



SAFETY DATA SHEET
MAGNESIUM SULPHATE - KIESERITE
REVISION 6, DATE 01 JAN 2023

1. IDENTIFICATION

Product Name	Magnesium Sulphate - Kieserite
Other Names	Kieserite; Magnesium Sulfate - Kieserite; Magnesium sulphate [CAS#7487-88-9]
Uses	Fertilisers.
Chemical Family	No Data Available
Chemical Formula	MgSO ₄ .H ₂ O
Chemical Name	Sulfuric acid, magnesium salt, monohydrate
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Suite 13A.03, Menara Summit Persiaran Kewajipan USJ1 47600 UEP Subang Jaya Selangor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Australia – Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
National Poison Centre	Malaysia	+60-4-6536-999

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

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Hazard Classification NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Signal Word None

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

3. COMPOSITION/INFORMATION ON INGREDIENTS*Ingredients*

Chemical Entity	Formula	CAS Number	Proportion
Magnesium sulfate (Kieserite)	MgSO ₄ .H ₂ O	14567-64-7	<=100 %

4. FIRST AID MEASURES*Description of necessary measures according to routes of exposure*

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get medical advice/attention if large amounts were swallowed or if you feel unwell. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	Treat symptomatically. *Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
Flammability Conditions	Non-combustible; Material does not burn.
Extinguishing Media	If material is involved in a fire, use dry chemical, Carbon dioxide (CO ₂), foam or water spray. Use fire extinguishing methods suitable to surrounding conditions.
Fire and Explosion Hazard	Fire decomposition products from this product are likely to be irritating if inhaled.
Hazardous Products of Combustion	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Metal oxide fumes, Sulphur oxides (SO _x).



Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	No Data Available
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
Clean Up Procedures	Pick up mechanically. If uncontaminated, sweep up and shovel into suitable containers and reuse as product. If contaminated with other materials, collect in suitable containers for disposal (see SECTION 13). *Vacuuming or wet-sweeping may be used to avoid dust dispersal.
Containment	Stop leak if you can do it without risk. Prevent entry into waterways, sewers, basements or confined areas.
Decontamination	No information available.
Environmental Precautionary Measures	Do not allow product to reach sewage system or any watercourse. Inform respective authorities in case of seepage into watercourse or sewage system. *This product is used as fertiliser. However, large spills can kill vegetation. Prevent large quantities from entering waterways.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised/unprotected personnel away.
Personal Precautionary Measures	Use personal protective equipment as required (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust and contact with eyes, skin and clothing. Use personal protective equipment as required (see SECTION 8).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Ensure containers are labelled, protected from physical damage and sealed when not in use. Keep away from heat and sources of ignition - No smoking. Protect from water/moisture. Keep away from foodstuffs and incompatible materials (see SECTION 10).
Container	Keep in the original container. *Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all label warnings and precautions listed for the product.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	No specific exposure standards are available for this product. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard for Nuisance dusts: 8 hr TWA = 10 mg/m ³ (measured as inhalable dust). - New Zealand WES for Particulates not otherwise classified: TWA = 10 mg/m ³ ; TWA = 3 mg/m ³ (respirable dust).
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust



ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Personal Protection Equipment

- Respiratory protection: Wear respiratory protection in case of high concentrations of airborne dust. Recommended: Dust mask/particulate respirator (refer to AS/NZS 1715 & 1716).
- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side shields or chemical safety goggles.
- Hand protection: Handle with gloves. Recommended: Protective gloves; The glove material has to be impermeable and resistant to the product/substance/preparation.
- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Protective work clothing (long sleeves).

Special Hazards Precautions

No information available.

Work Hygienic Practices

Do not eat, drink or smoke when using this product. Wash hands before breaks and after handling the product. Take off contaminated clothing and wash it before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Granular or powder
Odour	Odourless
Colour	White to off-white/light grey
pH	ca. 5 - 9 Aqueous solution (25°C)
Vapour Pressure	No Data Available
Relative Vapour Density	No Data Available
Boiling Point	No Data Available
Melting Point	No Data Available
Freezing Point	No Data Available
Solubility	320.03 g/l in water 20°C (MgSO ₄)
Specific Gravity	No Data Available
Flash Point	No Data Available
Auto Ignition Temp	No Data Available
Evaporation Rate	No Data Available
Bulk Density	ca. 1,250 kg/m ³ (20°C)
Corrosion Rate	No Data Available
Decomposition Temperature	>700 °C
Density	No Data Available
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	No information available.



Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Non-combustible; Material does not burn.
Reactions That Release Gases or Vapours	Decomposition may produce irritating, toxic and/or corrosive fumes, including Metal oxide fumes, Sulphur oxides (SO _x).
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	This product is unlikely to react or decompose under normal storage conditions.
Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Avoid strong heating. Protect from water/moisture.
Materials to Avoid	Incompatible/reactive with strong oxidisers.
Hazardous Decomposition Products	Decomposition may produce irritating, toxic and/or corrosive fumes, including Metal oxide fumes, Sulphur oxides (SO _x).
Hazardous Polymerisation	Will not occur.

11. TOXICOLOGICAL INFORMATION

General Information	Information on possible routes of exposure: - Ingestion: Since Magnesium salts are slowly absorbed, abdominal pain, vomiting and diarrhoea may be the only symptoms. However, if elimination is blocked by bowel blockage (or other reasons), CNS depression, lack of reflexes, hypocalcaemia (deficiency of Calcium in the blood) may occur. - Eye contact: Can cause mild irritation to eyes. - Skin contact: No adverse effects expected, but dust may cause mechanical irritation. - Inhalation: Dust may be slightly irritating. Sore throat or coughing may occur. Chronic effects: No information available.
Carcinogen Category	None

12. ECOLOGICAL INFORMATION

Ecotoxicity	No information available.
Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Slightly hazardous for water - Do not allow undiluted product or large quantities of it to reach ground water, watercourse or sewage system.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available



13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container in accordance with local/regional/national regulations. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options.
Special Precautions for Land Fill	For larger quantities, if recycling or reclaiming is not possible, use a commercial waste disposal service. Dispose of small quantities and empty containers by wrapping with paper and putting in garbage.

14. TRANSPORT INFORMATION**Land Transport (Australia)**

ADG Code

Proper Shipping Name	Magnesium Sulphate - Kieserite
Class	No Data Available
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Sea Transport

IMDG Code

Proper Shipping Name	Magnesium Sulphate - Kieserite
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

Proper Shipping Name	Magnesium Sulphate - Kieserite
Class	No Data Available
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available



Comments

NON-DANGEROUS GOODS: Not regulated for AIR transport.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information

No Data Available

Poisons Schedule (Aust)

Not Scheduled

National/Regional Inventories

Australia (AIIIC)	Listed
Canada (DSL)	Not Determined
Canada (NDSL)	Not Determined
China (IECSC)	Listed
Europe (EINECS)	Not Determined
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Not Determined
Korea (KECI)	Not Determined
Malaysia (List of Classified Substances)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Taiwan (TCSI)	Listed
USA (TSCA)	Not Determined
Mexico (INSQ)	Not Determined

16. OTHER INFORMATION

Related Product Codes

MASULK1000, MASULK1001, MASULK1002, MASULK1004, MASULK1050, MASULK1100, MASULK1120, MASULK1140, MASULK2000, MASULK2100, MASULK2150, MASULK2160, MASULK2200, MASULK2250, MASULK2300, MASULK2350, MASULK2400, MASULK2450, MASULK2500, MASULK2700, MASULK2710, MASULK2720, MASULK2900, MASULK2905, MASULK2910, MASULK2920, MASULK2925, MASULK2940, MASULK2945, MASULK3000, MASULK3200, MASULK3400, MASULK3500, MASULK3600, MASULK3700, MASULK3800, MASULK3900, MASULK3901, MASULK3905, MASULK3910, MASULK3920, MASULK4000, MASULK4002, MASULK4005, MASULK4010, MASULK4200, MASULK4201, MASULK4500, MASULK4505, MASULK4510, MASULK4600, MASULK4610, MASULK4650, MASULK4660, MASULK4700, MASULK4750, MASULK5000, MASULK5500, MASULK5505, MASULK5510, MASULK5515, MASULK5600, MASULK5620, MASULK5800,



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MASULK5820, MASULK6000, MASULK6100, MASULK6500, MASULK6600, MASULK7000, MASULK7010, MASULK7020, MASULK8000, MASULK8020

Revision

6

Revision Date

01 Jan 2023

Key/Legend

< Less Than

> Greater Than

AICS Australian Inventory of Chemical Substances

atm Atmosphere

CAS Chemical Abstracts Service (Registry Number)

cm² Square Centimetres

CO₂ Carbon Dioxide

COD Chemical Oxygen Demand

deg C (°C) Degrees Celcius

EPA (New Zealand) Environmental Protection Authority of New Zealand

deg F (°F) Degrees Farenheit

g Grams

g/cm³ Grams per Cubic Centimetre

g/l Grams per Litre

HSNO Hazardous Substance and New Organism

IDLH Immediately Dangerous to Life and Health

immiscible Liquids are insoluable in each other.

inHg Inch of Mercury

inH₂O Inch of Water

K Kelvin

kg Kilogram

kg/m³ Kilograms per Cubic Metre

lb Pound

LC₅₀ LC stands for lethal concentration. LC₅₀ is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

LD₅₀ LD stands for Lethal Dose. LD₅₀ is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

ltr or L Litre

m³ Cubic Metre

mbar Millibar

mg Milligram

mg/24H Milligrams per 24 Hours

mg/kg Milligrams per Kilogram

mg/m³ Milligrams per Cubic Metre

Misc or Miscible Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH₂O Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight



