Safety Data Sheet (SDS) CopX

According to UN GHS 8th Ed

First print date: 27 January 2025
Version: 1.1

SECTION 1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

Product identifier:

Identification as on the label/Trade name: CopX

Common name: Copper Hydroxide 538g/l

Relevant identification uses of the substance and uses advised against:

Identified uses: Fungicide

Uses advised against: Use only as directed.

Details of the supplier of the Safety Data Sheet:

Enviro Bio-Chem (Pty) Ltd, 44 Kerk Street,
Lichtenburg, North West, South Africa, 2740

Details of the Registration Holder:

Enviro Crop Protection (Pty) Ltd, 44 Kerk Street,
Lichtenburg, North West, South Africa, 2740

Contact Details:

Telephone: +27 87 231 7261
Fax: 086 541 7948
Website: www.envirobiochem.co.za

Emergency telephone numbers:

24 Hour Emergency Number: Bateleur: +27 83 123 3911
Griffon Poison Information Centre: +27 82 446 8946
Poisons Information Helpline: 0861 555 777
Tygerberg Hospital: +27 21 931 6129

SECTION 2. HAZARD IDENTIFICATION

Classification of the substances or mixture

The mixture is classified according to SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]

Hazard classes/Hazard categories	Hazard statement
Acute Toxicity – Oral (Category 4)	H302
Serious Eye Damage / Irritation (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:

Hazard classes/Hazard categories	Hazard statement
Harmful is swallowed	H302
Causes serious eye damage	H318
Harmful in inhaled	H332
Very toxic to aquatic life	H400
Very toxic to aquatic life with long lasting effects	H410

Precautionary Statements:

General:

Statement Number	Statement
P201	Obtain special instruction before use.
P202	Do not handle until all safety precautions have been read and understood.

Prevention:

Statement Number	Statement
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

Response:

Statement Number	Statement
P317	Get medical help.
P330	Rinse mouth.
P391	Collect spillage.
PP301 + 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: Immediatley rinse with water for several minutes. Remove contact lenses if present, and easy to do. Continue rinsing.

Disposal:

Statement Number	Statement
P501	Dispose of the contents/ containers in accordance with the local legislation to a licensed facility

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Trade Name:	COPX
IUPAC/Chemical Name (active ingredient):	Copper (II) Hydroxide
Molecular Formula:	$Cu(OH)_2$
CAS:	20427-59-2
EC:	243-815-9
Formulation:	Suspension Concentrate - 538 g/L

Ingredients:

Substance name (IUPAC)	CAS Number.	Concentration % by weight	Classification EC1272/2008
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.

SECTION 4. FIRST AID MEASURES

Description of first aid measures:

In case of inhalation: Avoid inhalation of vapour or mist spray**.** If inhaled, remove to fresh air. Administer artificial respiration if breathing is stopped. Seek medical attention.

In case of skin contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Seek medical attention if symptoms persist.

In case of eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. If eye symptoms (redness, irritation, or pain) persist refer patient to ophthalmologist for examination of eyes.

In case of ingestion: Wash out mouth with water if the patient is alert and conscious. Do NOT induce vomiting . If vomiting occurs spontaneously, keep head below hips to avoid aspiration. Keep patient at rest and transport to nearest medical facility for further treatment. attention. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar,tie, belt, or waistband.

Most important symptoms and effects, both acute and delayed:

Acute effects: Harmful in case of inhalation.

Anticipated delayed effects: Causes serious eye damage.

Most important symptoms: None known

Indication of any immediate medical attention and special treatment needed:

No specific antidote known. Treat symptomatically. Symptoms may be delayed following ingestion.

SECTION 5. FIRE FIGHTING MEASURES

Extinguisher media:

Suitable extinguisher media: Foam. Dry powder. Carbon dioxide. Water spray.

Small Fire: Extinguish small fires with carbon dioxide, dry powder, or alcohol-resistant foam.

Large Fire: Water fog or foam can be used for larger fires or cooling of unaffected stock but avoid the accumulation ofpolluted run-off from the site.

Unsuitable extinguishing media**:** Do not use high volume water jet, due to contamination risk.

Special hazards arising from the mixture:

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.

Advice for fire-fighters:

Avoid inhaling hazardous vapours and fumes. Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Use an approved/certified respirator or equivalent.

Contain fire control agents for later disposal according to Section 13.
Water can be used to cool unaffected containers.

SECTION 6. ACCIDENTAL RELEASE

Personal precautions, protective equipment, and emergency procedures:

For non-emergency personnel: Keep all personnel away may be toxic by inhalation. Avoid contact with eyes and skin.
For emergency responders: Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear. Use an approved/certified respirator or equivalent Avoid contact with eyes and skin. Do not breathe in fumes. Refer to section 8 for recommended personal protective equipment. Evacuate unnecessary personnel.

Environmental precautions:

Stop leak if without risk. Do not touch spilled material. Prevent entry into drains, watercourses, groundwater or confined areas: dike if needed. This product is classified to be very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.
If the product contaminates public water, inform appropriate authorities immediately in accordance with local regulations.
Dispose in a safe manner in accordance with local/national regulations.

Methods for containment and cleaning up:

For small spills Contain spilled material if possible. Collect in suitable and properly labelled containers. Absorb with materials such as: sand, earth, vermiculite, or diatomaceous earth
For large spills Prevent entry into drains, watercourses, or confined areas. Cover contained spill with an inert absorbent material e.g., sand, earth, vermiculite or diatomaceous earth. Vacuum, scoop or sweep up material into a clean, dry, sealable container. Label container with the contents and dispose of according to local regulations. Do not reuse spilled material. To decontaminate the spill area, tools and equipment, wash with water and a suitable detergent.

Reference to other sections:

See section 7 for information on safe handling.
See section 8 for information on personal protection equipment.
See section 13 for information on disposal.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

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. Avoid inhalation. Avoid contact with eyes, skin or clothing. Ensure adequate ventilation during use and handling. Do not handle broken containers without protective equipment. Clean up spills immediately that occur during handling.
Protective measures: Observe directions on label and instructions for use.
Advice on general occupational hygiene: Do not eat drink or smoke when handling this product. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet

Conditions for safe storage, including incompatibility:

Store product in a locked, segregated, and approved area, out of reach of unauthorized 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 fertilizers.

Incompatible substances and mixtures:

Refer to product label.

Specific end uses:

Use as directed. Use original container.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters:

Occupational exposure limits (OEL): No information available.

Biological exposure indices (BEI): No information available.

Additional exposure limits under the conditions of use: No information available.

Exposure control:

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. A Risk Assessment should be conducted before handling is to commence to determine specific exposure control.

Appropriate engineering controls: Adequate ventilation is essential. Appropriate measures 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. Ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene measures: Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking and using the lavatory at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

Personal Protective Equipment

Eye/face protection: Use safety glasses. If there is a potential for exposure to particles which could cause eye discomfort wear chemical goggles.

Hand protection: Use chemical resistant gloves. Examples of preferred glove barrier materials include Nitrile/butadiene rubber, Polyethylene, Ethyl vinyl alcohol laminate, Polyvinyl alcohol, Polyvinyl chloride.

Body protection: Appropriate impervious clothing is required to prevent skin contact with the product.

Respiratory protection: Use in a well-ventilated area. For use in well-ventilated areas a respirator is generally not required. If used in areas that are not well-ventilated Respiratory protection is required; use NIOSH approved air purifying respirator with cartridges/canisters approved for organic vapours.

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic 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)	Not data available
Boiling point (° C)	Not applicable
Flash point (° C)	No data available
Evaporation rate	No data available
Flammability	No data available

Upper /lower flammability limits	No data available
Vapour pressure at 25°C	No data available
Vapour density	No data available
Relative density g/ml (20°C)	1.4 – 1.45 g/ml
Water solubility (g/l) at 20°C	Soluble
Partition coefficient : n-octanol/water	Not determined
Particle Size (D50%)	1.663 – 1.561 µm
Particle Size (D90%)	2.418 – 2.196 µm
Viscosity, dynamic (mPa s)	Not applicable
Explosive properties	No explosive properties
Oxidising properties	Not an oxidizer
Explosive limits	No data available

SECTION 10. STABILTY AND REACTIVITY

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

Chemical stability:
Hazardous polymerization will not occur. Stable for a minimum of 2 years under recommended storage and handling conditions.

Possibility of hazardous reactions:
Slightly reactive with oxidising agents

Conditions to avoid:
Keep away from excessive heat.

Incompatible materials:
Oxidizing agent.

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.

SECTION 11. TOXICOLOGICAL INFORMATION

Toxicokinetics, metabolism and distribution: No data available

Information on toxicological effects:

Assessment of acute toxicity:
The product has not been tested. The data reported is for the main ingredients in the mixture.

CopX	
Acute toxicity:	
Acute Oral LD50 (rat)	>1280 mg/kg
Acute Dermal LD50 (rabbit)	>2000 mg/kg
Acute Inhalation LC50 (rat)	>1.14 mg/l
Skin irritation/ corrosion (rabbit)	No skin irritation
Toxicity to fish LC50 – 96h	Oncorhynchus myskiss 0.017 mg/l
Eye damage / irritation (rabbit)	Iris leasions and a lack of reversibility
Respiratory or skin sensitization (Guinea pig)	Not sensitizing
Germ cell mutagenicity	Classification criteria are not met

Carcinogenicity	Classification criteria are not met
Reproductive toxicity	Classification criteria are not met
Specific Target Organ Toxicity STOT single exposure	Classification criteria are not met
Specific Target Organ Toxicity STOT repeated exposure	Classification criteria are not met
Aspiration hazard	Classification criteria are not met
Specific Target Organ Toxicity STOT repeated exposure	Classification criteria are not met

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

Sulfoxaflor **Toxicity**	
Aquatic Toxicity Fish LC_{50} (96 hr) Aquatic Toxicity Daphnia LC_{50} (48 hr) Toxicity to algae – static test EC_{50} (72h)	Oncorhynchus mykiss 0.017 mg/l Daphnia magna (Water flea) 0.038mg/l Pseudokirchneriella subcapitata (green algae)): 0.009mg/l
Persistence and degradability	Copper (II) Hydroxide is not readily biodegradable and is very persistent. Because copper is an element, it cannot break down any further via hydrolysis, metabolism, or any other degradation processes.
Bioaccumulation potential **Partition coefficient: n-octanol/water**	Copper is strongly bio-accumulative.
Mobility in soil	The product will likely be mobile in the environment due to its water solubility. The free cupric ion has a high sorption affinity for soil, sediments and organic matter, and copper applied to the surface is not expected to readily move into groundwater. Poorly draining soils and soils with shallow water tables are more prone to produce runoff contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.
Other adverse effects	This product has potential for runoff for several months after application.

SECTION 13. DISPOSAL CONSIDERATIONS

Waste treatment methods:

Product:

Keep out of drains, sewers, ditches, and waterways. Open dumping or burning of this pesticide is prohibited.
Waste resulting from the use of this product cannot be re-used or reprocessed. Refer to container label for disposal information. Treat as hazardous waste and dispose of in accordance with local/ regional/ national/ international regulations.

Container:

Refer to container label for disposal information. Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is cleaned, reconditioned, or destroyed. Rinse empty container three times with a volume of water equal to at least one tenth of that of the container. Pour rinse water into spray tank. Dispose of as hazardous waste. not contaminate water when disposing of rinse water. Dispose of using an approved waste disposal service provider. Follow all local/ regional/ national/ international regulations. Do not reuse the container for any other purpose.

SECTION 14. TRANSPORT INFORMATION

UN Number	3082
UN proper shipping name UNRTDG	Environmentally Hazardous Substance, Liquid, N.O.S. (Copper (II) Hydroxide)
Transport hazard class	9
Packaging group	III
Marine pollutant	Yes

SECTION 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:

EU regulations: Regulation EC 1272/2008 [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

SECTION 16. OTHER INFORMATION

Indication of changes:

Classification according to SANS 10234:2019, Regulation EC 1272/2008 [EU-GHS/CLP]

GHS aligned – all sections

Training instructions:

Use as indicated on the label, special training may be required for application.

Further information:

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.

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.