

# **Euardsman**® COPPER OXYCHLORIDE 50

WETTABLE POWDER FUNGICIDE AGRICULTURAL READ THE LABEL BEFORE USING

GROUP M<sup>2</sup> FUNGICIDE

REGISTRATION NO.13245 PEST CONTROL PRODUCTS ACT GUARANTEE: Copper from Copper Oxychloride....50%

## **PRECAUTIONS**

**KEEP OUT OF REACH OF CHILDREN.** Hazardous if swallowed, inhaled or absorbed through the skin. Avoid breathing dust or spray mist. Avoid contact with the eyes, skin and clothing. After handling, wash thoroughly with soap and water before eating, drinking or smoking and change to clean clothing. Do not apply or allow to drift to area occupied by unprotected persons and animals or to streams, lakes or ponds to protect wildlife. Avoid contamination of feed or food, including such crops on which residue is unsafe. Add Hydrated lime when treating copper sensitive crops.

If this pest control product is to be used on a comodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., contact 1-866-375-4648 or www.cropro.org/.

### FIRST AID

If swallowed: Induce vomiting. Repeat until vomit is clear. Seek medical attention or contact a poison control centre IMMEDIATELY. In case of skin contact, remove contaminated clothing and wash skin with soap and water. If in eyes, flush with plenty of water for 15 minutes and seek medical attention or contact a poison control centre. Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

### TOXICOLOGICAL INFORMATION

No specific antidote. Treat symptomatically

### DISPOSAL

- 1.Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.
- 3. Make the empty container unsuitable for further use.
- 4. Dispose of the container in accordance with the provincial requirements.
- 5. For information on disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

# **DIRECTION FOR USE**

Rates per 1,000 litres are based on dilute spray mixture. Copper Oxychloride 50 may be used in low volume or concentrate sprays by increasing the dosage to apply the same quantity of Copper Oxychloride 50 per hectare as would normally be applied when spraying dilute mixtures. Apply in sufficient water for thorough coverage of all plant parts; this volume depends on spray equipment and size of plants. The spray tank should be partially filled with water and the required Copper Oxychloride 50 added with the agitator running. Keep agitator running during filling and spraying operations. The use of a surfactant (spreader sticker) according to manufacturer's recommendations will improve coverage of spray. May be used up to 1 day before harvest. DO NOT APPLY BY AIR.

# RESISTANCE MANAGEMENT

For resistance management, please note that Copper Oxychloride 50 contains a Group  $M^2$  fungicide. Any fungal population may contain individuals naturally resistant to Copper Oxychloride 50 and other Group  $M^2$  fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay fungicide resistance:

- Where possible, rotate the use of Copper Oxychloride 50 or other Group M² fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicide from a different group when such use is permitted.
- Fungicide use should be based on an IPM program that includes scouting, historical information related to pesticide use and crop rotation and considers cultural, biological and other chemical control practices.
- Monitor treated fungal populations for resistance development.
- If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different target site of action, if available.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information and to report suspected resistance, contact Univar Canada Ltd at www.univarcanada.com.

# **COMPATABILITY**

Copper Oxychloride 50 without lime can be mixed with most insecticides, spreader-stickers and superior oil. Copper Oxychloride 50 with lime cannot be mixed with insecticide wettable powders. When adding oil or an insecticide, observe the cautions and intervals before harvest on edible crops printed on the insecticides label.

CROP OR PLANT	DISEASE	RATE AND METHOD
Blueberry (Highbush)	Bacterial Blight	Apply 2-4 kg. in 500-1000 litres of water per hectare once before fall rains, once at 50% leaf fall and once at bud burst, followed by repeat applications at 14 day intervals during wet weather. (Maximum 6 applications per year)
		Ground (handgun or tractor-mounted sprayers).
Cucumber, Melon Pumpkin, Squash	Agular leaf spot. Anthracnose, Bacterial wilt, Downy mildew. Alternaria and Septoria leaf spot.	Use 4 kg. in 1000 litres of water per hectare. Spray at weekly intervals. For Bacterial Wilt control it is necessary to control cucumber beetles.
Potato	Early & late blight	Use 4 kg. in 1000 litres of water per hectare. Spray to ensure thorough coverage of plants. Start applications when plants are 10-20 cm. high and repeat at 7-10 day intervals.
Tomato	Early & late blight Septoria leaf spot, Bacterial canker	Use 4 kg. in 1000 litres of water per hectare. Spray to ensure thorough coverage of plants. Start applications when plants are 10-13 cm. high and repeat at 7-10 day intervals (on green-house tomatoes - use 3 kg. per litres of water).
Celery	Early & late blight	Use 4 kg. in 1000 litres of water per hectare. Spray to ensure thorough coverage of plants. Start applications when plants are 5 cm. high and repeat at 7-10 day intervals.
Cranberry	Leafblight, Twigblight (Phomopis/Diaporthe Vaccinii), Fruit Rot Fungal Complex	Use 4 kg. in 500 - 1000 litres of water per hectare. Maximum of three applications per year. For twigblight apply at bud break and then at 10-14 day intervals: for fruit rot apply at early bloom and repeat at 10-14 day intervals.
Filbert/Hazelnut	Bacterial Blight	3-9 kg. of product per hectare. Maximum of three applications per year: first application Aug/Sept before Autumn rains are heavy, spray when 3/4 leaves have fallen: third application in early spring before bud set: use low rate on small trees, high rate for large trees; apply in 1000 litres of water per hectare; ground spray only.
	Eastern Filbert Blight	Rate: 3-9 kg of product per hectare (1.5-4.5 kg ai.per hectare). Maximum of three applications per year and repeat at 10-14 days interval. Use low rate on small trees, and high rate on large trees. Apply product in 1000 L water/ha. Application is needed only from budswell to budbreak (approximately late March to mid May) which is the time that the tissue is susceptible to infection. May be applied up to 1 day before harvest.
Sour Cherry	Brown rot, Leaf spot	Use 2 kg. plus 4 kg. hydrated lime per 1000 litres of dilute spray. Consult local calendar for timing of application
Sweet & Sour Cherry	Bacterial Canker (Pseudomomas sp)	6-9 kg. of product per hectare. Apply by air blast sprayer when 3/4 leaves have fallen. Make a second application in early spring before bud break. Use low rate on small trees, high rate for large trees; apply in 1000 litres of water per hectare; ground spray only. Later applications in the spring may cause injury.
Peach, Apricot (British Columbia only)	Coryneum Blight, Peach Leaf Curl	Apply 9 kg. per hectare in September AFTER the harvest is completed.
Peach	Leaf Curl	Apply 2 kg. in 1000 litres of water in fall after leaves have fallen or in the spring before buds break.
Pear (British Columbia Only)	Fireblight (see below)	To reduce blossom infection apply 2.25 kg. per hectare when blossoms open. In case of hail damage immediately repeat this treatment. Do not apply on Anjou.
Cotoneaster, Crabapple, Hawthorn, Mountain Ash, Quince	, Fireblight (see below)	Apply 1.25 kg. in 1000 litres. Spray several times during blossoming: also repeat during summer when bacteria spread rapidly in warm, rainy weather.
Arborvitae, Cedar, Fir, Juniper, Pine, Spruce	Leafblight, Needlecast, Tipblight, Twigblight	Apply 4 kg. in 1000 litres of water when new growth starts in spring and repeat 3 to 4 times at 10 day intervals. Further sprays are advisable during prolonged rainy periods
Onion	Downy mildew	Apply every 10 to 14 days throughout growing season beginning in mid May for over wintered crops and mid June for spring seeded crops. Apply at rate of 3 kg. in 500 litres per hectare.
Raspberry	Bacterial Blight	Apply once before Fall rains using 2.5 kg. in 1000 litres per hectare and 3 times using 3 kg. in 1000 litres per hectare beginning with budburst and at 14 and 28 day successive intervals.
Grapes	Downy Mildew Powdery Mildew	Mix 3 kg. plus 6 kg. of hydrated lime in 1000 litres. Apply at Pre-bloom at 1500 litres per hectare and at Post- bloom and in cover sprays at 2000 litres per hectare until mid August. Do not apply on SEIBEL varieties.

FIREBLIGHT may be spread to healthy plants by insects such as aphids and leafhoppers. It is, therefore, of utmost importance that regular applications with an effective insecticide, such as Thiodan, are made. Diseased twigs which appear to have been "scorched", must be cut off at 15 cm. below the infected part and burned; disinfect pruning shears after each cut in solution of 1 part of "Javex" to 4 parts of water.

# **NOTICE TO BUYER**

# **NOTICE TO USER**

and, subject thereto, the buyer assumes the risk to persons or property arising from the use or handling of this product and accepts the product on that condition.

Seller's guarantee shall be limited to the terms set out on the label This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product under unsafe conditions.

> Univar Canada Ltd. 9800 Van Horne Way Richmond, BC V6X 1W5



