

VILLA COPPER OXYCHLORIDE 850 WP

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: COPPER OXYCHLORIDE 850 WP
Other identifier: -
Recommended use: Adjuvant
Restrictions on use: Agriculture - farming, small scale farming, home and garden.

Supplier: Villa Crop Protection (Pty) Ltd.
PO Box 10413
Aston Manor, 1630, South Africa
Telephone: (011) 3962233
Fax: (011) 3964666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
Envirosure. +27 31 205 4918
(Hazcall24) +27 86 044 4411
(Client: Villa Crop Protection)
Griffon Poison Information Centre +27 82 446 8946
(Client: Villa Crop Protection)
Poisoning Emergency telephone numbers:
Griffon Poison Information Centre +27 82 446 8946
Poisons Information Centre +27 861 555 777
Villa Crop Protection Emergency number:
National Safety, Health and Environmental Manager:
+27 63 698 0668

2. HAZARDS IDENTIFICATION

| UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008 | | |
|--|-------------------------------|--------------|
| Hazard classes | Hazard categories | H-statements |
| Health | | |
| Oral | Acute Tox. 4 | H302 |
| Dermal | Acute Tox. 5 Skin Irrit. 3 | H313 H316 |
| Inhalation | Acute Tox. 4 | H332 |
| Environment | | |
| Aquatic acute | Aquatic Acute 1 | H400 |
| Aquatic chronic | Aquatic Chronic 1 | H410 |

The most important adverse effects:
Physiochemical effects:
None known.
Human health effects:
Harmful if swallowed or inhaled.
Causes mild skin irritation.

Label elements:



Signal word: Warning
Hazard statements:
H302: Harmful if swallowed.
H313: May be harmful in contact with skin.
H316: Causes mild skin irritation.
H332: Harmful if inhaled.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
Precautionary statements:
P264: Wash skin and eyes thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P273: Avoid release to the environment.
P391: Collect spillage.
P501: Dispose of contents/container in accordance with local regulations.
Special labelling of certain mixtures:
None known.
Other hazards:
None known.
Toxicity:
Classification according to GHS: Category 4
Classification according to WHO: Category III
Classification according to GPIC: Category III

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture
Composition:

| Chemical Name | CAS | Conc. (m/v %) | Classification EC 1272/2008 |
|-------------------------|-----------|---------------|--|
| Copper Oxychloride | 1332-65-6 | 85% | Acute Tox. 3 (H301) Acute Tox. 4 (H332) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410) |
| Sodium dodecyl sulphate | 151-21-3 | < 5% | Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Aquatic Chronic 3 (H412) |

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure.
Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation persists.

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Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.

Eyes: Flush eyes with clean water. Lift eyelids to facilitate irrigation. If present, remove contact lenses and continue rinsing.

Ingestion: Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. The stomach should be emptied by aspiration and lavage and demulcents such as milk or egg white should be given freely.

Anticipated acute effects: Harmful if swallowed. May be harmful in contact with skin. Causes mild skin irritation. Harmful if inhaled.

Anticipated delayed effects: None known.

Most important symptoms/effects: The ingestion of a large quantity of copper oxychloride is followed by nausea and vomiting. Metallic taste and a burning sensation in the oesophagus and stomach.

Advice to physician: Treat symptomatically and supportively. Chelating agents such as penicillamine or sodium calciumedetate should be given. Pethidine may be given to relief pain if necessary.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Extinguish fires with water, carbon dioxide, dry powder, or alcohol-resistant foam.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: No fire hazard, but fine dust in air may form an explosive mixture if source of ignition is present.

Special Fire Fighting Procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Keep upwind. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Avoid contact with skin. Do not breathe in spray mist or dust. Ventilate area of spill or leak, especially in contained areas.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified to be very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water/Environmental Affairs.

Methods and Materials for Containment: Contain spilled product by diking area with sand or earth.

Methods and Materials for Clean-up: Contain spilled product by picking up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal. Do not create a powder cloud by using a brush or compressed air. Label containers with the contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Harmful if swallowed. Avoid contact with skin. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep out of reach of unauthorised persons, children and animals. Store in its original, labelled container, tightly closed, in an isolated, dry, cool and well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

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Incompatible substances and mixtures: Refer to product label.
Packaging material: HDPE bags with virgin polythene liner and plastic containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration

| Components | Exposure limits | Type of exposure limit | Source |
|---------------------|----------------------|------------------------|-----------|
| Kaolin (Total dust) | 10 mg/m ³ | Up to 10-hour TWA | NIOSH REL |

Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved air-purifying respirator.

Hand Protection: The use of chemically protective gloves is recommended to prevent against skin contact.

Eye Protection: This product is not believed to cause eye damage, but as a precaution, the use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employee must wear appropriate protective clothing; boots, hat and equipment to prevent repeated or prolonged skin contact with this substance.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light green powder.

Odour: Odourless.

pH (1% aqueous dilution): Not available.

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: Not applicable.

Flammability: Not flammable, but fine dust in air may form an explosive mixture if source of ignition is present.

Upper/lower explosion limits: Not applicable.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density: Not available.
Bulk density: 0.7 to 0.8 kg/litre
Solubility: Dispersible in water.
n-octanol/water partition coefficient: Not available.
Auto-ignition temperature: Not applicable.
Decomposition temperature: Not available.
Viscosity: Not applicable.

10. STABILITY AND REACTIVITY

Chemical Stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50 °C, preferably below 30 °C, and not for prolonged periods in direct sunlight.

Reactivity: None known.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Extreme heat or exposure to flames.

Incompatible Materials: Incompatible with mercury-containing compounds, thiram, DNOC, lime sulfur and dithiocarbamates.

Hazardous Decomposition Products: Decomposes on heating above 220 °C. Decomposes on heating in alkaline media with the formation of copper oxides (toxic).

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS (conforms to WHO)

Oral LD₅₀ rat > 1100 mg/kg

Dermal LD₅₀ rat > 2300 mg/kg

Inhalation LC₅₀ (4h) rat > 3.3 mg/l

Skin Irritation: Causes mild skin irritation.

Eye Irritation: Product is not an eye irritant.

Skin Sensitization: Product is not a skin sensitizer.

Respiratory Sensitization: The product is not a respiratory sensitizer.

Reproductive cell mutagenicity: Not available.

Carcinogenicity: Not available.

Reproductive toxicity: Not available.

Specific target organ toxicity – single exposure: Not available.

Specific target organ toxicity – repeated exposure: Not available.

Aspiration hazard: Not available

Chronic Effects (other targets e.g. developmental): Not available.

POTENTIAL ADVERSE EFFECTS:

Inhalation: Harmful if inhaled.

Skin contact: Causes mild skin irritation.

Eye contact: None known.

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Ingestion: The ingestion of a large quantity of copper oxychloride is followed by nausea and vomiting. Metallic taste and a burning sensation in the oesophagus and stomach.

12. ECOLOGICAL INFORMATION

This product is considered a marine pollutant.

ECOTOXICITY DATA: Active ingredient

Fish:
 LC₅₀ (96 h) Rainbow trout 0.217 mg Cu/ℓ

Daphnia:
 LC₅₀ (48 h) 0.29 mg Cu/ℓ

Algae: 56.3 mg Cu/ℓ
 E_bC₅₀ 187.5 mg Cu/ℓ
 E_rC₅₀

Birds:
 Dietary LC₅₀ (8 d) Bobwhite quail 167.3 mg Cu/kg b.w. daily

Bees:
 LD₅₀ contact 109.9 mg/bee (Cu equiv.)

LD₅₀ oral 1.81 mg/bee (Cu equiv.)

Worms:
 LC₅₀ (14 d) >489.6 mg/kg soil

Plants: Copper is an essential element and is under homeostatic control in plants.

ENVIRONMENTAL EFFECTS:

Animals: Copper is an essential element and is under homeostatic control in mammals.

Persistence and degradability: Copper is a chemical element and therefore cannot be degraded or transformed into related metabolites.

Bio-accumulative Potential: Not determined.

Mobility in soil: In soil, it is mainly strongly bound to a wide range of soil substances, therefore limiting the amount of free copper ions in soil solution and so its bioavailability. The amount of free copper ions is primarily controlled by pH and the amount of dissolved organic carbon in the soil. In acid soils, copper ions will be at greater concentration than at neutral or alkaline pH. Copper is not expected to leach to the saturated zone.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATIONS

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with

local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant. Contaminated absorbents, surplus product, etc., should be burned in a high-temperature incinerator (> 1000 °C) with effluent gas scrubbing.

Container: Emptied containers retain product residues. Do not re-use the empty container for any other purpose. Empty containers by inverting the empty container over the spray or mixing tank. Thereafter, rinse the container three times with a volume of water equal to a minimum of one third of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner. Destroy the container by perforating and flattening and dispose of through an approved waste dump site, incineration plant or recycling company. Observe all labelled safeguards until container is destroyed.

14. TRANSPORT INFORMATION

UN Number: 3077

Road Transport ADR/IRD:

Class: 9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper Oxychloride 850 g/kg)

Maritime Transport IMDG/IMO:

Class: 9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper Oxychloride 850 g/kg)

Marine Pollutant (Y/N): Yes.

Air Transport IATA/ICAO:

Class: 9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Copper Oxychloride 850 g/kg)

Special/Environmental Precautions: Wedge drums tightly to avoid movement.

Transport in bulk (according to MARPOL 73/78, Annex II and the IBC code): Not available.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation for the mixture:

OHS 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

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Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Packaging: Packed in 20, 25, 30, 40, 50, 60, 200, 250, 500 g, 1, 2, 5, 10, 25, 50 kg plastic containers or HDPE bags with virgin polythene liner, labelled according to South African regulations and guidelines.

Additional H statements (formulants):

H303: May be harmful if swallowed.

H315: Causes skin irritation.

H412: Harmful to aquatic life with long lasting effects.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.