

SAFETY DATA SHEET

CopX

1. CHEMICAL PRODUCT & COMPANY IDENTIFICATION

Product Name: CopX
Other identifier: Copper Hydroxide 538g/l
Pesticide Classification: Fungicide
Restrictions on use: Agriculture

Supplier

Enviro Bio-Chem (Pty) Ltd
 Co. Reg. No.: 2013/194774/07
 44 Kerk Street, Lichtenburg
 North West, South Africa 2740

Registration Holder

Enviro Crop Protection (Pty) Ltd,
 Co. Reg. No.: CK2001/036403/23
 44 Kerk Street, Lichtenburg
 North West, South Africa 2740

Telephone: +27 12 006 0063
Fax: 086 541 7948
Website: www.envirobiochem.co.za

24 Hr Emergency Number: Spillage: 0861 000 366

In case of Poisoning:

Griffon Poison Information Centre: +27 82 446 8946
 Tygerberg Hospital: (+27 21) 931 6129
 Poison Emergency Enquiries: (+27 21) 689 5227

2. HAZARD IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	Hazard statements
Acute Toxicity – Oral	Category 4	H302
Serious Eye Damage	Category 1	H318
Acute Toxicity – Inhalation	Category 4	H332
Aquatic Toxicity – Acute	Category 1	H400
Aquatic Toxicity – Chronic	Category 1	H410

The most important adverse effects:

The most important adverse physiochemical effects: None Known.

The most important adverse human health effects: None Known.

Label elements:



Signal word: Danger

Hazard statements:

H302: Harmful if swallowed.
 H318: Causes serious eye damage.
 H332: Harmful if inhaled.

H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P102: Keep out of reach of children.
P103: Read label before use.
P201: Obtain special instruction before use.
P202: Do not handle until all safety precautions have been read and understood.
P261: Avoid breathing fume/ mist/ vapours or spray.
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.
P280: Wear protective gloves, protective clothing, eye protection and face protection.
P264 + P265: Wash hand and face thoroughly after handling. Do not touch eyes.
P317: Get medical help.
P330: Rinse mouth.
P391: Collect spillage.
P301 + P317: IF SWALLOWED: Get medical help.
P304 + P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses if present, and easy to do. Continue rinsing.
P501: Dispose of contents/container in accordance with local/regional/ national/international regulation.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substances/ Mixture: Mixture

Composition:

Chemical Name	CAS	Conc. (m/m%)	Classification EC 1272/2008
Copper (II) Hydroxide	20427-59-2	41%	Acute Toxicity, Inhalation, Category 2. Acute Toxicity Oral, Category 4. Serious Eye Damage/Irritation, Category 1. Aquatic Toxicity, Acute, Category 1. Aquatic Toxicity, Chronic, Category 1.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section. Occupational exposure limits, if available, are listed in Section 8.

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 and consult a doctor / poison control centre.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation persists / person feels unwell. Seek medical attention if you feel unwell after inhalation.

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 / person feels unwell.

Eyes: Flush eyes with clean water. Lift eyelids to facilitate irrigation. If present, remove contact lenses and continue rinsing. Seek medical attention if irritation persists.

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. If the person is alert, rinse mouth thoroughly with water. If swallowed, get emergency medical help immediately.

Anticipated acute effects: Harmful in case of inhalation. Harmful if swallowed. Causes serious eye damage.

Anticipated delayed effects: None known.

Most important symptoms/effects: None known.

Advice to physician: Treat symptomatically and supportively. No specific antidote known.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide, dry powder, or alcohol-resistant foam for small fires and water fog or foam can be used for larger fires or cooling of unaffected stock but avoid the accumulation of polluted run-off from the site.

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

Specific hazards: May release irritating fumes upon combustion such as oxides of carbon and nitrogen. Hazardous decomposition products in case of fire: Refer to Section 10: Stability and Reactivity.

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: Keep all personnel away may be toxic by inhalation. Avoid contact with eyes and skin. Do not breathe in spray mist or dust. Ventilate area of spill, 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 as very toxic to aquatic organisms with 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. Collect in suitable and properly labelled containers. Absorb with materials such as sand, earth, vermiculite, or diatomaceous 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 and/ or inhaled. Avoid contact with skin and eyes. 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: Handle in accordance with good industrial hygiene and safety practice. Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Storage:

Conditions for safe storage: Keep under lock and key and 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.

Incompatible substances and mixtures: Refer to product label.

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure Limits:

No information available.

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: For most well-ventilated conditions, no respiratory protection should be needed. 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. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

Eye Protection: 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.

Environmental exposure controls: Prevent product from entry into sewers and water courses.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid
Colour	Blue
Aspect	Homogenous Suspension
Odour	Slight chemical odour
Odour threshold	No data available
pH	8.94 – 8.76
Melting point / freezing point (° C)	No data available
Boiling point (° C)	Not applicable
Flash point (° C)	No data available
Evaporation rate	No data available
Flammability	Non flammable
Upper /lower flammability limits	No data available

Vapour pressure	No data available
Vapour density	No data available
Relative density (20°C)	1.4 – 1.45 g/ml
Water solubility (g/l) at 20°C	Soluble
Partition coefficient: n-octanol/water partition coefficient	No data available
Particle Size (D50%)	1.663 – 1.561 µm
Particle Size (D90%)	2.418 – 2.196 µm
Auto-ignition temperature (° C)	No data available
Decomposition temperature (° C)	No data available
Viscosity, dynamic (mPa s)	No data available
Explosive properties	No explosive properties
Oxidising properties	Not an oxidizer
Explosive limits	No data available

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: Product is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

Possibility of Hazardous Reactions: Slightly reactive with oxidising agents.

Conditions to Avoid: Extreme heat or exposure to flames.

Incompatible Materials: Oxidizing agents.

Hazardous Decomposition Products: Does not decompose when used for intended uses. Could decompose when heated. Under burning conditions, the product may form toxic and irritating fumes including oxides of copper.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS:

Acute Oral LD₅₀ (rat): > 1280 mg/kg

Acute Dermal LD₅₀ (rat): > 2000 mg/kg

Acute Inhalation LC₅₀ (rat, 4 hr): > 1.14 mg/l air.

Skin Irritation: Not classified.

Eye Damage/Irritation: Causes serious eye damage.

Skin Sensitization: Not classified.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

Specific target organ toxicity – single exposure: Not classified.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: Not classified.

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

12. ECOLOGICAL INFORMATION

The product is classified as a marine pollutant.

ECOTOXICITY DATA:

Active ingredient: Copper Hydroxide 538g/l

Fish

LC₅₀ (96 hr) 10 mg/l rainbow trout

Daphnia

EC₅₀ (48 hr) 0.0438 mg/l

Algae

Static test EC₅₀ (72h) 0.0223 mg/l (*Selenastrum capricornutum*)

Birds

Acute oral LD₅₀ 223 mg/kg bobwhite quail

Dietary LC₅₀ 8 days 883 mg/kg diet (bobwhite quail); 863 mg/kg (mallard ducks)

Bees

Toxicity to bees LD₅₀ (oral) 49 µg/bee.

Toxicity to bees LD₅₀ (contact) 42.8 µg/bee.

Worms

LC₅₀ (14d) >677 mg/kg soil (*Eisenia fetida*)

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

Bioaccumulation: No data available.

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

13. DISPOSAL CONSIDERATION

Pesticide Disposal: 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.

Package Product Wastes: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is cleaned, reconditioned or destroyed. Thereafter, rinse the container three times with a volume of water equal to a minimum of one third of that of the container. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

14. TRANSPORT INFORMATION

UN Number 3082

Road Transport ADR/IRD:

Class: 9
 Packaging group: III
 UN proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Copper (II) Hydroxide)

Maritime Transport IMDG/IMO:

Class: 9
 Packaging group: III
 UN proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Copper (II) Hydroxide)

Marine Pollutant (Y/N): Yes

Air Transport IATA/ICAO:

Class: 9
 Packaging group: III
 UN proper Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Copper (II) Hydroxide)

15. REGULATORY INFORMATION

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

Relevant information regarding authorization: Occupational Health and Safety Act 1993. Regulation for Hazardous Chemical Agents, 2021. UN Recommendations on the Transport of Dangerous Goods Model Regulations Rev. 21 (2019), Globally Harmonized System of Classification and Labelling of Chemicals (GHS) Rev 8, 2019.

Relevant information regarding restrictions: None.

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

Other national regulations: National Road Traffic Act, 1996 (ACT NO. 93 of 1996). SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes. National Environmental Management Waste Act 59 of 2008. Act 36 of 1947 of the Republic of South Africa. This product is registered under it is a violation of South African law to use this product in any manner inconsistent with its approved labelling. Read and follow all label directions

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Note: Read and understand all the information on the product label before using the product.

Other hazard statements, abbreviations and explanations:

H302: Harmful if swallowed.

H318: Causes serious eye damage.

H332: Harmful if inhaled.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

LD50 value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

OEL/RL: Occupational exposure limit-recommended limit.

TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

ST/STEL: Short-term exposure limits.

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

Compiled: /
Reviewed: July 2025
Next revision: July 2030

For detailed information on revisions, contact the registration holder.