

Material Safety Data Sheet

(This document conforms to ISO 11014-1)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Supplier / Manufacturer: Kimleigh Chemicals SA (Pty) Ltd
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 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: Copper Metalin 500.

Molecular Formula: Proprietary Information.

Product range: Fertion.

Chemical Family: Agricultural micronutrient.



2. COMPOSITION / INFORMATION ON INGREDIENTS

Substance Name: Copper Metalin 500.

Appearance: Brownish liquid.

Hazardous Ingredients:

Ingredients	Content	GHS Classification
Copper	30 – 75 %	H302 H410

3. HAZARD IDENTIFICATION

Physical State and Appearance: Brownish liquid.

GHS Classification:
 H302: Harmful if swallowed.
 H410: Very toxic to aquatic life with long lasting effect.
 P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

Pictogram:



Signal word: Warning Warning

Routes of Entry: Eye Contact. Inhalation. Ingestion. Absorbed through skin.

Potential Health Effects: *Eyes* May cause eye irritation and local inflammation.

Skin Causes mild skin irritation.

Inhalation Inhalation of mist may cause irritation to respiratory tract. 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, esophagus and gastrointestinal tract. May have difficulty swallowing. Symptoms may include abdominal pain, nausea, vomiting and diarrhoea.

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:

Nitrous oxide; oxides of copper.

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, CO₂, 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.

Special Remarks on Fire Hazards:

Prevent fire-fighting water from entering surface water or

groundwater.

**Special Remarks on
Explosion Hazards:**

Not available.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Use personal protective equipment. Avoid substance contact, ingestion and inhalation. Ensure adequate ventilation.

**Environmental Protection
Measures:**

Do not allow to enter sewerage system.

Small Spill:

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.

Large Spill:

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

Handling:

Handle with care in accordance with good industrial hygiene and safety practices. Avoid inhalation of mist. 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. 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.

Storage:

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. Access to water and eye wash facility should be available.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Engineering controls:

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.

Personal Protection:

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

Eyes

Splash goggles / safety glasses with side shields.

<i>Body</i>	Body-covering clothing / full suit.
<i>Respiratory</i>	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

Physical State and Appearance:	Brownish liquid.
Odour:	Odourless.
pH (50 g/ℓ H₂O solution):	> 9.0
Boiling Point:	> 100 °C
Freezing Point:	< 0 °C
Relative density (20 °C):	± 1.51 kg / ℓ
Vapour Pressure:	Not applicable.
Vapour Density:	Not applicable.
Volatility:	Not applicable.
Odour Threshold:	Not applicable.
Evaporation Rate:	Not applicable.
VOC:	Not applicable.
Solubility in water (20 °C)	Product is miscible with water.

10. STABILITY AND REACTIVITY

Stability and Reactivity:	The product is stable under recommended conditions of storage and use.
Conditions of Instability:	High temperatures. Store away from strong oxidizing agents and acids.
Incompatibility with Various Substances:	Strong oxidizing agents and acids. Must not be used with a straight ammonium nitrate fertilizer or any fertilizer containing ammonium nitrate which may have self-sustaining decomposition properties.
Hazardous Decomposition Products:	Oxides of copper.
Hazardous Polymerization:	Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicity:	Acute oral toxicity (LD50): 470 mg/kg [RAT].
Chronic Effects on Humans:	<u>CARCINOGENIC EFFECTS:</u> Not suspected. <u>MUTAGENIC EFFECTS:</u> Not suspected. <u>TERATOGENIC EFFECTS:</u> Not suspected.
Acute Effects on Humans:	Mild eye irritant. Mild skin irritant. Inhalation may cause mild irritation to respiratory tract. May be harmful if inhaled. It may cause irritation to the respiratory tract. Symptoms can include irritation of nasal passages, sore throat, shortness of breath and coughing. Harmful if swallowed. It may cause irritation and/or 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:	Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Fish: <i>Cyprinodon variegatus</i> (LC50) >0.17 mg / ℓ (96 h) Daphnia: <i>Daphnia Magna</i> (EC50) 0.5 mg / ℓ (48h)
Phytotoxicity:	Copper is an essential micronutrient for healthy plant growth, but can be harmful in large quantities to copper sensitive plants.
Mobility:	Product is miscible with water.

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

Land Transport:

ADR / RID

UN Number: 3082 Class: 9 Packing group: III
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (Copper Metalin 500).

Marine Transport:

IMDG

UN Number: 3082 Class: 9 Packing group: III
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (Copper Metalin 500).

Air Transport:

IATA

UN Number: 3082 Class: 9 Packing group: III
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S. (Copper Metalin 500).

Signal Word:



Warning
H302:

Warning

Hazard Statements:

H410:

Harmful if swallowed.

P501:

Very toxic to aquatic life with long lasting effect.
Dispose of contents/container in accordance with
local / regional / national / international
regulations.

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.

16. OTHER INFORMATION

Emergency Contact:

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

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.