION 01  
REVISION NUMBER: 01

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

**1.1. Product identifier**

Name of Product	Symbio Kieserite
Synonyms	Sulfuric acid magnesium salt (1:1), monohydrate Magnesium Sulphate 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:**  
Origin Amenity Solutions Ltd  
1-3 Freeman Court,  
Jarman Way,  
Orchard Road,  
Royston,  
Hertfordshire,  
SG8 5HW  
Tel: 0800 138 7222  
Email: [sales.symbio@originamenity.com](mailto:sales.symbio@originamenity.com)

**1.4. Emergency telephone number**

<b>Emergency phone No.</b>	0800 138 7222 (09.00 – 17.00 GMT Monday – Friday)
<b>National emergency telephone number</b>	111

**2: Hazards identification**

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

Physical Hazards:	Not Classified
Health Hazards:	Not Classified
Environmental Hazards:	Not Classified

**2.2. Label elements**

None required

**2.3. Other hazards**

Not assigned.

**3. Composition/information on ingredients**

**3.1 Substance**

	CAS Number	Content	Classification
Sulfuric acid magnesium salt (1:1), monohydrate	14168-73-1	99-100%	Not Classified

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**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.

**5. Fire Fighting measures**

The product is non-combustible.

**5.1. Extinguishing media**

Suitable extinguishing media      Use fire-extinguishing media appropriate for surrounding materials.  
Unsuitable extinguishing media      None known.

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

During fire, gases hazardous to health may be formed.

**5.3. Advice for firefighters**

Special protective equipment for firefighters	Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace. Self-contained breathing apparatus, operated in positive pressure mode and full protective clothing must be worn in case of fire.
Special firefighting procedures	Move containers from fire area if you can do so without risk.

**6. Accidental release measures**

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

For non-emergency personnel	Keep unnecessary personnel away.
For emergency responders	Ensure adequate ventilation. Avoid inhalation of dust. Avoid contact with skin and eyes. Use personal protection as recommended in section 8 of the SDS.

**6.2. Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not contaminate water.

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

Collect spill using a vacuum cleaner with a HEPA filter. Flush area with plenty of water.

**6.4. Reference to other sections**

For personal protection, see section 8. For waste disposal, see section 13.

**7. Handling and storage**

**7.1. Precautions for safe handling**

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

Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Use with adequate ventilation. Observe good industrial hygiene practices. Keep in air-tight containers- material is hygroscopic. Store in a cool, dry, well-ventilated place. Store away from incompatible materials.

**7.3. Specific end use(s)**

Fertiliser

**8. Exposure controls/personal protection**

**8.1. Control parameters**

Occupational exposure limits                      No exposure limits noted for ingredient(s).

**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      Environmental manager must be informed of all major spillages.

**9. Physical and chemical properties**

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

Appearance	Grey granules
Physical state	Solid.
Form	Granules
Colour	Grey
Odour	Odourless.

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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 <sub>4</sub>
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.

**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.

**12.2. Persistence and degradability**

No data available.

**12.3. Bioaccumulative potential**

No data 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**

The product is not classified for transport

**15. Regulatory information**

**GB CLP Regulation:** Non-applicable  
**Classification procedure:** Non-applicable

It is recommended to use the information included in this safety data sheet as a basis for conducting workplace-specific risk assessments in order to establish the necessary risk prevention measures for the handling, use, storage and disposal of this product.

**Other legislation:**

The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020.

The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use) (Amendment etc.) (EU Exit) Regulations 2020.

Control of Substances Hazardous to Health Regulations 2002 (as amended)

**16. Other information**

**Abbreviations used**

CAS: Chemical Abstracts Service.

PBT: Persistent, bioaccumulative and toxic.

vPvB: Very Persistent and very Bioaccumulative.

**Disclaimer**

The information in this SDS was obtained from sources which we believe to be reliable. Origin Amenity Solutions 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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