

Safety Data Sheet

According to the International Organization for Standardization, ISO 11014:2009

www.kimleigh.com

TEL: | +27 18 293 1028: | +27 18 285 1014



Reg. No. 1974/000531/07

PO Box 1097 | Potchefstroom | 2520 | South Africa

11 Jasper vd Westhuizen Str | Potchindustria | Potchefstroom | 2531

Trade name: Zinc Sulphate Monohydrate

Product range:

ANIMADE

Growing with
FERTION

SECTION 1: Chemical Product and Company Identification

1.1 Product identifier:

Product name : Zinc Sulphate Monohydrate
Chemical formula : ZnSO₄.H₂O
Chemical family : Sulphates

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

Relevant identified uses

Animal feeds, fertilizers, food additive and dietary supplement.

1.3 Details of the supplier of the safety data sheet:

Supplier:

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


E-mail : sheq@kimleigh.co.za

1.4 Emergency telephone number:

Kimleigh Chemicals SA (Pty) Ltd: Tel: +27 (18) 293-1028

SECTION 2: Hazards Identification

2.1. Classification of the substance:

| Classification according to the Global Harmonized System (GHS): | Code: | Pictogram: | Signal word: |
|---|--------------|---|--------------|
| Health hazards: Harmful if swallowed. Causes serious eye damage. | H302 H318 |  GHS07 | Warning |
| Environmental hazards: Very toxic to aquatic life with long lasting effect. | | H410 | |

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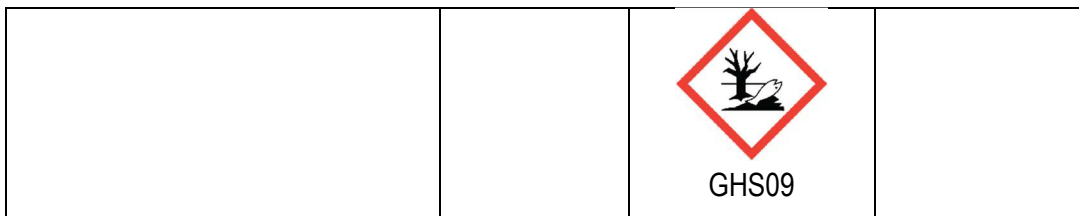
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Precautionary statements:

- P501 : Dispose of contents/container in accordance with local / regional / national / international regulations.
- P315 : Get immediate medical attention/advice.
- P305+P351+P338 : If in eyes, rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
- P301+P310 : If swallowed immediately call poison center or doctor/physician.

2.2 Potential health effects:

Routes of entry: Eye contact, inhalation, ingestion, absorbed through skin.

Eyes: Risk of serious eye damage to eyes. May cause eye irritation and local inflammation. Possible corneal burn symptoms include stinging, tearing and redness.

Skin: Causes skin irritation.

Inhalation: Inhalation of dust may cause damage to respiratory tract and can lead to the formation of edemas. Other symptoms can include irritation of nasal passages, sore throat, shortness of breath, and coughing.

Ingestion: Harmful if swallowed. It may cause irritation and/or a burning sensation in the mouth, pharynx, oesophagus and gastrointestinal tract. May have difficulty swallowing. Symptoms include abdominal pain, nausea, vomiting, and diarrhoe. After uptake of large quantities drop in blood pressure, cardiovascular disorder and collapse. Target organs: kidney, pancreas, liver, and lungs.

SECTION 3: Composition/Information on Ingredients

3.1 Substance:

Substance name: Zinc Sulphate Monohydrate
Appearance: White/pink free-flowing powder
Active ingredients: 35 % Zn minimum (m/m)

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SECTION 4: First Aid Measures

4.1 Description of first aid measures

General information

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

Following inhalation

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

Following skin contact

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

Following 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.

Following ingestion

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. 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.

SECTION 5: Firefighting Measures

Products of combustion:

Oxides of sulphur and zinc.

Explosion hazards in presence of various substances:

Risk of explosion of the product in the presence of static discharge: NO.

Risk of explosion of the product in presence of mechanical impact: NO.

Firefighting media and instructions:

Use alcohol-resistant foam, water spray, dry chemical or carbon dioxide.

Protective clothing (Fire):

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

Special remarks on fire hazards:

Prevent fire-fighting water from entering surface water or groundwater.

Special remarks on explosion hazards:

Not available.

| | | | | | | | |
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SECTION 6: Accidental Release Measures

Personal Protection:
Hands: Nitrile rubber gloves.
Eyes: Splash goggles.
Body: Protective work clothing.
Feet: Safety boots.

Wear appropriate respiratory and personal protection equipment. Isolate spill area and provide ventilation. Avoid dust formation. Avoid breathing vapours, mist or gas. Scoop or vacuum up spill using a vacuum system equipped with a high efficiency particulate air (HEPA) filtration system and place in a properly labeled closed container for further handling and disposal.

Small spill: Use appropriate tools and personal protective equipment. Pick up spillage. Dispose of in a waste disposal container. Do not allow to enter sewerage system.

Large spill: Use appropriate tools and personal protective equipment. Contain material. Take up spillage limiting generation of dust. Dispose of in a waste disposal container. Do not allow to enter sewerage system.

Environmental Precautions: Do not allow to enter drains or to be released to the environment.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Protective measures

Advice on safe handling

Handle in a well-ventilated area in an enclosed, controlled process. Avoid creating dust. Ensure adequate ventilation if dusts are created. Do not breathe dust or fumes. Wash thoroughly before eating or smoking. See section 8 for information on personal protection equipment.

Advice on safe storage

Store in a cool, dry area. Store material tightly sealed in properly labeled containers. Protect from moisture. Store away from oxidizers. See section 10 for more information on incompatible materials.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Engineering controls: Whenever possible the use of local exhaust ventilation or other engineering controls is the preferred method of controlling exposure to airborne dust and fume to meet established occupational exposure limits. Use good housekeeping and sanitation

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practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Personal Protection: Protective clothing should be selected specifically for the working place, depending on concentration and quantity of substance handled.

Respiratory Protection: Use suitable respirator when dust or fumes are present.

Eye Protection: Safety glasses.

Skin Protection: Impermeable gloves, protective work clothing as necessary.

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.

SECTION 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance:

| | |
|------------------------|------------|
| Physical state: | Powder |
| Colour: | White/pink |
| Odour: | Odourless |

9.2 Other information:

| | |
|---------------------------------------|------------------------|
| Boiling point: | Not available |
| Vapour density: | Not available |
| Flammability/explosive limits: | Not available |
| Bulk density: | 500 kg/m ³ |
| Relative density (20°C): | 3.28 g/cm ³ |
| Solubility: | ~ 350 g/l |

SECTION 10: Stability and Reactivity

10.1 Reactivity and stability

The product is stable under recommended conditions of storage and use.

10.2 Conditions of Instability

High temperatures will cause decomposition. Material is hygroscopic – avoid contact with moisture. Do not store in contact with alkalis and oxidizing agents.

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10.3 Hazardous decomposition products

Oxides of zinc.

10.4 Incompatibility with various substances

Avoid contact with high concentrations of nitrates, alkalis, tannins, and oxidising agents. Lead, calcium, strontium salts, borax. In molten state reacts violently with (some) metals.

10.5 Hazardous Polymerization

Will not occur.

SECTION 11: Toxicological Information

11.1 Information on toxicological effects:

| | Effect dose / concentration | Value(s) | Species |
|---------------------|-----------------------------|--------------|---------|
| Acute oral toxicity | LD50 | >2,000 mg/kg | Rat |

11.2 Other information:

Acute and chronic effects on humans:

Following inhalation

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

Following skin contact

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

Following 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.

Following ingestion

If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. 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.

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Carcinogenicity:

No component of this product presented at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Toxicity to reproductive system:

Tests on laboratory animals for reproductive effects are cited in Registry of Toxic Effects on Chemical Substances (RTECS).

SECTION 12: Ecological Information

Ecotoxicity:

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Fish: *Onchorhynchus mykiss* LC50: 0.43 mg/l

Daphnia: *Daphnia magna* EC50: 0.15 mg/l

Algae: *Scenedesmus quadricauda*: IC50: 0.52 mg/l

Mobility:

Do not allow to enter water or soil.

SECTION 13: Disposal Considerations

13.1 Treatment:

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

SECTION 14: Transport Information

| | Land transport (ADR/RID) | Inland waterway transport (ADN) | Sea transport (IMDG) | Air transport (ICAO-TI / IATA-DGR) |
|---------------------------------|---|---|---|---|
| 14.1 UN No. | 3077 | 3077 | 3077 | 3077 |
| 14.2 UN Proper shipping name | Environmental hazardous substance, Solid, n.o.s. (Zinc Sulphate Monohydrate) | Environmental hazardous substance, Solid, n.o.s. (Zinc Sulphate Monohydrate) | Environmental hazardous substance, Solid, n.o.s. (Zinc Sulphate Monohydrate) | Environmental hazardous substance, Solid, n.o.s. (Zinc Sulphate Monohydrate) |

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| 14.3 Transport hazard class(es) | Class 9 | Class 9 | Class 9 | Class 9 |
| Hazard label(s) |   GHS07 GHS09 | | | |
| 14.4 Packing group | III | III | III | III |
| 14.5 Transport label |  | | | |

Section 15: Regulatory Information

Republic of South Africa Regulations: 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.

SECTION 16: Other Information

16.1 Hazardous Material Identification System

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM

| HAZARD INDEX | | PERSONAL PROTECTION INDEX | |
|---|-----------------|---|---------------------------|
| 4 | Severe Hazard | A | G |
| 3 | Serious Hazard | B | H |
| 2 | Moderate Hazard | C | I |
| 1 | Slight Hazard | D | J |
| 0 | Minimal Hazard | E | K |
| * An asterisk or other designation corresponds to additional information on a data sheet or separate chronic effects notification | | F | X |
| HEALTH | | Consult your supervisor or S.O.P. for "Special" handling directions | |
| FLAMMABILITY | 0 3 | A Safety Glasses | n Safety Goggles |
| PHYSICAL HAZARD | 0 | o Face Shield & Eye Protection | p Gloves |
| Personal Protection | C | q Boots | r Synthetic Apron |
| | | s Full Suit | t Dust Respirator |
| | | u Vapor Respirator | w Dust & Vapor Respirator |
| | | y Full Face Respirator | z Airline Hood or Mask |

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16.2 Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with the International Organization for Standardization.

16.4 Disclaimer:

KIMLEIGH CHEMICALS SA (Pty) Ltd provides the information contained herein in good faith but does not assume any liability whatsoever for its accuracy or completeness. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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