

55146-64

11/8/2010

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

NOV 8 2010

Nathan D. Ehresman
Director, Regulatory Affairs
Nufarm Americas, Inc.
501 Cascade Pointe Lane, Suite 103
Cary, NC 27513

Subject: CHAMP Formula 2 Flowable
EPA Reg. No. 55146-64
Your amendment dated November 3, 2010
EPA Decision Number 441746

Dear Mr. Ehresman:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended, to make application rate adjustments based on the product's revised physical properties (eg. density, copper content, etc.) in the basic CSF approved 9/28/10, is acceptable.

One copy of the label stamped "Accepted" is enclosed for your records. This label supersedes all labels previously accepted for this product. Please submit one copy of the final printed label before the product is released for shipment.

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

A handwritten signature in black ink, which appears to read "Tony Kish", is written over the typed name.

Tony Kish
Product Manager (22)
Fungicide Branch
Registration Division (7504P)

Enclosure

Champ[®] Formula 2 Flowable

AGRICULTURAL FUNGICIDE / BACTERICIDE

ACTIVE INGREDIENT:

Copper Hydroxide* (CAS No. 20427-59-2) 37.5%

OTHER INGREDIENTS: 62.5%

TOTAL: 100.0%

Metallic Copper Equivalent 24.4%

Contains 4.5 lbs. Copper Hydroxide per gallon.

KEEP OUT OF REACH OF CHILDREN

WARNING / AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

SEE INSIDE BOOKLET FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

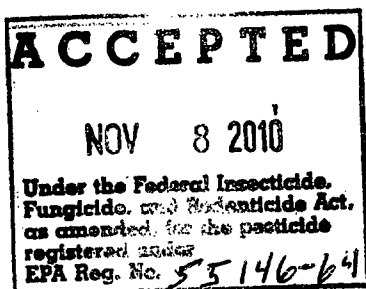
For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300

For Medical Emergencies Only, Call (877) 325-1840

EPA REG. NO. 55146-64

EPA EST. NO. _____

Manufactured For
NUFARM AMERICAS INC.
AGT DIVISION
150 Harvester Drive
Burr Ridge, IL 60527



NET CONTENTS _____ GALS. (_____ Liters)

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS WARNING / AVISO

Causes substantial but temporary eye injury. Harmful if swallowed.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators, and other handlers must wear the following:

- long-sleeved shirt and long pants
- chemical-resistant gloves made of any waterproof material, such as polyvinyl chloride, nitrile rubber, or butyl rubber
- shoes plus socks
- protective eyewear (goggles, faceshield, or safety glasses)

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. **DO NOT** reuse them.

Engineering Controls Statement

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

USER SAFETY RECOMMENDATIONS

Users Should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing / PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

FIRST AID

IF IN EYES	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED	<ul style="list-style-type: none"> • Call a poison control center 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 center or doctor. • DO NOT give anything by mouth to an unconscious person.
IF INHALED	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates and may contaminate water through runoff. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas.

DO NOT apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls, chemical-resistant gloves made of any waterproof material, such as polyvinyl chloride, nitrile rubber, or butyl rubber, shoes plus socks and protective eyewear (goggles, faceshield, or safety glasses).

For at least 7 days following the application of copper-containing products in greenhouses:

At least one container or station designed specifically for flushing eyes is available in operating condition with the WPS-required decontamination supplies for workers

Workers are informed orally, in a manner they can understand:

- that residues in the treated area may be highly irritating to their eyes;
- that they should take precautions, such as refraining from rubbing their eyes, to keep the residues out of their eyes;
- that if they do get residues in their eyes, they should immediately flush their eyes with the eye flush container that is located with the decontamination supplies; and
- how to operate the eye flush container or eye flush station.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard (WPS) for agricultural pesticides 40 CFR part 170. The Worker Protection Standard (WPS) applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

DO NOT enter or allow others to enter until sprays have dried.

FROST INJURY PROTECTION: Bacterial Ice Nucleation Inhibitor: Application of this product made to all crops listed on this label at rates and stages of growth indicated below just prior to anticipated frost conditions will afford control of ice nucleating bacteria (*Pseudomonas Syringae*, *Erwina Herbicola* and *Pseudomonas Fluorescens*) and may therefore provide protection against light frost. Use higher rates when bacterial infection is severe. Not recommended in those geographical areas where weather conditions favor severe frost.

GENERAL INSTRUCTIONS

This product can be used with all types of spraying equipment. The volume per acre will differ depending on the specific crop and the equipment used. Use this product as per instructions on this label.

APPLYING SPRAY MIXTURE: The directions given under each crop are for applying dilute spray mixture unless otherwise shown. The amount of this product applied per acre in concentrate and aerial sprays must be the same as the amount applied per acre in dilute sprays. The required amount must be mixed with enough water to thoroughly cover the crop with spray mixture and is to be applied to the point of runoff. The volume of water needed will depend upon the spray equipment used and the size of the crop being sprayed. Read the information below about applying dilute, concentrate, and aerial sprays.

APPLYING DILUTE HIGH-VOLUME SPRAYS: On vegetable crops use 25 to 100 gallons of spray mixture per acre; on fruit and nut trees use 250 to 800 gallons per acre. As much as 1,500 gallons per acre may be needed for large trees.

APPLYING CONCENTRATE GROUND SPRAYS: On vegetable crops use 5 to 20 gallons of spray mixture per acre; on fruit and nut trees use 25 to 250 gallons per acre.

APPLYING AERIAL SPRAYS: Use 3 to 30 gallons per acre.

NOTES:

- This product may be reactive on metal and masonry surfaces such as galvanized roofing. Avoid contact with metal surfaces. **DO NOT** spray on cars, houses, lawn furniture, etc.
- **DO NOT** tank mix this product with Aliette® fungicide unless appropriate precautions have been taken to buffer the spray solution or severe phytotoxicity may result.
- This product must not be applied in a spray solution having a pH of less than 6.5 as phytotoxicity may occur.
- Environmental conditions such as extended periods of wet weather, acid rain, etc. which alter the pH of the leaf surface may affect the performance of this product resulting in possible phytotoxicity or loss of effectiveness.
- Reduced effect on pests or crop injury may result from tank mixing this product especially where several products are involved. Unless recommended on this label or by state/local expert, or the user has small scale direct experience, tank mixing must not be undertaken.
- This product may be reactive with soft metals and some synthetic materials such as plastics, rubbers, etc. When working with equipment containing these materials the equipment must be thoroughly flushed with clean water after each day's use.

SPRAY DRIFT MANAGEMENT:

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and the method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size

Apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed

DO NOT apply at wind speeds greater than 15 MPH. Only apply this product if the wind direction favors on-target deposition (approximately 3 to 10 MPH), and there are no sensitive areas within 250 feet downwind.

Temperature Inversions

If applying at wind speeds less than 3 MPH, the applicator must determine if a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. **DO NOT** make applications into areas of temperature inversions or unstable atmospheric conditions.

Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of copper compounds. Where states have more stringent regulations, they must be observed.

Equipment

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

For Aerial Application:

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. **DO NOT** release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety.

When applications are made with a crosswind, the swath must be displaced downwind. The applicator must compensate for this displacement at the up and downwind edge of the application area by adjusting the path of the aircraft upwind.

For Groundboom Application:

DO NOT apply with a nozzle height greater than 4 feet above the crop canopy.

CHEMIGATION: Apply this product only through center pivot, motorized lateral move, end tow, traveler, big gun, plastic solid set, or plastic hand move sprinkler irrigation systems. **DO NOT** apply this product through any other type of irrigation system unless specifically set forth above or as may be specified in the future as additional systems not containing aluminum components come into use. Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make

necessary adjustments should the need arise. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

DO NOT connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ), or the functional equivalent, in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. For nonpublic water sprinkler chemigation systems, the system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shutdown. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. For non-public water sprinkler chemigation systems, the irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. **DO NOT** apply when windspeed favors drift beyond the area intended for treatment.

It is recommended that the pesticide supply tank be equipped with a means for continuous agitation either by recirculation or a mechanical agitator. Charge the supply tank with the appropriate amount of water and add the pesticide slowly followed by any sticker-spreaders, insecticides, nutrients, etc. Observe all cautions and limitations on the label of all products used in the mixtures. For fixed position irrigation systems such as center pivot, big gun, etc., the pesticide should be applied towards the end of the irrigation period. Exact timing will depend on the desired pesticide application rate and calibration of the system. For moving systems, the pesticide should be applied continuously. In all cases, thorough coverage of the crop should be achieved.

NOTE: IRRIGATION SYSTEMS AND ASSOCIATED PIPING SHOULD BE THOROUGHLY FLUSHED WITH CLEAN WATER FOLLOWING APPLICATION OF COPPER BASED FUNGICIDES. FLUSHING MUST BE DONE IN A MANNER WHICH WILL NOT WASH THE PRODUCT FROM THE FOLIAGE AND REDUCE DISEASE CONTROL.

No additional surfactants are needed unless specified for an individual crop. Add this product to the spray tank followed by any sticker-spreaders, insecticides, nutrients, etc. Observe all cautions and limitations on the label of all products used in mixtures. The specific instructions given on this label are based on general applications and circumstances. The recommendations of the State Agricultural Extension Service should be closely followed as to timing, frequency and number of sprays per season.

NOTE: APPLICATION TO PLANT SURFACES WHICH HAVE LOW pH CHEMICAL RESIDUE MAY ALSO RESULT IN CROP INJURY.

BERRIES, VINES AND HOPS

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
BRAMBLES (Blackberry, Santiam, Logans, Boysen, Marion, Aurora, Cascade, Chehalem and Thornless Evergreen)	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, Yellow Rust, and Pseudomonas Blight.	2.66	Apply delayed dormant spray after training in Spring. Make Fall spray application after harvest. Add 1 quart of crop oil per acre.
	Leaf Spot, Cane Spot, Purple Blotch, Anthracnose, and Yellow Rust.	1.33	Apply when leaf buds begin to open and repeat when flower buds show white. Add 1 quart of crop oil per acre.
	NOTE: Crop injury may occur if applied to foliage under certain conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear. For all uses, the minimum interval between treatments is 7 days. DO NOT apply more than 27.5 pints (3.4 gallons) product per acre (10 lbs. metallic copper / A) per year.		
BLUEBERRY	Bacterial Canker	3.75 – 4.66	Make first application before the Fall rains, preferably the first week in October and a second application 4 weeks later. The minimum interval between treatments is 7 days. DO NOT apply more than 23.0 pints (2.9 gallons) product per acre (8.4 lbs. metallic copper/A) per year.
CRANBERRY	Fruit Rot	5.33	Apply beginning in late bloom. One or two applications made at 10 to 14 day intervals may be required, depending on disease pressure.
	Rose Bloom		Make three applications at 10 to 14 day intervals as soon as symptoms are observed.
	Bacterial Stem Canker		Apply post harvest and again in the Spring before bud burst. One or two additional applications at 10 to 14 day intervals may be required depending on disease severity.
	Tip Blight (Monilinia), Stem Blight, Leaf Blight, Red Leaf Spot		Apply as a delayed dormant spray in the Spring. Repeat at 10 to 14 day intervals as needed through prebloom.
	Upright Dieback		Apply as a prebloom application. A second application can be made 10 to 14 days later if required.
	NOTE: For all uses, the minimum interval between treatments is 7 days. DO NOT apply more than 34.7 pints (4.3 gallons) product per acre (12.6 lbs. metallic copper/A) per year.		
CURRENT & GOOSEBERRY	Anthracnose, Leaf Spot	6.66	Make 3 applications starting after harvest, before bloom and after petal fall. Continue on a 10 to 14 day schedule during wet conditions in the Spring. The minimum interval between treatments is 10 days. DO NOT apply more than 44 pints (5.5 gallons) product per acre (16 lbs. metallic copper/A) per year.

BERRIES, VINES AND HOPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
GRAPE	Black Rot, Phomopsis, Powdery Mildew, Downy Mildew	1.33 – 2.66	Begin application at bud break with additional applications made throughout the season depending on disease severity. The minimum interval between treatments is 3 days. DO NOT apply more than 55 pints (6.9 gallons) product per acre (20 lbs. metallic copper/A) per year.
	NOTE: <ul style="list-style-type: none"> Slight to severe foliage injury may occur in copper-sensitive varieties such as Concord, Delaware, Niagara and Rosette. Use lower rate of this product and test for sensitivity when treating these varieties or others known to be sensitive to copper. Hydrated lime may be added at a rate of up to 0.5 pound per 100 gallons of spray solution to decrease the severity of phytotoxicity. Mix this product and water first before adding lime or incompatibility may occur. 		
HOPS	Downy Mildew	1.33	Apply as a fungicide crown treatment after pruning, but before training. After training, additional fungicide treatments are needed at about 10 day intervals. The minimum interval between treatments is 10 days. DO NOT apply more than 7.3 pints (0.9 gallons) product per acre (2.7 lbs. metallic copper/A) per year.
	NOTE: Discontinue use 2 weeks before harvest.		
RASPBERRY	Leaf and Cane Spot, Purple Blotch, Anthracnose, Yellow Rust, Pseudomonas Blight	2.66	Apply as a delayed dormant spray after training in the Spring. Make a Fall application after harvest. Add one quart of crop oil per acre.
	Leaf and Cane Spot, Purple Blotch, Anthracnose, Yellow Rust	1.33	Apply when leaf buds begin to open and repeat when flower buds show white. Add one quart of crop oil per acre.
	NOTE: Crop injury may occur if applied to foliage under certain conditions such as hot or prolonged moist periods. Discontinue applications if signs of crop injury appear. For all uses, the minimum interval between treatments is 7 days. DO NOT apply more than 27.5 pints (3.4 gallons) product per acre (10 lbs. metallic copper/A) per year.		
STRAWBERRY	Leaf Spot & Leaf Blight	1.33 – 2.00	Begin application when plants are established and continue on a weekly schedule throughout season. The minimum interval between treatments is 7 days. DO NOT apply more than 22.5 pints (2.8 gallons) product per acre (8.2 lbs. metallic copper/A) per year.
	NOTE: Discontinue applications if signs of phytotoxicity appear.		

FIELD CROPS

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
ALFALFA	Cercospora & Leptosphaerulina Leaf Spots	1.33	Apply 10 to 14 days before each harvest or earlier if disease threatens. The minimum interval between treatments is 30 days. DO NOT apply more than 3.0 pints (0.4 gallons) product per acre (1.1 lbs. metallic copper/A) per year.
	NOTE: Spray injury may occur with sensitive varieties such as Lahontan.		
PEANUT	Cercospora Leaf Spot	1.00 – 2.00	Begin spraying 35 to 40 days after planting or when disease symptoms first appear. Continue applications at 10 to 14 day intervals. One to two quarts of six pounds per gallon flowable sulfur may be added. Reduce spray interval to seven days during humid weather. Use higher rates when conditions favor disease. The minimum interval between treatments is 7 days. DO NOT apply more than 13.0 pints (1.6 gallons) product per acre (4.75 lbs. metallic copper/A) per year.
POTATO	Early Blight & Late Blight	0.66 – 2.66	Apply at 3 to 10 day intervals starting when plants are 6 inches high. Apply the lower rate in those locations where disease is light and the higher rate where disease is severe.
	Colorado Potato Beetle (Suppression Only)		Application of this product at rates and timing recommended for control of <i>early blight</i> and <i>late blight</i> may provide suppression of the Colorado Potato Beetle.
	NOTE: For all uses, the minimum interval between treatments is 5 days. DO NOT apply more than 69 pints (8.6 gallons) product per acre (25 lbs. metallic copper/A) per year.		
SUGARBEET	Cercospora Leaf Spot	1.33 – 3.33	Start spray when disease threatens and continue for 4 to 5 applications. Spray every 10 to 14 days depending on weather conditions and depending on disease severity. The minimum interval between treatments is 10 days. DO NOT apply more than 21.7 pints (2.7 gallons) product per acre (7.8 lbs. metallic copper/A) per year.
WHEAT, BARLEY, OATS	Septoria Leaf Blotch & Helminthosporum Spot Blotch	1.00 – 1.33	Make first application by early heading and follow with second application 10 days later or as necessary. Use higher rates when conditions favor disease. The minimum interval between treatments is 10 days. DO NOT apply more than 2.9 pints (0.37 gallons) product per acre (1 lb. metallic copper/A) per year.

TREE CROPS

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
ALMOND, APRICOT, CHERRY, PLUM, PRUNE	Coryneum Blight [Shot Hole] (<i>Stigminta carpophila</i>), Bacterial Canker, Blossom Brown Rot, Dead Bud (<i>Pseudomonas syringae</i>), Bacterial Blast (<i>Pseudomonas</i>)	5.33 – 8.00	Use as a dormant application before foliage buds swell. For CHERRIES , where disease is severe, an additional application at leaf fall may be required. ALMOND ONLY: for Bacterial Blast control in sprinkler irrigated orchards or where disease is severe, apply 0.75 pint per acre post-bloom, at two week intervals or just prior to sprinkling.
	Coryneum Blight [Shot Hole] (<i>Stigminta carpophila</i>), Blossom Brown Rot	4.20	Early bloom (popcorn) application prior to full bloom.
	<p>NOTE: To avoid plant injury, DO NOT use above rate after full bloom. For blast control in sprinkler irrigated orchards or where disease is severe, apply 2 to 4 sprays or as many as required, at 1.0 – 2.0 pints per acre at two week post-bloom intervals or just before sprinkling. In sensitive varieties of ALMONDS, such as Peerless, Mission, and Neplus slight leaf injury may occur from post-bloom spray. For all uses: The minimum interval between treatments is 7 days for dormant, late dormant, up to pink bud use for apricots, cherries, plums and prunes. The minimum interval between treatments is 7 days for dormant, late dormant use on almonds. The minimum interval between treatments during the blooming/growing season is 5 days for almonds, apricots, cherries, plums and prunes. DO NOT apply more than 4.2 pints product per acre (1.5 lbs. metallic copper/A) in a single application during bloom and growing season. DO NOT apply more than a total of 49.6 pints (6.2 gallons) product per acre (18 lbs. metallic copper/A) per year.</p>		
APPLE	Anthracnose, European Canker, Blossom Blast, Shoot Blast (<i>Pseudomonas</i>)	8.00 – 12.00	Apply before Fall rains.
	Fireblight, Scab*	5.33 – 10.50	Make application as a full cover spray between silver-tip and green-tip. NOTE: Phytotoxicity may occur from late application. After green-tip apply at 0.75 pint per acre.
	Crown or Collar Rot	2.75	Mix in 100 gallons of water. Apply 4 gallons of suspension as a drench on the lower trunk area of each tree. Apply either in early Spring or in Fall after harvest each year. NOTE: DO NOT use if soil pH is below 5.5 or copper toxicity may result.
	<p>NOTE: Use on yellow varieties may cause discoloration. To avoid, pick before spraying. The minimum interval between treatments is 5 days applied during bloom and growing season. Make only 1 application per season when applied in fall/late dormant season at a rate of 22.5 pints (2.75 gallons) product per acre (8 lbs. metallic copper/A). Make only 1 application per season between silver-tip to green-tip with a maximum application rate of 16 pints (2 gallons) product per acre (6 lbs metallic copper/A). DO NOT apply more than 4.1 pints product per acre (1.5 lb. metallic copper/A) in a single application during bloom and growing season. DO NOT apply more than 44 pints (5.5 gallons) product per acre (16 lbs. metallic copper/A) per year.</p>		

TREE CROPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
AVOCADO	Anthrachnose, Blotch, Scab	5.33 – 8.00	<p>Apply when bloom buds begin to swell. Continue application at monthly intervals for 5 to 6 applications. Use higher rate when conditions favor disease.</p> <p>The minimum interval between treatments is 14 days. DO NOT apply more than 52 pints (6.5 gallon) product per acre (18.9 lbs. metallic copper/A) per year.</p>
CITRUS	Melanose, Scab, Algal Spot	2.66 – 8.00	Apply, depending on disease severity, as a pre-bloom and post-bloom spray.
	Greasy Spot, Pink Pitting	1.33 – 4.00	Apply using higher rates when conditions favor disease.
	Brown Rot	2.66 – 5.33	Apply beginning in Fall and continuing as needed. Apply to skirts of trees to a height of at least 4 feet. Use higher rates when conditions favor disease.
	Citrus Canker (Suppression Only)	1.25 – 8.00	<p>General Recommendations: Apply 8 pints per acre, spraying flushes 7 to 14 days after shoots begin to grow. Young fruit may require an additional application. Number and timing of applications will be dependent on disease pressure. Under heavy disease pressure, each flush of new growth should be sprayed.</p> <p>Florida Specific Recommendations: Begin applications to protect new leaf flushes. Repeat at 14 to 21 day intervals, or more often if needed, depending on disease pressure and environmental conditions. It is important to protect all subsequent leaf flushes throughout the year. Young fruit may require an additional application. Under dry weather conditions and low disease pressure, use 1.25 – 2.5 pints per acre. Under conditions of wet weather and high disease pressure, higher rates may be required (4.0 – 8.0 pints per acre).</p>
	Alternaria Brown Spot (Suppression Only)	5.33 – 6.66	Apply to susceptible varieties on the first flush in the Spring and every additional flush. Application to fruit should start after two-thirds of the petals have fallen and be repeated at 21 day intervals.
	Phytophthora Foot Rot	0.66	Mix this product with 1 gallon of water and paint trunks of trees from the soil surface to the lowest scaffold limbs. Apply in May prior to Summer rains and/or in the Fall prior to wrapping trees for freeze protection. Treatment serves as protection for up to one year, but does not cure existing infections.
	Phytophthora Brown Rot, Septoria Spot	2.66 – 5.33	Apply to the entire tree in the Fall before or just after the first rain and continue as needed.
	<p>NOTE: DO NOT use this product on citrus seedlings grown in greenhouses or shadehouses.</p> <p>In California: in areas subject to copper injury, add 0.33 to 1.0 pound of high quality lime per pound of this product. For all uses, the minimum interval between treatments is 7 days. DO NOT apply more than 34.7 pints (4.3 gallons) product per acre (12.6 lbs. metallic copper/A) per year.</p>		

TREE CROPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
CITRUS (Field Nursery Grown)	Melanose, Scab, Greasy Spot, Pink Pitting, Brown Rot and Citrus Canker (Suppression Only).	2.66 – 5.33	Apply in 100 gallons of water at 28 day intervals. The minimum interval between treatments is 7 days. DO NOT apply more than 34.7 pints (4.3 gallons) product per acre (12.6 lbs. metallic copper/A) per year.
FILBERT (Washington & Oregon)	Bacterial Blight	12.00 – 16.00	Apply as a postharvest spray. In seasons of heavy rainfall, apply another spray when three-fourths of the leaves have dropped. Add 1.0 pint of superior type oil per 100 gallons of water.
	Eastern Filbert Blight		Apply in sufficient water to obtain thorough coverage. Make initial application at budswell to budbreak. Additional sprays should be made on a 10 to 14 day interval depending on disease severity or when conditions are conducive for disease development. Add 1.0 pint of superior type oil per 100 gallons of water.
	NOTES: For all uses, the minimum interval between treatments is 14 days. DO NOT apply more than 66.1 pints (8.3 gallons) product per acre (24 lbs. metallic copper/A) per year.		
KIWIFRUIT	Blossom Blight (Bud Rot), Leaf Spot (Phomopsis), Erwinia herbicola, Pseudomonas syringae, Pseudomonas fluorescens	1.33 – 2.00	Make two to three applications during dormant season. DO NOT apply at time of or after leaf emergence. The minimum interval between treatments is 30 days. DO NOT apply more than 17.4 pints (2.2 gallons) product per acre (6.3 lbs. metallic copper/A) per year.
MACADAMIA	Blossom Blight & Raceme Blight, Anthracnose	3.00 – 6.00	Apply, depending on disease pressure, in 50 to 300 gallons of water during peak raceme development and bloom periods. For aerial application apply 3 - 6 pints per acre in 10 to 30 gallons of water. The minimum interval between treatments is 7 days. DO NOT apply more than 26.0 pints (3.25 gallons) product per acre (9.4 lbs. metallic copper/A) per year.
OLIVE	Peacock Spot, Olive Knot	5.33 – 8.00	Make first application before Winter rains fall. A second application in early Spring should be made if disease is severe. The minimum interval between treatments is 30 days. DO NOT apply more than 49.6 pints (6.2 gallons) product per acre (18 lbs. metallic copper/A) per year.

TREE CROPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
PEACH & NECTARINE	Leaf Curl, Coryneum Blight (Shot Hole), Bacterial Canker, Bacterial Blast (<i>Pseudomonas</i>), Bacterial Blight (<i>Xanthomonas</i>)	5.33 – 10.66	Apply after leaf fall as a dormant application. Use the higher rate when rainfall is very heavy and disease pressure is high. May be used with an agricultural spray oil.
	Blossom Brown Rot, Leaf Curl, Coryneum Blight (Shot Hole)	5.33 – 8.00	Apply as a full cover spray at pink bud. Application at this time affords some control of <i>Leaf Curl</i> and <i>Coryneum Blight</i> .
	Bacterial Spot	5.33	Apply as a dormant spray.
	<p>NOTE: DO NOT apply within 3 weeks prior to harvest. Use only specified rates. Spotting of leaves and defoliation may occur from use in cover sprays.</p> <p>For all uses: The minimum interval between treatments is 7 days for dormant, late dormant, up to pink bud use for peaches and nectarines. The minimum interval between treatments during the blooming/growing season is 5 days for peaches and nectarines. DO NOT apply more than 4 pints product per acre (1.5 lbs. metallic copper/A) in a single application during bloom and growing season. DO NOT apply more than a total of 49.6 pints (6.2 gallons) product per acre (18 lbs. metallic copper/A) per year.</p>		
PEAR	Fireblight	0.66	Apply at 5 day intervals throughout bloom period.
	<i>Pseudomonas</i> Blight	8.00 – 10.66	Apply before Fall rains and again at dormant before Spring growth starts.
	<p>NOTE: Excessive dosages may cause fruit russet.</p> <p>For all uses: The minimum interval between treatments is 5 days applied during bloom and growing season. Make only 1 application per season when applied in fall/late dormant season at a rate of ef 22.5 pints product per acre (7.6 lbs. metallic copper/A). DO NOT apply more than 4.2 pints product per acre (1.5 lb. metallic copper/A) in a single application during bloom and growing season. DO NOT apply a total of more than 44 pints (5.5 gallons) product per acre (16 lbs. metallic copper/A) per year.</p>		
PECAN	Shuck Rot, Kernel Rot (<i>Phytophthora cactorum</i>), Zonate Leaf Spot (<i>Cristulariella pyramidalis</i>) (Suppression Only)	1.33 – 2.66	<p>Apply at 2 to 4 week intervals when kernel growth begins through shuck opening.</p> <p>Apply in sufficient water to ensure thorough coverage.</p> <p>The minimum interval between treatments is 14 days. DO NOT apply more than 23.2 pints (2.9 gallons) product per acre (8.4 lbs. metallic copper/A) per year.</p>
PISTACHIO	Botrytis Blight, Botryosphaeria Panicle and Shoot Blight, Septoria Leaf Blight, Late Blight (<i>Alternaria alternata</i>)	2.66 – 5.33	<p>Apply beginning at budswell. Repeat at 14 to 28 day intervals depending on disease conditions. If disease conditions are severe, use the high rate and the short spray interval.</p> <p>The minimum interval between treatments is 14 days. DO NOT apply more than 23.2 pints (2.9 gallons) product per acre (8.4 lbs. metallic copper/A) per year.</p>

TREE CROPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
QUINCE	Fire Blight	0.66	<p>Apply at 5 day intervals throughout the bloom period.</p> <p>Apply in sufficient water to provide thorough coverage.</p> <p>The minimum interval between treatments is 5 days applied during bloom and growing season. DO NOT apply more than 4.2 pints product per acre (1.5 lb. metallic copper/A) in a single application during bloom and growing season. DO NOT apply a total of more than 44 pints (5.5 gallons) product per acre (16 lbs. metallic copper/A) per year.</p>
WALNUT	Walnut Blight	5.33 – 8.00	<p>Apply first spray at early pre-bloom prior to or when catkins are partially expanded. Make additional applications during bloom and early nutlet stage as needed. Additional applications may be necessary when frequent rainfall occurs.</p>
	<p>NOTES: When applied as a dilute spray, 1.0 pint of Summer oil emulsion may be added per 100 gallons of spray. Adequate control may not be obtained when copper tolerant species of <i>Xanthomonas</i> bacteria are present.</p> <p>The minimum interval between treatments is 7 days. DO NOT apply more than 88 pints (11.0 gallons) product per acre (32 lbs. metallic copper/A) per year.</p>		

TROPICAL CROPS

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
BANANA	Sigatoka	1.33	<p>Apply by air. Mix this product in 3 gallons of water containing 0.5 gallon agricultural oil. Apply on a 14 day schedule throughout the wet season. Apply at 21 day intervals during dry periods.</p>
	Black Pitting	2.66	<p>Mix in 100 gallons of water. Apply directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.</p>
	<p>NOTES: The minimum interval between treatments is 7 days. DO NOT apply more than 52.0 pints (6.5 gallons) product per acre (19 lbs. metallic copper/A) per year.</p>		
CACAO	Black Pod	1.33 – 5.66	<p>Begin applications at the start of the rainy season and continue while infection conditions persist. Sprays should be made as often as 14 to 21 days in high rainfall areas at varying rates from 1.5 – 5.5 pints per acre depending on disease severity. For drier areas, where 2 to 4 applications are recommended during critical infection periods and at long intervals, use 4.0 – 5.75 pints per acre, according to disease pressure incidence and planting density.</p> <p>The minimum interval between treatments is 14 days. DO NOT apply more than 43.3 pints (5.4 gallons) product per acre (15.8 lbs. metallic copper/A) per year.</p>

TROPICAL CROPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
COFFEE	Coffee Berry Disease (<i>Collectotrichum coffeanum</i>)	4.00 – 5.33	Apply first spray after flowering and before onset of long rains and then at 21 to 28 day interval until picking. Use higher rates when rainfall is heavy and disease pressure is high.
	Bacterial Blight (<i>Pseudomonas syringae</i>)		Begin spray program before onset of the long rains and continue throughout the rainy season at 14 to 21 day intervals. The critical time of spraying to control this disease is just before, during, and after flowering(s), especially when coinciding with wet weather. Use the higher rates when rainfall is heavy and disease pressure is high.
	Leaf Rust (<i>Hemileia vastatrix</i>)	1.33 – 2.66	Apply before the onset of rain and then at 21 day intervals while the rains continue. Use higher rates when rainfall is heavy and disease pressure is high.
	Iron Spot (<i>Cercospora coffeicola</i>) and Pink Disease (<i>Corticium salmonicolor</i>)	1.33	Apply as a concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.
	For all uses: The minimum interval between treatments is 14 days. DO NOT apply more than 34.4 pints (4.3 gallons) product per acre (12.6 lbs. metallic copper/A) per year.		
GUAVA	Anthrachnose, Red Algae	2.00	Apply beginning just prior to flowering and repeat weekly until just prior to harvest. The minimum interval between treatments is 7 days. DO NOT apply more than 13.6 pints (1.7 gallons) product per acre (4.9 lbs. metallic copper/A) per year.
LITCHI	Anthrachnose	2.00	Apply beginning just prior to flowering and repeat weekly until just prior to harvest. The minimum interval between treatments is 7 days. DO NOT apply more than 13.6 pints (1.7 gallons) product per acre (4.9 lbs. metallic copper/A) per year.
MAMEY SAPOTE	Anthrachnose, Algal Leaf Spot	4.00 – 5.00	Apply when conditions favor disease development. Repeat at 14 to 30 day intervals as needed. The minimum interval between treatments is 14 days. DO NOT apply more than 23.2 pints (2.9 gallons) product per acre (8.4 lbs. metallic copper/A) per year.
MANGO (Florida & Puerto Rico)	Anthrachnose	5.33 – 6.66	Apply monthly after fruit set until harvest. The minimum interval between treatments is 30 days. DO NOT apply more than 132 pints (16.5 gallons) product per acre (48 lbs. metallic copper/A) per year.

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TROPICAL CROPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
PAPAYA	Anthracnose	2.00 – 6.66	Apply before disease is expected to appear. Repeat at 10 to 14 day intervals or at 7 day intervals during periods of heavy rainfall. Use the higher rates when conditions favor disease. The addition of a suitable spreader-sticker may be desirable especially during periods of heavy rains. The minimum interval between treatments is 14 days. DO NOT apply more than 58.4 pints (7.3 gallons) product per acre (21.2 lbs. metallic copper/A) per year.
PASSION FRUIT	Anthracnose	4.00	Apply beginning just prior to flowering and repeat weekly. The minimum interval between treatments is 7 days. DO NOT apply more than 26.0 pints (3.25 gallons) product per acre (9.4 lbs. metallic copper/A) per year.
SUGAR APPLE (Annona)	Anthracnose	8.00	Apply beginning just prior to flowering and repeat weekly. The minimum interval between treatments is 7 days. DO NOT apply more than 34.7 pints (4.3 gallons) product per acre (12.6 lbs. metallic copper/A) per year.

VEGETABLE CROPS

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
BEAN (Dry, Green)	Brown Spot, Bacterial Blight (Halo & Common), Downy Mildew*	0.66 – 2.00	For protective sprays, apply first application when plants are 6" high. Apply on 7 to 14 day schedule depending on local conditions. Adjust rates depending on disease severity. The minimum interval between treatments is 7 days. DO NOT apply more than 13.0 pints (1.6 gallons) product per acre (4.75 lbs. metallic copper/A) per year.
* Except California			
CARROT	Alternaria Leaf Spot, Carrot Blight (Cercospora)	1.33	When disease threatens apply at 7 to 14 day intervals depending on disease severity. The minimum interval between treatments is 7 days. DO NOT apply more than 13.7 pints (1.7 gallons) product per acre (5 lbs. metallic copper/A) per year.

VEGETABLE CROPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
CELERY & CELERIAC	Cercospora Early, Septoria Late Blight & Bacterial Blights	1.33	Apply as soon as plants are first established in the field, then every 5 to 7 days depending on disease severity and weather. The minimum interval between treatments is 7 days. DO NOT apply more than 14.6 pints (1.8 gallons) product per acre (5.3 lbs. metallic copper/A) per year.
CRUCIFERS Broccoli, Brussels Sprout, Cabbage, Cauliflower, Kale, Collard Greens, Mustard Greens, and Turnip Greens	Black Rot (<i>Xanthomonas</i>), Black Leaf Spot (<i>Alternaria</i>), Downy Mildew	0.33 – 0.66	Apply at 7 day intervals after transplants are set in the field. Use higher rate when conditions favor disease. The minimum interval between treatments is 7 days. DO NOT apply more than 7.3 pints (0.9 gallons) product per acre (2.7 lbs. metallic copper/A) per year.
NOTES: Reddening of older leaves may occur on Broccoli at the higher rate and flecking of wrapper leaves may occur on Cabbage.			
CUCURBITS Cantaloupe, Cucumber, Honeydew, Muskmelon, Pumpkin, Squash, and Watermelon	Alternaria Leaf Spot, Angular Leaf Spot, Anthracnose, Downy Mildew, Powdery Mildew, Gummy Stem Blight, Watermelon Bacterial Fruit Blotch (Suppression)	1.33	Apply beginning when conditions are favorable for disease development and repeat at 5 to 7 day intervals, as needed depending on disease severity. The minimum interval between treatments is 5 days. DO NOT apply more than 14.4 pints (1.8 gallons) product per acre (5.3 lbs. metallic copper/A) per year.
NOTES: Crop injury may occur from application at shorter intervals. Discontinue use if injury occurs.			
EGGPLANT	Alternaria Blight, Anthracnose, Phomopsis	1.33	Use before disease appears. Repeat at 7 to 10 day intervals. The minimum interval between treatments is 7 days. DO NOT apply more than 21.7 pints (2.7 gallons) product per acre (7.9 lbs. metallic copper/A) per year.
ENDIVE, ESCAROLE	Downy Mildew	0.66 – 1.33	Begin treatment when disease first appears and repeat every 7 to 10 days as needed to suppress disease. The minimum interval between treatments is 5 days. DO NOT apply more than 22.0 pints (2.8 gallons) product per acre (8 lbs. metallic copper/A) per year.

VEGETABLE CROPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
GARLIC, LEEK, ONION	Purple Blotch & Downy Mildew	1.33	Apply when plants are four to six inches high and repeat at 7 to 10 day intervals. The minimum interval between treatments is 7 days. DO NOT apply more than 16.5 pints (2.1 gallons) product per acre (6 lbs. metallic copper/A) per year.
	Bacterial Blight	0.66 – 1.00	
LETTUCE	Downy Mildew	0.66 – 1.33	Begin treatment when disease first appears and repeat every 7 to 10 days as needed to suppress disease. The minimum interval between treatments is 5 days. DO NOT apply more than 22.0 pints (2.8 gallons) product per acre (8.0 lbs. metallic copper/A) per year.
PEA	Powdery Mildew	1.00 – 2.00	Begin spray treatment when disease symptoms first appear. Adjust rates according to disease severity. Repeat applications at weekly intervals. The minimum interval between treatments is 7 days. DO NOT apply more than 10.8 pints (1.4 gallons) product per acre (4 lbs. metallic copper/A) per year.
PEPPER	Bacterial Spot	1.33 – 2.00	When disease threatens, apply in sufficient water for adequate coverage at 5 to 10 day intervals depending on disease severity. The minimum interval between treatments is 3 days. DO NOT apply more than 32.6 pints (4.1 gallons) product per acre (11.9 lbs. metallic copper/A) per year.
SPINACH	Anthrachnose, Cercospora Leaf Spot, Downy Mildew, White Rust, Blue Mold	1.33 – 2.66	Begin treatment when disease first appears and repeat every 7 to 10 days as needed to suppress disease. The minimum interval between treatments is 7 days. DO NOT apply more than 10.9 pints (1.4 gallons) product per acre (4 lbs. metallic copper/A) per year.
	NOTE: Flecking may occur on spinach leaves.		

VEGETABLE CROPS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
TABLE BEET, BEET GREENS	Cercospora Leaf Spot	1.33 – 2.66	Apply when conditions favor disease. Repeat treatment at 10 to 14 day intervals as needed. The addition of agricultural spray oil is recommended. The minimum interval between treatments is 10 days. DO NOT apply more than 21.6 pints (2.7 gallons) product per acre (7.9 lbs. metallic copper/A) per year.
TOMATO	Early Blight, Late Blight, Bacterial Speck, Bacterial Spot, Anthracnose, Gray Leaf Mold & Septoria Leaf Spot	1.33	When disease threatens, apply at 7 to 10 day intervals, or as necessary. Apply at 10 to 30 day intervals beginning when the disease threatens. Use more frequent applications when disease pressure is high. When disease threatens, apply at 7 to 10 day intervals, more frequently when disease is severe.
	NOTES: For all uses, the minimum interval between treatments is 3 days. DO NOT apply more than 48.0 pints (6.0 gallons) product per acre (17.4 lbs. metallic copper/A) per year. DO NOT apply more than 22.0 pints (2.75 gallons) product per acre (8 lbs metallic copper/A) per year to tomatoes grown for fresh market.		
WATERCRESS	Cercospora Leaf Spot	1.33	Apply when plants are established in the field. Repeat at 7 to 14 day intervals up to four applications per crop in at least 50 gallons of water per acre. The minimum interval between treatments is 7 days. DO NOT apply more than 5.8 pints (0.7 gallons) product per acre (2.1 lbs. metallic copper/A) per year.

SEED DRESSING

CROP	DISEASE	RATE (Fluid Ounces)	USE INSTRUCTIONS
RICE	Water Mold & Seed Rot (<i>Achlya spp.</i> , <i>Pythium spp.</i>)	2.00 – 4.00	Use at the recommended rate for each 100 pounds of rice seed. For ease of handling and when using a seed treating machine, dilute with an equal amount of water. Maintain continuous agitation of the mixture throughout the operation. Consult State Agricultural Experiment Station regarding specific recommendations for your area.
WHEAT & BARLEY	Bacterial Leaf Blight (<i>Pseudomonas syringae</i>), Bacterial Leaf Streak (<i>Xanthomonas translucens</i>), Common Bunt (<i>Tilletia caries</i>)	2.00	Apply at the rate of formulated product per 100 pounds of seed. It should be diluted with equal parts of water before applying.

DO NOT use treated seed for food, feed or oil purposes. Care must be exercised in the handling of treated seed. **DO NOT** use augers used for handling treated seed to move seed for feed, food or oil processing. **DO NOT** re-use bags from treated seed to handle food or feed products.

Seeds treated with this product that are then packaged or bagged for future use must be suitably colored with an EPA approved dye, such as one of the dyes listed in 40 CFR Section 180.910 or Section 180.920 to prevent their subsequent inadvertent use as a food for man or feed for animals. Treated seed must contain the following labeling on the outside of the seed package or bag: "This package or bag contains seed that has been treated with copper hydroxide. **DO NOT** use for food, feed or oil purposes. Store away from feeds and foodstuffs. Persons opening this bag or package or loading/pouring the treated seed must wear a long-sleeved shirt, long pants, shoes and socks, chemical resistant gloves made of any waterproof material, and eye protection such as goggles or face shield."

MISCELLANEOUS

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
ATEMOYA	Anthrachnose	2.00	<p>Apply just prior to flowering and repeat weekly until just prior to harvest.</p> <p>The minimum interval between treatments is 7 days. DO NOT apply more than 34.7 pints (4.3 gallons) product per acre (12.6 lbs. metallic copper/A) per year.</p>
CARAMBOLA	Anthrachnose	4.00	<p>Apply just prior to flowering and repeat weekly until just prior to harvest.</p> <p>The minimum interval between treatments is 7 days. DO NOT apply more than 29.0 pints (3.6 gallons) product per acre (10.5 lbs. metallic copper/A) per year.</p>
CHIVES	Downy Mildew	1.33	<p>Apply when plants are established in the field. Repeat at 7 to 10 day intervals as needed.</p> <p>The minimum interval between treatments is 7 days. DO NOT apply more than 7.3 pints (0.9 gallons) product per acre (2.7 lbs. metallic copper/A) per year.</p>
DILL	Phoma Leaf Spot, Rhizoctonia Foliage Blight	1.75	<p>Apply when plants are established in the field. Repeat at 7 to 10 day intervals as needed.</p> <p>The minimum interval between treatments is 7 days. DO NOT apply more than 10.8 pints (1.4 gallons) product per acre (4 lbs. metallic copper/A) per year.</p>
GINSENG	Alternaria Leaf & Stem Blight	1.75	<p>This product may be applied as a tank mix with two pounds Iprodione 50WP in 100 gallons of water per acre. Begin Iprodione 50WP/Champ Formula 2 Flowable applications as soon as plants have emerged in Spring.</p> <p>Applications should be repeated every 7 days until plants become dormant in Fall. Apply fungicides at least eight hours before rain, giving the fungicides time to dry on the plants. Use of a spreader-sticker is advised.</p> <p>The minimum interval between treatments is 7 days. DO NOT apply more than 14.5 pints (1.8 gallons) product per acre (5.3 lbs. metallic copper/A) per year.</p> <p>NOTE: <i>Alternaria Leaf & Stem Blight</i> is most severe in humid conditions such as those found in the dense canopies of 2, 3, & 4 year old ginseng. Complete and thorough spray coverage is required for control.</p>

MISCELLANEOUS (continued)

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
PARSLEY	Bacterial Blight (<i>Pseudomonas spp.</i>)	2.00	Apply when plants are first established in the field and repeat at 5 to 7 day intervals. The minimum interval between treatments is 10 days. DO NOT apply more than 5.5 pints (0.7 gallons) product per acre (2 lbs. metallic copper/A) per year.
PERSIMMON	Cercospora Leaf Spot	1.33	Apply beginning in May/June, during leaf flush, and repeat at 14 day intervals throughout the season depending on disease severity. The minimum interval between treatments is 14 days. DO NOT apply more than 16.5 pints (2.1 gallons) product per acre (6 lbs. metallic copper/A) per year.

TURFGRASS

CROP	DISEASE	RATE	USE INSTRUCTIONS
TURFGRASS	Algae Control	1 pint per 1,000 ft ² (for spot treatment) 8 pints (1 gallon) / A (for broadcast spray)	Apply in 5 gallons of water. Use as a spot or broadcast treatment to control algae. This product may be used alone or in combination with other registered fungicides as a maintenance spray. The minimum interval between treatments is 10 days. DO NOT apply more than 8 pints (1 gallon) product per acre (3 lbs. metallic copper/A) in a single application. DO NOT apply more than 57.8 pints (7.3 gallons) product per acre (21 lbs. metallic copper/A) per year.
	NOTE: Phytotoxicity may occur depending upon varietal differences. If injury occurs discontinue use. DO NOT apply in spray solutions with a pH of less than 6.5.		

CONIFERS

For use on conifers, including Douglas Fir, Fir, Juniper, Leyland Cypress, Pine and Spruce, in Christmas tree plantings, forest stands and silviculture nurseries.

CROP	DISEASE	RATE PER ACRE (Pints)	USE INSTRUCTIONS
DOUGLAS FIR (<i>Pseudotsuga menziesii</i>)	Rhabdocline Needlecast	1.50 – 3.00	<p>For control of foliar diseases apply as a thorough cover spray. Begin applications in the Spring at the initiation of new growth and repeat at 2 to 4 week intervals or as needed. Use the higher rates when disease pressure is severe or when environmental conditions favor disease development.</p> <p>The minimum interval between treatments is 7 days. DO NOT apply more than 55 pints (6.9 gallons) product per acre (20 lbs. metallic copper/A) per year.</p>
FIR (<i>Abies spp.</i>)	Needlecasts		
JUNIPER (<i>Juniperus spp.</i>)	Anthrachnose, Phomopsis Twig Dieback		
LYELAND CYPRESS (<i>Cupressocyparis leylandii</i>)	Cercospora Needle Blight		
PINE (<i>Pinus spp.</i>)	Needlecasts		
SPRUCE (<i>Picea spp.</i>)	Needlecasts		

Lichens: To control lichens on any of the conifers above, apply 5.5 pints per acre as a dormant application before new growth emerges in the spring. The addition of a non-ionic surfactant will improve control. A second application may be required after 12 months.

Note: DO NOT buffer or combine with emulsifiable concentrate insecticides.

GREENHOUSE AND SHADEHOUSE CROPS

This product may be used in greenhouses and shadehouses to control diseases on crops listed on this label. Specific directions are provided below for certain crops and the grower should be aware that the sensitivity of crops grown under such conditions differ greatly from field conditions. The user must determine if this product can be used safely prior to commercial application by testing a small area and observing the results for 7 to 10 days.

One level Teaspoon (TSP) of this product per 1,000 square feet is equivalent to 0.45 pints per acre. Begin application at first sign of disease and repeat at 7 to 14 day intervals as needed.

CROP	DISEASE	RATE (Teaspoons) per 1000 ft ²	USE INSTRUCTIONS
CUCUMBER	Angular Leaf Spot, Downy Mildew	1.25 – 1.50	Apply weekly when plants begin to vine. The minimum interval between treatments is 5 days. DO NOT apply more than 32 TSP (0.33 pints) product per 1000 ft ² (0.12 lbs. metallic copper/1000 ft ²) per crop cycle.
EGGPLANT	Alternaria Blight, Anthracnose, Phomopsis	1.50	Apply at first sign of disease and repeat at 7 to 14 day intervals as needed. The minimum interval between treatments is 7 days. DO NOT apply more than 50 TSP (0.5 pints) product per 1000 ft ² (0.18 lbs. metallic copper/1000 ft ²) per crop cycle.
PEPPER	Bacterial Spot	1.50 – 2.25	Apply when conditions first favor disease and at 5 to 10 day intervals as needed. The minimum interval between treatments is 3 days. DO NOT apply more than 73 TSP (0.75 pints) product per 1000 ft ² (0.27 lbs. metallic copper/ 1000 ft ²) per crop cycle.
TOMATO	Anthracnose, Bacterial Speck, Bacterial Spot, Early Blight, Grey Leaf Mold, Late Blight, Septoria Leaf Spot	1.50 – 2.25	Apply when conditions first favor disease and at 7 to 10 day intervals as needed. The minimum interval between treatments is 3 days. DO NOT apply more than 50 TSP (0.5 pints) product per 1000 ft ² (0.18 lbs. metallic copper/1000 ft ²) per crop cycle.

NOTE: DO NOT use this product on Citrus seedlings grown in greenhouses or shadehouses.

ORNAMENTALS

Use this product on container, bench, or bed-grown ornamentals in greenhouses, shadehouses, outdoor nurseries, and on ornamentals grown in indoor and outdoor landscapes for control of bacterial and fungal diseases of foliage, flowers and stems.

CROP	DISEASE	USE RATE & APPLICATION INSTRUCTIONS
PECAN, LIVE OAK (Texas and Florida)	Ball Moss	Mix 5.50 pints of product in 100 gallons of water. Apply in Spring after heavy rain, using 1.5 gallons of spray mix per foot of tree height. Make sure to wet tufts thoroughly. 100 gallons of spray mix is sufficient to treat approximately 67 feet of tree height. A second application may be needed after 12 months. DO NOT apply more than 5.5 pints product per acre (2 lbs. metallic copper/A) in a single application. DO NOT make more than one application per year.
	NOTE: This product may be injurious to ornamentals grown under live oaks.	
PHILODENDRON	Bacterial Leaf Spot	Mix 1.00 pint of product in 100 gallons of water. Apply weekly before disease appears. The minimum interval between treatments is 7 days. DO NOT apply more than 55 pints (6.9 gallons) product per acre (20.0 lbs. metallic copper/A) per year.
SYCAMORE	Anthrachnose	Mix 1.33 to 2.00 pints in 100 gallons of water. Make 2 applications as a full cover spray. Make first application at bud crack and second application 7 to 14 days later at 10% leaf expansion. The minimum interval between treatments is 7 days. DO NOT apply more than 55 pints (6.9 gallons) product per acre (20.0 lbs. metallic copper/A) per year.

FOR CONTROL OF BACTERIAL AND FUNGAL DISEASES ON FOLIAGE, FLOWERS, AND STEMS OF ORNAMENTALS grown in greenhouses, shadehouses, outdoor nurseries, and on ornamentals grown in indoor and outdoor landscapes: Apply this product at 0.66 pints per 100 gallons as a full cover spray beginning at first sign of disease. Apply 10-20 gallons of spray mixture per 1000 ft². Apply no more than 800 gallons solution per acre dilute per application (2.0 lbs. metallic copper per acre). **DO NOT** make more than 10 applications at these rates per year (maximum of 20.0 lbs. metallic copper per acre per year). **NOTE:** Compact flowers may take as little as 20 gallons solution per acre while large trees may take as much as 800 gallons solution per acre. Repeat at intervals of 7 to 14 days depending on rainfall and disease severity. Due to the large number of species, widely varying growth conditions, and varieties of ornamentals and nursery plants it is not possible to test every variety for sensitivity to this product. Prior to large-scale use, apply the specified rate of this product on a small area and check for symptoms of phytotoxicity in 7 to 10 days.

DO NOT tank mix with Aliette® fungicide without buffering the spray solution.

One-half (0.5) Tablespoon (TBSP) of this product per gallon of water is equivalent to 1.50 pints per 100 gallons.

ORNAMENTAL	DISEASE
AGLAONEMA	Bacterial Leaf Spot
ALTHEA (Rose of Sharon)	Bacterial Leaf Spot
ARALIA	Xanthomonas & Cercospora Leaf Spots, Alternaria
ARBORVITAE	Alternaria Twig Blight, Cercospora Leaf Spot
AZALEA (1)	Cercospora Leaf Spot, Botrytis Blight, Phytophthora Dieback, Powdery
BEGONIA	Bacterial Leaf Spot (<i>Xanthomonas</i> spp., <i>Erwinia</i> spp., <i>Pseudomonas</i> spp.)
BOSTON FERN	Bacterial Leaf Spot
BOUGAINVILLEA	Anthrachnose, Bacterial Leaf Spot
BULBS (Tulip), (Easter lily) (2)	Botrytis Blight, Anthrachnose
CAMELLIA	Anthrachnose, Bacterial Leaf Spot
CAMPOR TREE	<i>Pseudomonas</i> Leaf Spot
CANNA	<i>Pseudomonas</i> Leaf Spot
CARNATION (1)	Alternaria Blight, <i>Pseudomonas</i> Leaf Spot & Botrytis Blight

ORNAMENTAL	DISEASE
CHINESE TALLOW TREE	Bacterial Leaf Spot (<i>Xanthomonas</i> spp., <i>Pseudomonas</i> spp.)
CHRYSANTHEMUM (1)	Septoria Leaf Spot, Botrytis Blight
COTONEASTER	Botrytis Blight
DAHLIA	Alternaria Leaf Spot, Cercospora Leaf Spot, Botrytis Grey Mold
DATE PALM	Pestalotia Leaf Spots
DIANTHUS	Bacterial Spot, Bacterial Soft Rot
DOGWOOD	Anthrachnose
DRACAENA	Bacterial Leaf Spot
DUMB CANE	Bacterial Leaf Spot
DUSTY MILLER	Bacterial Leaf Spot (<i>Pseudomonas cichorii</i>)
ECHINACEA	Botrytis Blight
ELM (Drake)	Xanthomonas Leaf Spot
EUONYMUS	Botrytis Blight, Anthracnose
EUROPEAN FAN PALM	Pestalotia Leaf Spot
GARDENIA	Alternaria Leaf Spot, Cercospora Leaf Spot, Botrytis Bud Rot
GERANIUM	Alternaria Leaf Spot, Cercospora Leaf Spot, Botrytis Grey Mold
GLADIOLUS	Alternaria Leaf Spot, Botrytis Grey Mold, Bacterial Leaf Blight, Botrytis
GOLDEN RAIN TREE	Alternaria Leaf Spot, Botrytis Grey Mold, Bacterial Leaf Blight
GRAPE IVY	Bacterial Leaf Spot
HIBISCUS (3)	Bacterial Leaf Spot
HOLLY FERN	Pseudomonas Leaf Spot
HONEY LOCUST	Bacterial Leaf Spot
IMPATIENS	Bacterial Leaf Spot
INDIA HAWTHORN (4)	Anthrachnose, Entomosporium Leaf Spot
IRIS	Bacterial Leaf Spot
IVY (English, Algerian) (1)	Xanthomonas Leaf Spots
IXORA	Xanthomonas Leaf Spots
JUNIPER (Eastern red cedar)	Anthrachnose
LANTANA	Bacterial Leaf Spot
LILAC	Cercospora Leaf Spot
LOBLOLLY BAY	Anthrachnose
LOQUAT	<i>Entomosporium maculate</i> , <i>Colletrichum</i> spp.
MAGNOLIA (Southern)	Anthrachnose, Bacterial Leaf Spot, Algal Leaf Spot
MAGNOLIA (Sweet bay)	Anthrachnose
MAGNOLIA	Bacterial Leaf Spot
MANDEVILLAS	Anthrachnose
MULBERRY (Contorted)	Bacterial Leaf Spot
MULBERRY (Weeping)	Bacterial Leaf Spot
NEPHYTIS	Bacterial Leaf Spot
OLEANDER	Bacterial Leaf Spot, Fungal Leaf Spot
OAK, LAUREL	Algal Leaf Spot (<i>Cephaleuros virescens</i>)
PACHYSANDRA	Volutella Leaf Blight
PANSY	Downy Mildew
PARLOR PALM	Bacterial Leaf Spot
PEAR (Flowering)	Fire Blight, Leaf Spot
PENTAS (Egyptian star)	Bacterial Leaf Spot (<i>Xanthomonas</i>)
PEONY	Botrytis Blight
PERIWINKLE	Phomopsis Stern Blight

ORNAMENTAL	DISEASE
PHLOX	Alternaria Leaf Spot
PHOTINA (Red tip, Red leaf)	Anthrachnose, Entomosporium
PISTACHIO	Anthrachnose
PLANTAIN LILY	Bacterial Leaf Spot
POTHOS	Bacterial Leaf Spot
POWDER PUFF PLANT	Bacterial Leaf Spot
PURPLE OSIER WILLOW	Anthrachnose
PYRACANTHA	Fireblight, Scab
QUEEN PALM	Exosporium Leaf Spot, Phytophthora Bud Rot
RHODODENDRON	Alternaria Flower Spot
ROSE (1)	Powdery Mildew, Black Spots
SNAPDRAGON	Anthrachnose, Dieback, Downy Mildew
SPATHE FLOWER	Bacterial Leaf Spot
TATARIAN HONEYSUCKLE	Bacterial Leaf Spot
UMBRELLA TREE	Bacterial Leaf Spot
VERBENA	Xanthomonas Leaf Spot
VIBURNUM	Anthrachnose
WASHINGTON PALM	Pestalotia Leaf Spot
WEeping FIG	Bacterial Leaf Spot
WEeping WILLOW	Bacterial Leaf Spot
YUCCA (Adams needle)	Cercospora & Septoria Leaf Spots

- (1) On some varieties a discoloration may occur on foliage or blooms. To prevent residues on commercial plants, **DO NOT** spray just before selling season.
- (2) Apply 2.00 to 3.20 pints of this product in 20 to 100 gallons of water per acre. The minimum interval between treatments is 7 days. **DO NOT** apply more than 26.4 gallons product per acre (75 lbs. metallic copper/A) per year.
- (3) Hibiscus – **DO NOT** apply to plants in flower.
- (4) For India Hawthorn use 1.33 – 2.75 pints per 100 gallons or 0.5 TBSP per gallon. **DO NOT** apply more than 10 applications at these rates per year (maximum of 20 lbs. metallic copper per acre per year).

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Store in a cool dry place.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest Environmental Protection Agency Regional Office for guidance.

CONTAINER DISPOSAL [HANDLING]:

[Nonrefillable Containers 5 Gallons or Less]

Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

[Nonrefillable containers larger than 5 gallons]

Nonrefillable container. DO NOT reuse or refill this container. Offer for recycling if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse as follows:** Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

[Refillable containers larger than 5 gallons]

Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

[Refillable containers for return to Nufarm]

Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Close all openings and replace all caps. Contact Nufarm's Customer Service Department at 1-800-345-3330 to arrange for return of the empty refillable container.

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION, INCLUDING WEATHER, ALL OF WHICH ARE BEYOND THE CONTROL OF MANUFACTURER OR SELLER AND ASSUMED BY BUYER OR USER. THIS WRITING CONTAINS ALL OF THE REPRESENTATIONS AND AGREEMENTS BETWEEN BUYER, MANUFACTURER AND SELLER, AND NO PERSON OR AGENT OF MANUFACTURER OR SELLER HAS ANY AUTHORITY TO MAKE ANY REPRESENTATION OR WARRANTY OR AGREEMENT RELATING IN ANY WAY TO THESE GOODS.

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LABEL HISTORY

File Name	Revision Mark	Comments
055146-00064.20081124.EPA.RED	RV112408	RED Label
055146-00064.20100826.Revised_RED_Label	RV082610	Revised RED Label