

# Magnesium Sulphate Heptahydrate

## Material Safety Data Sheet

(This document conforms to ISO 11014-1)

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Supplier / Manufacturer:

Kimleigh Chemicals SA (Pty) Ltd



11 Jasper van der Westhuizen Street, Potchindustria,  
Potchefstroom, North West Province, 2531, South Africa.

Tel no: +27 (18) 293-1028 Fax no: +27 (18) 294-4079

Web: www.kimleigh.com Email: sales@kimleigh.co.za

Chemical Name:

**Magnesium sulphate heptahydrate.**

Molecular Formula:

MgSO<sub>4</sub>•7H<sub>2</sub>O

Product Range:

Animade and Fertion.

Chemical Family:

Inorganic sulphates.

Uses:

Animal feeds, fertilizers, dyeing, printing, dietary supplement.

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance Name:

Magnesium sulphate heptahydrate.

Appearance:

White to yellowish fine crystals.

Molar mass:

246.47 g / mol

CAS Number:

10034-99-8

EC Number:

231-298-2

Hazardous Ingredients:

Ingredients	Content m/m	GHS Classification
Magnesium sulphate heptahydrate	98 %	H319

### 3. HAZARD IDENTIFICATION

Physical State and Appearance:

White to yellowish fine crystals.

GHS Classification:

H319: Causes serious eye irritation.  
P501: Dispose of contents/container in accordance with local/regional/international regulations.

Pictogram:



Signal word:

Warning

Routes of Entry:

Eye Contact. Inhalation. Ingestion. Absorbed through skin.

Potential Health Effects:

Eyes May cause eye irritation and local inflammation.

Skin May cause mild skin irritation.

*Inhalation* May cause mild irritation to respiratory tract.

*Ingestion* It may cause irritation and/or a burning sensation in the mouth, pharynx, oesophagus and gastrointestinal tract.

**Potential Chronic Health Effects:**

CARCINOGENIC EFFECTS:  
Not suspected.

MUTAGENIC EFFECTS:  
Not suspected.

TERATOGENIC EFFECTS:  
Not suspected.

#### 4. FIRST AID MEASURES

**General Advice:**

Consult a physician. Show this material safety data sheet to the doctor in attendance.

**Eye Contact:**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

**Skin Contact:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if irritation persists.

**Inhalation:**

If inhaled, move person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

**Ingestion:**

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Rinse mouth with water. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

#### 5. FIRE-FIGHTING MEASURES

**Products of Combustion:**

May emit toxic SO<sub>x</sub> gases. Magnesium oxide residue.

**Explosion Hazards in Presence of Various Substances:**

Risks of explosion of the product in presence of static discharge: No.  
Risks of explosion of the product in presence of mechanical impact: No.

**Fire Fighting Media and Instructions:**

Small fire: Use dry chemicals, CO<sub>2</sub>, alcohol-resistant foam or water spray.  
Large fire: Water spray or fog, alcohol-resistant foam. Use water spray to cool containers.

**Protective Clothing (Fire):**

Wear NIOSH approved self-contained breathing apparatus or equivalent and full protective gear.

<b>Special Remarks on Fire Hazards:</b>	Prevent fire-fighting water from entering surface water or groundwater.
<b>Special Remarks on Explosion Hazards:</b>	Not available.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	Use personal protective equipment. Avoid substance contact and inhalation. Ensure adequate ventilation.
<b>Environmental Protection Measures:</b>	Do not allow to enter sewerage system.
<b>Small Spill:</b>	Wear personal protective equipment. Use appropriate tools and adsorptive material to contain and adsorb the spilled solution and dispose of in a convenient waste disposal container.
<b>Large Spill:</b>	Use appropriate tools and personal protective equipment. Stop leak if without risk. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dyke if needed. Absorb with liquid binding material like sand, universal binders. Call for assistance on disposal.

## 7. HANDLING AND STORAGE

<b>Handling:</b>	Handle with care in accordance with good industrial hygiene and safety practices. Minimise dust generation. Avoid inhalation of dust. Avoid contact with eyes and skin and any form of ingestion. Wear suitable protective clothing such as overalls, boots, rubber gloves, goggles, nose and mouth protection and wash contaminated clothing daily. Use dust mask or respirator with dust cartridge. Wash thoroughly with soap and water after use or accidental skin contact. Do not eat, drink or smoke during use. Avoid contamination of food, foodstuffs, eating utensils and drinking water. Do not discharge residues or any of the product into rivers, dams and canals.
<b>Storage:</b>	Store in a cool, dry and well-ventilated place away from food, foodstuffs, combustible materials and incompatible substances. Close container tightly after opening. Store under lock and key and keep out of reach of children, uninformed persons and animals. Minimise dust generation. Access to water and eye wash facility should be available.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

<b>Engineering controls:</b>	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
<b>Personal Protection:</b>	Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the substance handled.

<i>Eyes</i>	Splash goggles / safety glasses with side shields.
<i>Body</i>	Body-covering clothing / full suit.
<i>Respiratory</i>	Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear appropriate respirator when ventilation is inadequate.
<i>Hands</i>	Gloves, nitrile rubber gloves.
<i>Feet</i>	Boots.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety practices. Remove and wash contaminated clothing. Wash hands after use and before eating or smoking. Wash promptly if skin becomes contaminated or wet.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State and Appearance:</b>	White to yellowish fine crystals.
<b>Odour:</b>	Slight bitter odour.
<b>pH:</b>	~ 5 (1 g / 100 ml solution)
<b>Boiling Point:</b>	Decomposes before boiling.
<b>Melting Point:</b>	1,124 °C at 1 atm
<b>Relative Density (20 °C):</b>	1.67 g/cm <sup>3</sup>
<b>Vapour Pressure:</b>	Not applicable.
<b>Vapour Density:</b>	Not applicable.
<b>Viscosity:</b>	Not applicable.
<b>Odour Threshold:</b>	Not applicable.
<b>Moisture Content:</b>	≤ 1 % (m/m).
<b>VOC:</b>	Not applicable.
<b>Solubility in water (20 °C)</b>	Very soluble in water.

## 10. STABILITY AND REACTIVITY

<b>Stability and Reactivity:</b>	The product is stable under recommended conditions of storage and use.
<b>Conditions of Instability:</b>	High temperatures. Store away from strong oxidizing agents and strong bases.
<b>Incompatibility with Various Substances:</b>	Strong oxidizing agents and strong bases.
<b>Hazardous Decomposition Products:</b>	SO <sub>x</sub> gasses.

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Toxicity:** Acute oral toxicity (LD50): >9,300 mg / kg

**Chronic Effects on Humans:** CARCINOGENIC EFFECTS:  
None.

MUTAGENIC EFFECTS:  
None.

TERATOGENIC EFFECTS:  
Not suspected.

**Acute Effects on Humans:** Mild eye irritant.

Mild skin irritant. Skin inflammation is characterized by itching, scaling, reddening or, occasionally blistering.

May be harmful if inhaled. Inhalation may cause damage or irritation of respiratory tract. Symptoms can include irritation of nasal passages, sore throat, shortness of breath and coughing.

Harmful if swallowed. It can cause irritation and/or a burning sensation in the mouth, pharynx, oesophagus and gastrointestinal tract.

**Synergetic Products:  
(Toxicologically)** Not available.

**Irritancy:** Draize Test: Not available.

**Sensitization:** Not available.

**Toxicity to Reproductive System:** Tests on laboratory animals for reproductive effects are cited in Registry of Toxic Effects on Chemical Substances (RTECS).

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** Fish: Pimephales promelas (LC50): 2,820 mg/l (96 h)  
Daphnia: Daphnia magna (EC50): 1,700 mg/l (48 h)  
Algae: Desmodesmus subspicatus (IC50): 2,700 mg/l (72 h)  
Bacteria: Photobacterium phosphoreum (EC50): 84,000 mg/l (30 min).

**Phytotoxicity:** Not suspected.

**Mobility:** Not applicable.

## 13. DISPOSAL CONSIDERATIONS

**Treatment:** Consultation with a permitted waste disposal site (TSD) should be accomplished. Always contact a permitted waste disposal site (TSD) to assure compliance with all current, local, national, and Governmental regulations.

## 14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.  
UN Number: not listed.

Signal Word:



Warning

<b>Hazard Statements:</b>	H319:	Causes serious eye irritation.
<b>Precautionary Statements:</b>	P264: P501:	Wash hands after handling. Dispose of contents/container in accordance with local / regional / international regulations.

## 15. REGULATORY INFORMATION

<b>Republic of South Africa Regulations:</b>	National Water Act 36 of 1998. Occupational Health and Safety Act, 1993. Environmental Conservation Act 73 of 1989. Hazardous Substances Act, 1973. Provincial Ordinances and Local By-laws.
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## 16. OTHER INFORMATION

**Label Requirement:** Keep away from food and foodstuffs.

**Emergency Contact:** KIMLEIGH CHEMICALS SA (PTY) LTD  
TEL NO. +27 (18) 293-1028

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