CopX

Advanced Copper Hydroxide for Superior Crop Protection

CopX (Reg. No: L11675 Act No. 36 of 1947), a **copper hydroxide-containing suspension concentrate contact fungicide and bactericide**, is specifically formulated for robust disease control in various crops. Classified under **FRAC Fungicide Group Code: M 01**, CopX offers growers a highly effective solution in the evolving landscape of crop protection.

What Makes CopX Outperform the Norm?
CopX's exceptional efficacy stems from a proprietary manufacturing process that delivers a superior formulation. It is an extremely effective broad-spectrum flowable product that releases copper ions at a constant rate on the plant surface, ensuring sustained disease control.

The Power of Particle Size: The effectiveness of any contact fungicide is significantly enhanced by optimal particle size. CopX boasts an average particle size just over **1 micron**, with **90% of particles being less than 5 microns (D-90)**. This ultra-fine sizing is ideal for:

- Superior Coverage & Adhesion: Smaller particles mean a greater number of copper particles per gram, leading to significantly increased surface area coverage and improved adhesion to the plant surface. They are not easily washed off by rain or irrigation, ensuring consistent protection.
- Enhanced Activity: The increased surface area facilitates the release of more copper ions when moisture is present, boosting fungicidal and bacterial activity.
- Preventing Phytotoxicity: Crucially, the carefully controlled particle size of CopX prevents phytotoxicity. Copper fungicides with particles smaller than 2 microns can be absorbed by the leaf, causing crop damage. CopX's optimal sizing ensures effective disease control without this risk.

Why Copper is Vital in Agriculture & How CopX Works?

Copper is an essential micronutrient for general crop growth and development and has historically been crucial for controlling fungal and bacterial diseases, including in organic farming. Plant pathogens have shown no reported resistance to copper fungicides.

Copper acts as a preventative contact fungicide, meaning it must be applied before disease development as it offers no curative or systemic activity. When applied as an insoluble copper salt, it remains on the plant surface. In the presence of moisture, plant exudates lower the pH, releasing Cu^{2+} ions. These ions are then absorbed by fungal spores or bacterial cells, disrupting their cellular functions and preventing infection. Copper's multi-site mode of action means it blocks enzyme functional groups, modifies proteins, and disrupts cell membranes, effectively controlling a broad spectrum of disease organisms.

Advantages & Features of CopX

CopX's advanced formulation provides numerous practical benefits for growers:

- Concentrated Liquid Formulation: Stable and easy to use, ensuring accurate measurement and dust-free application.
- Broad-Spectrum Efficacy: Effective against a wide variety of fungal and bacterial diseases across many crops.
- Ready-to-Use: This does not require a chemical reaction in the tank to become active.
- Chlorine-free.
- Excellent Tank Suspendability: Ensures even distribution.
- Compatibility: Can be used with most other pesticides.
- Good Sticking Ability: Ensures robust coverage and minimal wash-off.
- Organic Certification: Approved for use in organic farming under EU 2018/848.

CopX is Effective Against

CopX is registered for use on the following crops and effectively controls the listed diseases:

CROP	DISEASE
Avocados	Fruit spot *(Pseudocercospora perpurea)*
Beans	Halo blight *(Pseudomonas phaseolicola)* Common blight *(Xanthomonas phaseoli)*
Citrus	Black spot *(Phyllosticta citricarpa)* Alternaria spot *(Alternaria citri)*
Cruciferae	Bacterial spot *(Pseudomonas maculicola)* Downy mildew *(Peronospora parasitica)*
Coffee	Rust *(Hemileia vastatrix)*
Grapes	Downy mildew *(Plasmopara viticola)*
Lettuce	Leafspot *(Pseudomonas cichorii, Septoria lacucae)*
Mangoes	Bacterial spot *(Pseudomonas mangiferae indicae)*
Ornamentals	Black spot *(Phyllosticta citricarpa)* Rust *(Uromyces spp.)* Downy mildew *(Peronospora spp.)* Leaf spot *(Alternaria spp.)*
Pome fruit	Scab *(Venturia inaequalis)*
Potatoes	Early blight *(Alternaria solani)* Late blight *(Phytophthora infestans)*
Seedlings	Damping Off and other Soil Fungi
Stone fruit	Bacterial Spot *(Xanthomonas campestris pv. pruni)* Leaf curl *(Taphrina deformans)*

Important Practical Considerations & Stewardship

Crucial Warnings:

1. Do not acidify the spray mixture or apply in combination with products that lower water pH or contain chelating agents, as this can lead to phytotoxicity.

2. Avoid high rates during mid-summer, 3-4 successive high-rate applications, or applying to wet fruit or at temperatures above 25°C.

3. Re-application is necessary to maintain effective control as residues decline due to plant growth and environmental factors (rainfall, wind).

Always refer to the product label for complete information, including specific usage instructions and withholding periods. Do not use for any purpose, or in any manner, contrary to the label instructions.

Defend Your Plants, Defend Your Harvest

CopX provides a cutting-edge, reliable solution for disease protection. Its unique formulation ensures superior coverage and consistent activity, contributing to healthier plants and increased yields.

For expert guidance and to ensure your crops thrive, contact your local Enviro Bio-Chem agent or visit www.envirobiochem.co.za.

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