

2011-12-19 2010-5601

BAG

GROUP	<b>M</b>	FUNGICIDE
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Wettable Powder

**COPPER SPRAY FUNGICIDE**

Fixed Copper Fungicide

COMMERCIAL



WARNING

POISON

READ THE LABEL BEFORE USING.

REGISTRATION NO. 19146  
PEST CONTROL PRODUCTS ACT

GUARANTEE:

Copper as Elemental, present as Copper Oxychloride 50%

IN CASE OF EMERGENCY DUE TO A MAJOR SPILL, FIRE OR  
POISONING INVOLVING THIS PRODUCT CALL DAY OR NIGHT,  
1-800-561-8273

LOVELAND PRODUCTS CANADA INC.  
789 Donnybrook Drive  
Dorchester, Ontario  
N0L 1G5  
1-800-328-4678

NET CONTENTS: 2-25 kg

01/12

## **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 eyes, skin and clothing.

Wear goggles, long pants, a long-sleeved shirt and shoes plus socks during mixing/loading, application, clean-up and repair. In addition, wear chemical-resistant gloves during mixing/loading, clean-up and repair.

Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Remove clothing/personal protective equipment immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

For cleaning/maintaining personal protective equipment, use detergent and hot water. Keep and wash personal protective equipment separately from other laundry.

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval of 48 hours.

### **For greenhouse use:**

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval of 24 hours.

At least one container or station designed specifically for flushing eyes must be available, and in operating condition with decontamination supplies, for workers entering the treated area. This container/station must remain available for at least seven days following application.

Applicators must post warning signs bearing the following information on all entrances to the greenhouse:

- The name of the product applied.
- The date and time of the application.
- "Product residues in the treated area may be highly irritating to the eyes."
- "Avoid contact of product residues with eyes."
- "If in eyes: Hold eye open and rinse slowly and gently with water for 15–20 minutes using the eye flush container [or eye flush station] located in the

greenhouse. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.”

- The location of the eye flush container/station.

- Instructions on how to operate the eye flush container/station.

Signs must remain posted at least 7 days after treatment. Only the applicator(s) (or someone under their supervision) may remove warning signs.

Do not apply or allow drift to areas 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 commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at: [www.croplife.ca](http://www.croplife.ca).

#### **FIRST AID:**

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

**IF IN EYES:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferable by mouth-to-mouth, if possible. Call a poison control centre or doctor for treatment advice.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

**TOXICOLOGICAL INFORMATION:** Treat symptomatically.

#### **RESISTANCE MANAGEMENT RECOMMENDATIONS**

For resistance management, please note that COPPER SPRAY Fungicide contains a Group M fungicide. Any fungal population may contain individuals naturally resistant to COPPER SPRAY Fungicide and other Group M 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 SPRAY Fungicide or other Group M 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 the Technical Service, Loveland Products Canada Inc., 1-800-328-4678 or at [www.uap.ca](http://www.uap.ca).

**DIRECTIONS FOR USE:** 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 Spray Fungicide added while stirring. Keep agitating during filling and spraying operations. May be used up to 1 day before harvest or as otherwise noted.

**DO NOT APPLY BY AIR.**

**DO NOT** apply this product in a way that will contact workers or bystanders, either directly or through drift. Only protected handlers may be in the area during application.

**DO NOT** apply this product directly to freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands), estuarine/marine habitats.

**DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

**Buffer zones**

Field sprayer application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** apply with spray droplets smaller than the American Society of Agricultural Engineers (ASAE) medium classification. Boom height must be 60 cm or less above the crop or ground.

Airblast application: **DO NOT** apply during periods of dead calm. Avoid application of this product when winds are gusty. **DO NOT** direct spray above plants to be treated. Turn off outward pointing nozzles at row ends and outer

rows. **DO NOT** apply when wind speed is greater than 16 km/hr at the application site as measured outside of the treatment area on the upwind side.

Use of the following spray methods or equipment **DO NOT** require a buffer zone: hand-held or backpack sprayer and spot treatment.

The buffer zones specified in the table below are required between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrublands), sensitive freshwater habitats (such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

Method of Application	Use site		Buffer Zones (meters) Required for the Protection of:				Terrestrial habitat
			Freshwater Habitat of Depths:		Estuarine/Marine Habitats of Depths:		
			Less than 1 m	Greater than 1 m	Less than 1 m	Greater than 1 m	
Field Sprayer *	Flowering Prunus, Forsythia, Lilac, Rose,		15	5	10	4	0
	Cranberry		15	5	10	4	0
	Potatoes		40	20	20	10	1
	squash, melon, pumpkin, cucumbers, onion, celery		20	10	10	5	1
	Tomatoes		45	20	25	10	1
Airblast	Apricots, peaches (except leaf curl)	Early growth stage	45	35	40	30	0
		Late growth stage	35	30	30	20	0
	Peach, (leaf curl)	Early growth stage	40	30	30	20	0
	crabapple Cotoneaster hawthorn, mountain ash, quince	Late growth stage	40	30	35	25	0
	Arborvitae, cedar, fir, juniper, pine, spruce	Early growth stage	55	45	45	40	1
		Late growth stage	45	35	35	30	1
	Raspberry	Early growth stage	55	45	50	40	1
		Late growth stage	45	35	40	30	1
	Grapes	Early growth stage	60	55	55	45	2
		Late growth stage	50	45	45	35	2
	Apple, pear	Early growth stage	60	50	50	40	1
		Late growth stage	50	40	40	35	1
	Walnuts	Early growth stage	50	45	45	35	1
		Late growth stage	40	35	35	25	1
	Sour Cherry	Early growth	55	45	45	40	1

	(brown rot, leaf rot)	stage					
	Blueberry (highbush)	Early growth stage	55	45	50	40	1
		Late growth stage	45	35	40	30	1
	Filbert/ Hazelnut	Early growth stage	55	50	50	40	1
		Late growth stage	45	40	40	30	1

\* For field sprayer application, buffer zones can be reduced with the use of drift reducing spray shields. When using a spray boom fitted with a full shield (shroud, curtain) that extends to the crop canopy, the labeled buffer zone can be reduced by 70%. When using a spray boom where individual nozzles are fitted with cone-shaped shields that are no more than 30 cm above the crop canopy, the labeled buffer zone can be reduced by 30%.

Crop or Plant	Disease	Rate and Method of Application
Apple Trees	Fire blight bacteria	Use 3.2 kg/ha in sufficient water for complete coverage. Use two applications per year; apply at Silvertip and after harvest with 50% leaf drop. Use ground application equipment. Thorough coverage of the entire tree is necessary for maximum effectiveness. This spray will not eliminate the need for streptomycin. It is effective in reducing the population of over-wintering fire blight bacteria and is a useful component of an overall fire blight control program.
Cucumber	Angular leaf spot, Anthracnose, Bacterial Wilt,  Downy mildew,  Alternaria and Septoria leaf spot.	Use 4 kg in 1000 L of water per ha. Spray in 7 day intervals, to a maximum of 5 times per year. For bacterial wilt control it is necessary to control cucumber beetles.
Melon, Pumpkin, Squash	Angular leaf spot, Anthracnose, Bacterial Wilt,  Downy mildew,  Alternaria and Septoria leaf spot.	Use 3.2 kg in 1000 L of water per ha. Spray in 5 day intervals, to a maximum of 5 times per year. For bacterial wilt control it is necessary to control cucumber beetles.
Celery	Early and Late	Use 4 kg in 1000 L of water per ha, spray to ensure

	Blight	thorough coverage of plants. Start applications when plants are 5 cm high and repeat at 7-10 day intervals a maximum of 5 times per year.
Onion	Downey Mildew	Apply 3 kg in 500 L of water per ha. Apply every 10-14 days throughout the growing season, beginning in mid-May for overwintered crop and mid-June for spring seeded crops. Do not apply within 1 day of harvest. Do not apply more than 6 applications per year.
Potato	Early and Late Blight	Use 4 kg in 1000 L of water per ha, spray to ensure thorough coverage of plants. Start applications when plants are 10-20 cm high and repeat at 7-10 day intervals. Do not apply more than 10 applications per year.
Tomato	Early and Late Blight, Septoria leaf spot (field tomatoes)	Use 4 kg in 1000 L of water per ha. Spray to ensure thorough coverage of plants. Start application when plants are 10-13 cm high and repeat at 7-10 day intervals. Do not apply more than 10 applications per year.
	Bacterial canker (greenhouse tomatoes)	Use 3 kg in 1000 L of water per hectare. Apply early in the growing season and repeat at 7-10 day intervals. Do not apply more than 10 applications per year.
Cranberry	Leafblight Twigblight ( <i>Phomopsis</i> / <i>Diaporthe vaccinii</i> ) Fruit Rot Fungal complex	Apply 4 kg in 500-1000 L water per hectare. Maximum of three applications per year, minimum of 10 days between applications; PHI 1 day. Ground application: 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.
Grape	Downy Mildew Powdery Mildew	Mix 3 kg plus 6 kg of hydrated lime in 1000 L of water. Apply at pre-bloom at 1500 L per ha and at post-bloom and in cover sprays at 2000 L per ha until mid August. Do not apply on Seibel varieties. Apply a maximum of 7 applications per year and leave a minimum of 3 days between applications.
Highbush Blueberry	Bacterial Blight	Use 2-4 kg in 500-1000 L/ha. Apply once before fall rains, once at 50% leaf fall and once at bud burst, then at 14 day intervals during wet weather. Maximum 6 applications per year. May be applied by hand gun or tractor sprayer. The preharvest interval is 1 day.
Peach, Apricot (British Columbia only)	Coryneum blight	Apply 9 kg per 1000 L per hectare once in September AFTER the harvest is completed.

Peach	Leaf Curl	Apply 2 kg in 1000 L of water in fall after leaves have fallen or in the spring before buds break. Apply a maximum of 2 applications per year, leaving a minimum of 7 days between applications.
Pear (British Columbia only)	Fireblight (see below)	To reduce blossom infection, apply 2.2 kg per 1000 L per hectare when blossoms open. In case of hail damage, immediately repeat this treatment. Do not apply on Anjou. Apply a maximum of 10 applications per year, leaving a minimum of 5 days between applications.
Raspberry	Bacterial blight	Apply 2.5 kg per 1000 L of water to cover 1 ha. Apply once before fall rains and three times (to a maximum of 4 applications per year) using 3 kg per 1000 L of water to cover 1 ha beginning with budburst and at 14-28 days successive intervals. Do not apply within 1 day of harvest.
Sour Cherry	Brown rot Leaf spot	Use 2 kg plus 4 kg of hydrated lime per 1000 L of dilute spray. Consult local spray calendar for timing of application. Apply a maximum of 10 applications per year, leaving a minimum of 7 days between applications.
Arborvitae, Cedar, Fir, Spruce, Juniper, Pines	Leafblight, Needlecast, Tipblight, Twigblight	Apply 4 kg in 1000 L of water when new growth starts in spring and repeat 3-4 times to a maximum of 5 times per year at 10 day intervals. Further sprays are advisable during prolonged rainy periods.
Cotoneaster Crabapple, Hawthorn, Mountain Ash, Quince	Fireblight (see below)	Apply 1.25 kg in 1000 L of water. Spray several times during blossoming; also repeat during summer when bacteria spread quickly in warm, rainy weather. Apply a maximum of 10 applications per year, leaving a minimum of 7 days between applications.
Flowering Prunus Spp.	Coryneum blight, bacterial canker ( <i>Pseudomonas syringae</i> )	6 kg in 1000 L/ha. Apply prior to fall rains and again when the majority of leaves have fallen leaving a minimum of 7 days between applications.
Forsythia, Lilac, Rose	Bacterial blight ( <i>Pseudomonas syringae</i> )	6 kg in 1000 L/ha. Apply once in October and again in January. During blight conditions in April and May, apply 1 g/L of active ingredient (2 g 50% wettable powder). Apply a maximum of 2 applications per year. Repeat at 7-10 day intervals.
Walnuts	Bacterial blight	Use 4 kg/ha in 1000 L water. Use up to 4 applications per year. Leave a minimum of 7 days between applications. Use ground (airblast) application equipment. Thorough coverage of the entire tree is



		necessary for maximum effectiveness. Begin applications with the first spray in late May at 1st pistillate, repeat at early June, July and August, with the last spray no later than husk split. Do not apply within 40 days of harvest.
Filbert/ Hazelnut (nut or ornamental)	Bacterial blight	Use 3 to 9 kg/ha in 1000 L water. Maximum of three applications per year. First application Aug./Sept., before autumn rains; second application if fall rains are heavy when ¾ of the leaves have fallen; third application in early spring before bud set; use low rate on small trees; high rate for largest trees. Apply as a ground spray only. Leave a minimum of 10 days between applications.
	Eastern Filbert Blight ( <i>Anisogramma anomala</i> )	Use 3 to 9 kg/ha. Maximum of 3 applications per year and repeat at 10-14 days intervals. Use low rate on small trees, and high rate on large trees. Apply product in 1,000 L/ha water during the spring when the tissues are susceptible to disease. Application is needed only from bud swell to bud break (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. Leave a minimum of 10 days between applications.

NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for this product for the use(s) described below were developed by persons other than Loveland Products Canada Inc. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Loveland Products Canada Inc. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crop(s) listed below.

Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Loveland Products Canada Inc. harmless from any claims based on efficacy or phytotoxicity in connection with the use(s) described below.

#### **DIRECTIONS FOR USE**

##### **Sweet and Sour Cherries**

Crop	Pest	Rate	Maximum No. of Applications
Sweet and Sour Cherries	Bacterial Canker ( <i>Pseudomonas syringae</i> pv <i>syringae</i> )	Apply 6 to 9 kg of product in 1000L per hectare. Apply by airblast sprayer when ¾ leaves have fallen. Make a second application in early	2

	and pv morsprunum)	spring before bud break. Later applications in the spring may cause injury. Use low rate on small trees, and high rate on large trees. Use ground application only.	
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**FIREBLIGHT** may be spread to healthy plants by insects such as aphids and leafhoppers. Diseased twigs which appear to be “scorched” must be cut off 15 cm below the infected part and burned; disinfect pruning shears after each cut in solution of 1 part “Javex” (chlorine bleach) to 4 parts of water.

**COMPATIBILITY:** Copper Spray can be mixed with most insecticides. Copper Spray 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 insecticide label.

**ENVIRONMENTAL HAZARDS**

TOXIC to birds, small wild mammals, aquatic organisms and non-target terrestrial plants. Observe buffer zones specified under DIRECTIONS FOR USE.

To reduce runoff from treated areas into aquatic habitats avoid application to areas with a moderate to steep slope, compacted soil, or clay.

Avoid application when heavy rain is forecast.

Contamination of aquatic areas as a result of runoff may be reduced by including a vegetative strip between the treated area and the edge of the water body.

**DISPOSAL:**

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions 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 provincial requirements.
5. For information on the 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.

**NOTICE TO USER:** This pest 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 this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.