



Technical data for plant protection product

**Z-10 XTRA 51 WP
34% Zineb + 17% Copper oxychloride**



CLASSIFICATION AND LABELING

Classification of the substance or mixture

Classification According Regulation (EC)
No 1272/2008 (CLP)

: STOT SE 3; H335
Skin Sens.1; H317
Aquatic Acute 1; H400
Aquatic Chronic 1; H410

Label elements

Labeling according to Regulation (EC)
No 1272/2008 (CLP)

Hazard pictograms



Signal words

: **WARNING**

Hazard statements

: *H335 – May cause respiratory irritation*
H317 – May cause an allergic skin reaction
H410 – Very toxic to aquatic life with long lasting effects

Precautionary Statements

: **Prevention**
P261 – Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P280 – Wear protective gloves
P273 – Avoid release to the environment

Response

P302 + P352 – *IF ON SKIN:* Wash with plenty of soap and water
P304 + P340 – *IF INHALED:* Remove victim to fresh air and keep at rest in a position comfortable for breathing
P391 – Collect spillage





Disposal

P501 – Dispose of contents/ container to local/ regional/ national/ international regulations

EUH 401 – To avoid risks to human health and the environment, comply with the instruction for use

SAFETY PRECAUTIONS

Individual protection measures, such as personal protective equipment

Respiratory protection 	:	In case of dust or aerosol formation use respirator with an approved filter. Half mask with a particle filter FFP2 (EN149).
Skin protection 	:	In case of prolonged and repeated exposure Wear body-covering chemical resistant protective clothing.
Eye protection 	:	Use safety glasses with side shields (according to EN 166).
Hand protection 	:	In case of short term exposure: Single-use vinyl gloves. In case of prolonged or frequently repeated exposure: nitrile-rubber gloves with a protection class of 5 or higher breakthrough time > 240 minutes thickness > 0.4 mm.

Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

- WEAR SUITABLE PROTECTIVE CLOTHING (COVERALLS) AND SUITABLE PROTECTIVE GLOVES when handling the concentrate.
- WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces. However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
- WASH CONCENTRATE from skin and eyes immediately.
- WASH HANDS AND EXPOSED SKIN before eating and drinking and after work.
- WHEN USING DO NOT EAT, DRINK OR SMOKE.

Environmental Protection

DO NOT CONTAMINATE surface waters or ditches with chemical or used container.

Storage and disposal

KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely. Store well away from seeds, fertilizers and animal feeding stuffs in a safe dry place designated as an agrochemical store.

DIRECTIONS FOR USE

IMPORTANT: This information is approved as part of the Product Label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

RESTRICTIONS OR WARNING

Onion crops, Potato, Coffee - wait 14 days after last treatment before harvesting the crop.

Eggplant - wait 14 days after last treatment before harvesting the crop.

Cabbage crops - wait 28 days after last treatment before harvesting the crop.

Cucurbit crops - wait 7 days after last treatment before harvesting the crop.

Tomato - wait 10 days after last treatment before harvesting the crop for processing.

Wait 3 days after last treatment before harvesting the crop for fresh consumption.

Rice - wait 21 days after last treatment before harvesting the crop.

DISEASES CONTROLLED

Z-10 XTRA 51 WP is a foliar fungicide containing 34% Zineb and 17% Copper oxychloride. Z-10 XTRA 51 WP is fungicide with contact mode of action for prevention of economically important diseases in rice, coffee, and leaf and fruit vegetables as specified in the table below.

CROP-SPECIFIC INFORMATION

Crop	Disease	Dose
Onion crops	Downy mildew	300 g/100 l water
Should be applied as part of a preventative disease management program. Apply up to 4 applications with sufficient water volume to ensure thorough coverage of foliage in 7-10 days intervals. Do not apply within 15 days of harvest.		
Eggplant	Alternaria, Septoria, Downy mildew, Ascochyta, Glomerella	300 g/100 l water
Should be applied as part of a preventative disease management program. Apply up to 6 applications with sufficient water volume to ensure thorough coverage of foliage (800 l water/ha) in 7 days intervals. Do not apply within 3 days of harvest.		

Cabbage crops	Alternaria, Downy mildew	300 g/100 l water
Should be applied as part of a preventative disease management program. Apply up to 4 applications with sufficient water volume to ensure thorough coverage of foliage in 7-10 days intervals. Do not apply within 28 days of harvest.		
Cucurbit crops	Downy mildew, Anthracnose	300 g/100 l water
Should be applied as part of a preventative disease management program. Apply up to 4 applications with sufficient water volume to ensure thorough coverage of foliage in 7-10 days intervals. Do not apply within 7 days of harvest.		
Potato	Late blight, Early blight, Anthracnose	300 g/100 l water
Should be applied as part of a preventative disease management program. Apply up to 4 applications with sufficient water volume to ensure thorough coverage of foliage in 7-10 days intervals. Do not apply within 15 days of harvest.		
Tomato	Late blight, Early blight, Anthracnose, Septoria	300 g/100 l water
Should be applied as part of a preventative disease management program. Apply up to 4 applications with sufficient water volume to ensure thorough coverage of foliage in 7-10 days intervals. Do not apply within 10 days of harvest for tomatoes for processing and within 3 days of harvest for tomato for fresh consumption.		
Coffee	Rust	300 – 400 g/100 l water
Should be applied as part of a preventative disease management program. Apply up to 3 applications with sufficient water volume to ensure thorough coverage of foliage in 2-3 weeks intervals. Do not apply within 15 days of harvest.		
Rice	Yellow leaf disease	300 g/100 l water
Should be applied as part of a preventative disease management program. Apply up to 3 applications with sufficient water volume to ensure thorough coverage of foliage in 7-10 days intervals. Do not apply within 21 days of harvest.		

TIMING

Spraying should commence as soon as there is a risk of infection.

Crops grown under irrigation should be regarded as at extreme risk at all times and treated at 7 days intervals. Do not apply Z-10 XTRA 51 WP if rainfall is imminent.

Treatment should be applied after irrigation.

Application of Z-10 XTRA 51 WP should be made at intervals dependent on weather conditions. Use the shorter interval of applications where crops are at high risk.

APPLICATION

Add the required quantity of Z-10 XTRA 51 WP to a half-filled spray tank with continuous agitation, then add the remaining volume of water. Spray immediately after mixing and continue agitation during spraying.

Wash out the sprayer thoroughly with water and liquid detergent immediately after use.

Finally wash out with water and drain.

RESISTANCE

Both Copper oxychloride and Zineb are classified as fungicides with low risk of resistance. However, to reduce the risk, plan a programme of treatments using fungicides with different modes of action.

DRIFT

Avoid spray drift outside those areas being sprayed.

COMPATIBILITY

The product is compatible with most of the commonly used pesticide except those with strong alkaline and strong acidic reaction. Before preparing the relevant mixture – a preliminary consulting with a specialist is recommended.

FIRST AID MEASURES

Inhalation – Remove from exposure area to fresh air.

Provide artificial breathing if the breathing has stopped

Seek medical attention immediately.

Skin contact – Remove contaminated clothing and shoes.

Wash affected area with plenty of water.

Seek medical attention if necessary.

Wash contaminated clothing before next use

Eye contact – Immediately rinse for at least 15 minutes with large quantity of drinking water while holding eyes open.

Remove contact lenses, if present and rinse eyes with plenty of drinking water for 5 minutes. Remove contact lenses and continue rinsing for 15 more minutes. Immediately seek qualified medical advice.

Ingestion – Never give anything by mouth to an unconscious person!

Seek medical attention immediately. Don't induce vomiting. If the patient is conscious, rinse out mouth thoroughly and have the patient drink a glass of water.

FIRE FIGHTING MEASURES

Suitable extinguishing media – Dry powder, carbon dioxide fire extinguishers. In case of large fires use water spray, foam extinguisher.

Unsuitable extinguishing media – Water jet.

Hazardous combustion products – In case of fire, along with other products of combustion, the smoke contains toxic gases – sulphur dioxide, nitrogen oxides, carbon monoxide and hydrogen sulphide.

Advice for firefighters - Full impervious coverall clothing. Self-containing breathing apparatus

ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

For those staff which does not meet for emergency: Remove immediately.

For the persons responsible for emergency: Eliminate all ignition sources (flame or spark). Provide local and general exhaust ventilation. Use protective clothing and gloves, respiratory mask with an effective particulate filter, chemical goggles for eye protection.

Environmental Protection – In case of accidental release take precautions to protect the surface and underground water, soil and sewage from contamination. Remove the sources of heat and flames.

In case of spill into the sewage, surface water, ground water or soil notify the competent authorities immediately.

Clean up Methods – Absorb with an inert material – sand, zeolite. Use vacuum cleaning. Do not dispose the product and/or contaminated materials into the sewage systems, water sources or water bodies. Collect into an appropriate, labelled tightly sealed waste container. Store the container at an appropriate place for further treatment or disposal according to the national legislation

HANDLING AND STORAGE

Precautionary measures: Use process enclosures, local exhaust ventilation and other suitable 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.

Measures to prevent fire: Dust may form explosive mixtures with air. All the areas where accumulation of dust in dangerously high concentrations may occur have to be indicated and provided with fire extinguishing systems/tools. Keep away from sources of ignition (open flames, sparkles).

Measures to prevent aerosol and dust: Regularly clean the premises and facilities wearing personal protective equipment and using professional fire-safe cleaning tools. Keep within the workspace only the quantities necessary for the normal working process. Containers / packaging must not be left open.

Advice on general occupational hygiene: Do not eat, drink or smoke when handling the product. In case of contamination change the work clothing. Avoid inhalation, ingestion and contact with eyes and skin. Do not handle this product without wearing the recommended personal protective clothing and equipment.

Conditions for safe storage, including any incompatibilities:

Technical measures and storage conditions: Keep in cool, dry, well-ventilated place far from sources of ignition. Prevent static electricity generation.

Do not allow accumulation of dust in significant concentrations. Keep out of reach of children

Packing materials: Keep in unopened original packing.

Requirements for storage rooms and vessels: Keep away from medicinal products, food, forage, fertilizers and seed; hazardous infectious substances, radioactive substances, explosive substances; highly reactive oxidizing substances

PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Greenish solid/ fine powder

Odor: Odorless

pH: 6.0 – 7.5 (25% suspension)

Melting point/ Freezing point: >158 °C

Bulk density: 380 – 400 g/cm³

Solubility(ies): In water - < 1.0 g/l at 20 °C

In organic solvents - Practically insoluble in most organic solvents. Soluble in carbon disulfide, pyridine, chloroform and dimethyl sulfoxide.

Viscosity: Not applicable

Explosive properties: The product is not explosive

Oxidizing properties: The substance is considered to have slight oxidizing properties.

STABILITY AND REACTIVITY

Stability and reactivity – Stable. No hazardous reactions when stored and handled according to instructions.

Hazardous decomposition products – Not known

Conditions to avoid: Avoid storage at temperature > 35 °C in a confined place.

Slow decomposition in presence of heat and moisture.

Prevent heating of the material to avoid thermal decomposition.

Materials to avoid – Avoid contact with strong oxidants and strong acids and basis. Decomposes under alkaline and acidic conditions.

TOXICOLOGICAL INFORMATION

Acute Oral Toxicity

LD₅₀ (rats) > 2000 mg/kg (for zineb)

LD₅₀ (rats) > 1387 mg/kg (for copper oxychloride)

Acute Dermal Toxicity

LD₅₀ (rats) > 2000 mg/kg (for zineb)

LD₅₀ (rats) > 2000 mg/kg (for copper oxychloride)

Acute Inhalation Toxicity

LC₅₀ (rats) > 20µl/L air (4h) (for zineb)

LC₅₀ (rats) > 30 mg/l air (4h) (for copper oxychloride)

ECOLOGICAL INFORMATION

Waterflea (*Daphnia magna*):

EC₅₀ = 40 mg/l (48 h) for zineb

EC₅₀ = 3.5 mg/l (48 h) for copper oxychloride

Algae (*Pseudokirchneriella subcapitata*):

EC₅₀ = 0.033 mg/l (72 h) for copper oxychloride

Toxicity for birds:

LD₅₀ > 173 mg/kg for copper oxychloride

Toxicity for fish:

LC₅₀ (*Rainbow trout*): 20.8 mg/l (96 h) for zineb

LC₅₀ (*Rainbow trout*): 0.38 mg/l (96 h) for copper oxychloride

Toxicity for honeybees:

LD₅₀ > 12.1 µg/bee contact for copper oxychloride

Toxicity on soil macro-organisms:

LC₅₀ > 489.6 mg/kg soil for earthworms for copper oxychloride

Persistence and degradability:

water – Zineb is practically insoluble in water. It is unstable in water and hydrolyses rapidly, producing ethylenediamine, ethylenethiourea and other degradation products. **soil** – Zineb is subject to chemical breakdown (hydrolysis) and does not persist in soil.

stable – (for copper in copper oxychloride)

Mobility in soil: Zineb is subject to chemical breakdown (hydrolysis) and does not persist in soil. Its bioactive half-life in field is 16 days. Within 4 months after a field planted with alfalfa was sprayed 99.7% of the applied Zineb was lost.

Bioaccumulative potential: Not biodegradable (for copper in copper oxychloride)

DISPOSAL

Avoid release to the environment. Dispose of this material and its container at hazardous or special waste collection point. Dispose in a safe manner in accordance with local/national regulations.

TRANSPORT

UN-No. (ADR): 3077

UN proper shipping name: Environmentally hazardous substance, solid, n.o.s (zineb and copper oxychloride)

Transport hazard class(es): 9

Packing group: III

Environmental hazards: **Environmentally hazardous substance indication**

ADR/RID/ IMDG-Code/ICAO-TI /IATA-DGR : **yes** / no

Marine pollutant: **yes** / no

Marking:

