



# SAFETY DATA SHEET

## MAGNESIUM SULPHATE HEPTAHYDRATE

### Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

CAS NUMBER: 10034-99-8  
PROPER SHIPPING NAME: Not regulated  
UN NUMBER: Not regulated

**PRODUCT USE:** Fertilizers and dietary supplements to correct magnesium deficiencies, textiles and dyestuffs, pharmaceuticals and cosmetics, brewing and distilling.

**SUPPLIER:** Interchem Agencies Limited  
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AUCKLAND 0627  
NEW ZEALAND  
Telephone: +64 9 418 0097  
Email: [compliance@interchem.co.nz](mailto:compliance@interchem.co.nz)  
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### Section 2 - HAZARDS IDENTIFICATION

#### STATEMENT OF HAZARDOUS NATURE

Classified as Non-Hazardous according to the criteria of the New Zealand Hazardous Substances and New Organisms legislation and GHS 7<sup>th</sup> Edition.

#### EMERGENCY OVERVIEW

Non-hazardous.  
Health injuries are not known or expected under normal use.  
Adverse ecological effects are not known or expected.

#### PRECAUTIONARY STATEMENTS

May be hazardous if swallowed.  
Do not breathe dust.  
If in contact with eyes, rinse thoroughly.

### Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

| NAME                            | CAS RN     | %   | HAZARDOUS |
|---------------------------------|------------|-----|-----------|
| Magnesium Sulphate Heptahydrate | 10034-99-8 | >90 | No        |

**SYNONYMS:** Epsom salts; Sulfuric acid, magnesium salt (1:1), heptahydrate; Magnesium sulphate, 7-hydrate; Epsomite

## Section 4 - FIRST AID MEASURES

### **SWALLOWED**

Rinse mouth. Give a glass of water.

First aid is not generally required. If unwell or in doubt, contact the Poison Centre (0800 764 766) or a doctor.

### **EYE**

If this product comes in contact with eyes wash out immediately with water.

If irritation continues, seek medical attention.

### **SKIN**

If skin or hair contact occurs flush skin and hair with running water (and soap if available).

Seek medical attention in the event of irritation.

### **INHALED**

Remove to fresh air. Encourage patient to blow nose to ensure clear passage of breathing.

Other measures are usually unnecessary. If symptoms persist, call a doctor.

### **NOTES TO PHYSICIAN**

Treat symptomatically.

## Section 5 - FIRE FIGHTING MEASURES

### **EXTINGUISHING MEDIA**

In case of fire, use appropriate extinguishing media most suitable for surrounding fire conditions: water spray, dry powder, foam, carbon dioxide (CO<sub>2</sub>).

### **FIRE FIGHTING**

Alert Fire Brigade and tell them location and nature of hazard.

Use standard procedure for chemical fires.

Clear fire area of all non-emergency personnel.

Stay upwind. Eliminate ignition sources.

Use water delivered as a fine spray to control fire and cool adjacent area.

DO NOT approach containers suspected to be hot.

Cool fire exposed containers with water spray from a protected location.

If safe to do so, remove containers from path of fire.

Equipment should be thoroughly decontaminated after use.

### **FIRE/EXPLOSION HAZARD**

Non-combustible solid.

Avoid generating dust, particularly clouds of dust in a confined or unventilated space.

Powder handling equipment such as dust collectors, dryers and mills may require additional protection measures such as explosion venting.

### **HAZARDS FROM COMBUSTION PRODUCTS**

Decomposes on heating emitting toxic fumes such as sulphoxides.

### **PERSONAL PROTECTIVE EQUIPMENT**

Firefighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots and gloves).

## Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Protective Equipment advice is contained in Section 8 of the SDS.

**SPILL RESPONSE**

Avoid generating dust. Increase ventilation. Move upwind.  
Evacuate all unnecessary personnel. Eliminate all sources of ignition.  
Personnel involved in the clean-up should wear full protective clothing.  
Stop leak if safe to do so. Use spark-proof tools and equipment.  
Sweep up or vacuum up (consider explosion-proof machines designed to be grounded during use).  
Collect in a labelled chemical waste container and seal for disposal. See section 13 of the SDS.  
Do NOT let product reach drains or waterways. If a significant amount does enter a waterway advise your local waste authority.  
Wash spill area with plenty of water after removal of contaminant.

**Section 7 - HANDLING AND STORAGE****PROCEDURE FOR HANDLING**

Ensure an eye bath and safety shower are available and ready for use.  
Wear appropriate eye and skin protection.  
Do not eat, drink or smoke when handling chemicals.  
Wash thoroughly after handling.  
Keep packaging closed until ready for use.  
Take precautionary measures against static discharges by bonding and grounding equipment.  
Avoid dust formation.

**SUITABLE CONTAINER**

Store in original packaging.  
Check all containers are clearly labeled and free from leaks.

**STORAGE INCOMPATIBILITY**

Avoid contamination, store away from Dangerous Goods and Toxic Substances.

**STORAGE REQUIREMENTS**

Store in dry, cool well ventilated conditions out of direct sunlight.  
Observe manufacturer's storing and handling recommendations.  
Keep tightly closed.

**Section 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION****EXPOSURE CONTROLS**

| Source               | Material        | Measurement                 | Limit                |
|----------------------|-----------------|-----------------------------|----------------------|
| New Zealand WES 2020 | total dust      | time weighted average (TWA) | 10 mg/m <sup>3</sup> |
| New Zealand WES 2020 | respirable dust | time weighted average (TWA) | 3 mg/m <sup>3</sup>  |

No exposure limits set by WorkSafe New Zealand or Safe Work Australia.

**PERSONAL PROTECTION EQUIPMENT (PPE)****VENTILATION SYSTEM**

Remove dust as necessary. Refer to the 'Local exhaust ventilation' guide found on the WorkSafe New Zealand website.

**PERSONAL RESPIRATORS**

Respirators are not required, however, if in doubt, seek expert occupational hygiene advice. AS/NZS 1715:2009 and AS/NZS 1716:2012.

An approved dust mask e.g. a P1 respirator is recommended when using this product in dusty conditions. See Australian/New Zealand Standard, AS/NZS 1715:2009 and AS/NZS 1716:2012.

**SKIN PROTECTION:**

Wear impervious protective clothing, including covered shoes, nitrile rubber gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**EYE PROTECTION:**

Use chemical safety goggles or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**Section 9 - PHYSICAL AND CHEMICAL PROPERTIES****APPEARANCE**

Crystalline solid.

**PHYSICAL PROPERTIES**

| PROPERTY                        | VALUE                                                  |
|---------------------------------|--------------------------------------------------------|
| State:                          | Solid                                                  |
| Molecular Weight:               | 246.48                                                 |
| Melting Range (°C):             | 1124 decomposes, loses all waters of hydration @ 250°C |
| Boiling Range (°C):             | Not Applicable                                         |
| Solubility in water (g/L):      | 710                                                    |
| pH (5% w/v solution):           | 5.0-9.2                                                |
| Specific Gravity (water=1):     | 1.67                                                   |
| Bulk Density:                   | Not Applicable                                         |
| Volatile Component (%vol):      | Nil                                                    |
| Relative Vapor Density (air=1): | Not Applicable                                         |
| Vapour Pressure (kPa):          | Not Applicable                                         |
| Autoignition Temp (°C):         | Not Applicable                                         |
| Flash Point (°C):               | Not Applicable                                         |
| Lower Explosive Limit (%):      | Not Applicable                                         |
| Upper Explosive Limit (%):      | Not Applicable                                         |
| Decomposition Temp (°C):        | 1124°C                                                 |
| Viscosity:                      | Not Applicable                                         |
| Evaporation Rate:               | Not Applicable                                         |

**Section 10 - CHEMICAL STABILITY AND REACTIVITY****CHEMICAL STABILITY**

Product is stable under normal conditions of use, storage and temperature.

**CONDITIONS TO AVOID**

Avoid excessive heat, direct sunlight, static discharges, moisture, freezing and high temperatures. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

**INCOMPATIBLE MATERIALS**

Incompatible with acids, ethoxy ethyl alcohols, arsenates, phosphates, tartrates, lead, barium, strontium and calcium. Keep containers dry and tightly closed to avoid moisture absorption and contamination.

**HAZARDOUS DECOMPOSITION**

No decomposition if stored under normal conditions of use. Thermal decomposition can lead to release of sulphur oxides.

**HAZARDOUS REACTIONS**

Hazardous polymerization will not occur.

## Section 11 - TOXICOLOGICAL INFORMATION

### ACUTE HEALTH EFFECTS

#### SWALLOWED

Health injuries are not known or expected under normal use. Acts as a laxative. Large amounts may cause nausea and vomiting.

#### EYE

Dust may cause mild irritation.

#### SKIN

This material may cause skin irritation following contact.

#### INHALED

Inhalation of dust may lead to respiratory irritation. Good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.

### CHRONIC HEALTH EFFECTS

No data available.

### TOXICITY AND IRRITATION DATA

#### TOXICITY

Acute Oral Toxicity, Rat, LD<sub>50</sub>: >2000 mg/kg [Manufacturer]

Acute Dermal Toxicity, LD<sub>50</sub>: >2000 mg/kg [Manufacturer]

Acute Inhalation Toxicity, LC<sub>50</sub>: Not available

#### IRRITATION

Nil Reported.

Persons with pre-existing conditions may be more susceptible.

**Sensitisation (respiratory/contact):** Not available.

**Carcinogenic effects:** Not classified or listed by IARC, NTP, OSHA, EU and ACGIH.

**Mutagenic effects:** Not available.

**Reproductive or developmental effects:** Not available.

**Aspiration hazard:** Not available.

**Specific target organ toxicity:** Not available.

## Section 12 - ECOLOGICAL INFORMATION

### ECOTOXICITY

No data available.

### TOXICITY DATA

Fish, (*Gambusia affinis*), 96hr LC<sub>50</sub>: 15500 mg/L [Manufacturer]

Crustacean, (*Daphnia magna*), 24hr EC<sub>50</sub>: 1700 mg/L [Manufacturer]

Algae (*Desmodesmus subspicatus*), 72hr EC<sub>50</sub>: 2700 mg/L [Manufacturer]

### Persistence and Degradability

Not applicable to inorganic substances.

### Mobility

Soluble in water.

### Environmental Fate (Exposure)

No data available. Do not allow product to enter drains, waterways or sewers.

**Bioaccumulative Potential**

No information available on bioaccumulation for this product.

**Section 13 - DISPOSAL CONSIDERATIONS**

Recycle wherever possible.

Consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

Dispose of by: Burial in a licensed landfill or Incineration in a licensed apparatus (after admixture with suitable combustible material)

Empty contaminated packaging should be taken for local recycling, recovery or waste disposal.

**Section 14 - TRANSPORT INFORMATION**

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Not classified as a Dangerous Good under NZS 5433:2007 Transport of Dangerous Goods on Land.

**Section 15 - REGULATORY INFORMATION****REGULATIONS**

Non-hazardous.

**Controls applying to this substance are:**

None, not hazardous.

Magnesium sulphate heptahydrate, CAS Number 10034-99-8, is found on the following inventories: TSCA, AIIC, DSL, ENCS, NZIoC

**Section 16 - OTHER INFORMATION**

NEW ZEALAND POISON CENTRE 0800 POISON (0800 764 766)

NZ EMERGENCY SERVICES: 111

**Abbreviations:**

ACGIH - American Conference of Governmental Industrial Hygienists.

ACVM - Agricultural Chemicals and Veterinary Medicines.

AIIC - Australian Inventory of Industrial Chemicals.

AOX - Absorbable organic halogens.

APF - Assigned Protection Factor.

BOD - Biochemical Oxygen Demand.

China IECSC - Inventory of Existing Chemical Substances Produced or Imported in China.

COD - Chemical Oxygen Demand.

DSL - Canadian Domestic Substances List.

EINECS - European Inventory of Existing Commercial Chemical Substances.

ENCS - Japanese Existing and New Chemical substances.

GHS - Globally Harmonized System of Classification and Labelling of Chemicals.

GRAS - Generally Recognized as Safe

IARC - International Agency for Research on Cancer.

ISHL - Japanese Industrial Safety and Health Law List of Chemicals.

Koc - soil organic carbon-water partition coefficient

Kow - octanol/water partition coefficient

**24 HOUR EMERGENCY CONTACT TELEPHONE 0800 CHEMCALL 0800 243 622**

LOEL - Lowest Observed Effect Level.

LD<sub>Lo</sub> - Lethal Dose Low (the lowest dosage per unit of bodyweight of a substance known to have resulted in fatality in a particular animal species).

NOEC - No Observed Effect Concentration.

NTP - National Toxicology Program.

NZIoC - New Zealand Inventory of Chemicals.

OECD HPV - The Organisation for Economic Co-operation and Development High Production Volume Chemicals.

PEL - Permissible exposure limit.

PPE - Personal Protective Equipment.

Prop 65 - California Proposition 65 List of Chemicals.

RTECS - Registry of Toxic Effects of Chemical substances.

STEL - Short term exposure limit.

TOC - Total Organic Carbon.

TSCA - US Toxic Substances Control Act Existing Chemicals.

TWA - The time-weighted average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.

VOC - Volatile Organic Compounds.

**Sources of key data used to compile the datasheet:**

Manufacturer's SDS.

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**Amendments:** Formatting and five yearly update.

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End of SDS