

4581-397

11/26/2002

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

NOV 26 2002

Mr. Timothy M. Formella  
Manager, Product Registrations  
Cerexagri, Inc.,  
630 Freedom Business Center  
King of Prussia, PA 19406

Dear Mr. Formella:

SUBJECT: Cuprofix MZ Disperss Fungicide  
EPA Registration Number 4851-397  
Your Submission of October 17, 2002

The amendment referred to above, submitted in connection with registration under section (3) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) is acceptable provided you make the following changes:

**Storage and Disposal:**

Replace the heading "Storage" with "Pesticide Storage".

**Directions for Use - Agricultural Use Table:**

- In the "Use Instructions" column for apples, move the text "It is recommended that this product be used in an Integrated Pest Management Program for all apple uses. Do not apply within 77 days of harvest. Do not apply more than 63.1 lbs of product (19.2 lbs of mancozeb active ingredient) per acre per year. Do not graze livestock in treated areas." out of the row for Fire Blight and related disease and put it into a row marked "All Apple Diseases." Do the same for the text "NOTE: Do not use if soil pH is below 5.5 as copper toxicity may result." in the Collar Rot Row.
- In the "Use Instructions" column for pears, move the text "It is recommended that this product be used in an Integrated Pest Management Program for all apple uses. Do not graze livestock in treated areas. It is recommended that this product be used in an Integrated Pest Management Program." out of the row for Fire Blight and put it into a row marked "All Pear Diseases." Add the text "Do not apply within 77 days of harvest. Do not apply more than 63.1 lbs of product (19.2 lbs of mancozeb active ingredient) per acre per season." to the "All Pear Diseases" row.

Please submit one copy of your final printed labeling before you release the product for shipment. A stamped copy of the label is enclosed for your records. If you have any questions, please contact Lisa Jones of my staff by phone at (703) 308-9424 or by e-mail at [jones.lisa@epa.gov](mailto:jones.lisa@epa.gov).

Sincerely,

/s/

Mary L. Waller  
Product Manager (21)  
Fungicide Branch  
Registration Division (7505C)

Enclosure: Stamped Label

CONCURRENCES							
SYMBOL ▶	7505C						
SURNAME ▶	Lisa Jones						
DATE ▶	Nov 25, 2002						

EPA Form 1320-1 (12-70) OFFICIAL FILE COPY

## Cuprofix® MZ Disperss® Dry Flowable Fungicide/Bactericide

**ACTIVE INGREDIENT:**

Mancozeb, a coordination product of zinc ion and manganese ethylenebisdithiocarbamate .....	30.4%
in which the ingredients are	
ethylenebisdithiocarbamate ion (C <sub>4</sub> H <sub>6</sub> N <sub>2</sub> S <sub>4</sub> ).....	23.6%
Manganese .....	6.0%
Zinc.....	0.8%
Basic Copper Sulfate * .....	22.1%
OTHER INGREDIENTS:.....	47.5%
TOTAL.....	100.0%

\* Metallic copper equivalent, 12%

### KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>-Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>-Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>-Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>-Call a poison control center or doctor immediately for treatment advice.</li> <li>-Have person sip a glass of water if able to swallow.</li> <li>-Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>-Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>-Take off contaminated clothing.</li> <li>-Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>-Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>-Move person to fresh air.</li> <li>-If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>-Call a poison control center or doctor for further treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	

EPA Registration No. 4581- 397

EPA Establishment No. 4581-FRA-002

Net Contents \_\_\_\_\_

Cerexagri, Inc.  
630 Freedom Business Center, Suite 402  
King of Prussia, PA 19406

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes or clothing. Wash hands thoroughly with soap and water after handling. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### 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.

##### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. 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.

#### 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.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not contaminate water by disposal of equipment washwaters.

#### CHEMICAL HAZARDS

Do not allow to become wet during storage. This may lead to certain chemical changes that will reduce the effectiveness of the product as a fungicide and create vapors that may be flammable. Keep container closed when not in use.

#### 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, 40 CFR Part 170. This Standard contains requirements for 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 intervals (REI). 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 24 hours without required PPE.

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:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

**NONAGRICULTURAL USE REQUIREMENTS**

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

Keep children and pets out of the treated area until sprays have dried.

**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage and disposal.

**STORAGE:** Store in the original container in a cool, dry place out of reach of children and animals. Store pesticides separately to prevent cross contamination of other pesticides, fertilizer, food and feed.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

## GENERAL INSTRUCTIONS AND INFORMATION

**GROUND or AERIAL APPLICATIONS:** Apply Cuprofix MZ Disperss at the rates shown; use sufficient water to provide thorough coverage, with available equipment in either dilute sprays or in concentrate ground or aerial sprays, typically at least 100 gallons per acre for traditional airblast sprayers, 25 to 50 gallons per acre for low volume airblast sprayers and 3 to 10 gallons per acre for aerial application. Rates of product per acre should be the same for dilute and concentrate sprays. Add Cuprofix MZ Disperss slowly to water in the spray tank with agitation, or premix thoroughly in a separate holding tank for concentrate or aircraft sprayers. Continuous agitation is recommended to keep the product in suspension. If needed, adjuvants of the spreader, sticker or compatibility agent type that are approved for use on growing crops may be used. During aerial application, human flaggers are prohibited unless in totally enclosed vehicles.

## SPECIAL PRECAUTIONS

- Cuprofix MZ Disperss should not be applied in a spray solution having a pH of less than 6.5 as phytotoxicity may occur.
- This product may be reactive on masonry and metal surfaces such as galvanized roofing. Avoid contact with metal surfaces. Do not spray on cars, houses, lawn furniture, etc.
- 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 Cuprofix MZ Disperss resulting in possible phytotoxicity or loss of effectiveness.
- Pesticides may perform in an unpredictable manner when tank mixed, especially where several products are involved. Reduced effect on pests or crop injury may occur. Unless recommended on this label or by a state/local expert, or the user has small scale direct experience, tank mixing should not be undertaken.
- Do not apply this product through any irrigation (chemigation) system using aluminum parts or components as damage to the system may occur. Such application is prohibited regardless of whether the irrigation system is flushed with water after use of this product.

Apply this product only through one or more of the following types of systems: sprinkler including center pivot, lateral move, traveler, big gun, plastic pipe solid set system(s) which contain no aluminum parts or components. Do not apply this product through any other type of irrigation system.

- Cuprofix MZ Disperss should be used only in accordance with the recommendations on this label.
- Cerexagri, Inc. will not be responsible for losses or damages resulting from use of this product in any manner not specifically recommended on this label. User assumes all risks associated with such non-recommended use.

## APPLICATION INSTRUCTIONS

### FOLIAR TREATMENT

**Where EBDC products used allow the same maximum poundage of active ingredient per acre per season:** If more than one product containing an EBDC active ingredient (maneb, mancozeb, or metiram) is used on a crop during the same growing season and the EBDC products used allow the same maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed any of the

specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

**Where EBDC products used allow different maximum poundage of active ingredient per acre per season:**

If more than one product containing an EBDC active ingredient is used on a crop during the same growing season and the EBDC products used allow different maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed the lowest specified individual EBDC product maximum poundage of active ingredient allowed per acre.

**SEED TREATMENT**

In addition to the maximum number of foliar applications permitted by the formula stated above, a single application of seed treatment may be made on crops that have registered seed treatment uses.

**AGRICULTURAL USE**

CROP	DISEASE	RATE in LBS Cuprofix MZ Disperss/A	USE INSTRUCTIONS
Apple	Fire Blight (suppression), Quince Rust, Cedar Apple Rust, Apple Scab, Powdery Mildew (suppression)	4 to 7	Recommended for processing apples only as fruit russetting and leaf spotting may occur. Make applications up to petal fall. After the green tip spray, increase the spray interval from 7 to 10 days on all cultivars. <b>NOTE:</b> To reduce the possibility of crop injury, use no more than 5 lbs. of Cuprofix MZ Disperss per application per acre on strains of Golden Delicious and Stayman after green tip. It is recommended this product be used in an Integrated Pest Management Program for all apple uses. Do not apply within 77 days of harvest. Do not apply more than 63.1 lbs. of product (19.2 lbs. of mancozeb active ingredient) per acre per year. Do not graze livestock in treated areas.
	Collar Rot, Crown Rot	10	<b>Pre-bloom:</b> 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 late fall after harvest. <b>NOTE:</b> Do not use if soil pH is below 5.5 as copper toxicity may result.
	Anthracnose, European Canker, Pseudomonas	14	<b>Pre-bloom:</b> Apply before fall rains. <b>NOTE:</b> Use on yellow varieties may cause discoloration. To avoid, pick before spraying.

Banana	Sigatoka	5 to 7.25	Apply when leaves first appear and repeat every 14 to 21 days or as required. Use sufficient water to provide adequate coverage. The addition of a surfactant to spray solutions will improve performance. May be applied by air in 3 gallons of water per acre combined with 0.5 gallon of agricultural spray oil. May be applied up to the day of harvest. Do not apply more than 24 lbs of mancozeb active ingredient (78.9 lbs product) per acre per season.
Barley, Oats, Wheat	Helminthosporium Leaf Spot, Septoria Leaf Spot, Glume Blotch	2.5 to 4.75	Make first application at early heading and follow with a second spray 10 days later. Do not apply within 26 days of harvest. Do not apply more than 4.8 lbs of mancozeb active ingredient (15.7 lbs product) per acre per crop. Use higher rates when conditions favor disease. Do not graze livestock in treated areas prior to harvest.
Cranberry	Fruit Rot	7.5 to 14	Start applications at mid-bloom and repeat at 7 to 10 day intervals as required. Do not apply within 30 days of harvest. Do not apply more than 14.4 lbs of mancozeb active ingredient (47.3 lbs product) per acre per season.
Cucumber	Angular Leaf Spot, Downy Mildew, Gummy Stem Blight, Anthracnose	4 to 7.25	Spray to provide thorough coverage of both upper and lower leaf surfaces. Do not apply within 5 days of harvest. Do not apply more than 19.2 lbs of mancozeb active ingredient (63.1 lbs product) per acre per season.
Grape	Black Rot, Downy Mildew, Powdery Mildew (suppression), Phomopsis	4 to 9.5 East of the Rockies	Apply in sufficient water to provide thorough coverage, starting at late dormant or bud break. Repeat when shoots are $\frac{1}{2}$ to $1\frac{1}{2}$ , 3 to 5, and 8 to 10 inches long, and then at 7 to 10 day intervals, as needed, until bloom. Apply every 3 to 7 days with moderate to severe disease pressure and when conditions favor disease. For late season control of black rot, powdery and downy mildew the use of other approved and recommended fungicide is suggested. Do not apply within 66 days of harvest.



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		4 to 6 West of the Rockies	<p>Do not apply more than 19.2 lbs of mancozeb active ingredient (63.1 lbs product) per acre per season <b>East of the Rocky Mountains.</b></p> <p>Do not apply more than 6 lbs of mancozeb active ingredient (19.7 lbs product) per acre per season <b>West of the Rocky Mountains.</b></p> <p><b>NOTE:</b> Foliage injury may occur on copper sensitive varieties such as Concord, Delaware, Niagara, and Rosette. Test for sensitivity before applying if sensitivity unknown.</p> <p><b>California:</b> Do not apply after bloom.</p>
Melons: Cantaloupe, Casaba, Crenshaw, Honeydew, Muskmelon, Watermelon	Alternaria Leaf Spot, Anthracnose, Cercospora Leaf Spot, Downy Mildew, Gummy Stem Blight, Bacterial Fruit Blotch, Watermelon Fruit Blotch (suppression)	5 to 7.25	Start applications when plants are in the two-leaf stage and repeat at 7 to 10 day intervals. Apply every 3 to 7 days with moderate to severe disease pressure and when conditions favor disease. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces. Do not apply within 5 days of harvest. Do not apply more than 19.2 lbs of mancozeb active ingredient (63.1 lbs product) per acre per season.
Onion (dry bulb)	Botrytis Leaf Blight, Downy Mildew, Purple Blotch  Bacterial Blight	5 to 7.25  3.5 to 5	Follow a protective spray schedule. Start when diseases are first observed in the area and repeat at 7-day intervals throughout the season. Apply every 3 to 7 days with moderate to severe pressure and when conditions favor disease. Do not apply to exposed bulbs. Do not apply within 7 days of harvest. Do not apply more than 24 lbs of mancozeb active ingredient (78.9 lbs product) per acre per crop.

**ACCEPTED**  
with **COMMENTS**  
In EPA Letter Dated:

NOV 26 2002

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.

4581-397

Papaya	Anthracnose	3.75 to 6.25	Apply in a minimum of 50 gallons of spray solution per acre. Apply before disease appears. Apply at 14 to 21 day intervals under light disease pressure and at 5 to 7 day intervals under heavy disease pressure. The addition of an approved spreader is desirable. May be applied up to the day of harvest. Do not apply more than 28 lbs of mancozeb active ingredient (92.1 lbs product) per acre per season.
Peanut	Cercospora Leaf Spot	2.5 to 4.75	Start applications when disease first appears or is reported in the area. Repeat sprays at 7 to 14 day intervals. Use higher rates and apply every 3 to 7 days with moderate to severe disease pressure and when conditions favor disease. Reduce sprays to a 7-day interval during humid weather. Use higher rate when disease conditions favor disease. Do not apply within 14 days of harvest. Do not feed treated vines to livestock. Do not apply more than 12.8 lbs of mancozeb active ingredient (42.1 lbs product) per acre per season.
Pear	Fire Blight (suppression)	2	Apply at 5-day intervals throughout the bloom period. Do not apply after bloom. Do not graze livestock in treated areas. It is recommended that this product be used in an Integrated Pest Management Program.
	Pseudomonas Blight	12 to 14.75	Apply before fall rains and again during dormancy before spring growth starts. Do not apply within 77 days of harvest. Do not apply more than 19.2 lbs of mancozeb active ingredient (63.1 lbs product) per acre per season. Use the higher rate when disease pressure is high or when conditions favor disease development. <b>NOTE:</b> Russetting may occur in copper sensitive varieties. Excessive dosages may cause fruit russet.

Potato	Early Blight, Late Blight	1.5 to 4.75	Apply 1.5 to 2 pounds per acre at 7 to 10 day intervals starting when plants are 6 inches high in locations where disease is light and up to 4.75 pounds per acre as vine size increases and where disease is severe. Use higher rates and apply every 3 to 5 days with moderate to severe disease pressure and when conditions favor disease. It is recommended that this product be used in an Integrated Pest Management Program. Vine-kill should occur 14 days before harvest. Do not apply within 14 days of harvest (except in Connecticut, Delaware, Florida, Maine, Massachusetts, Michigan, New Hampshire, New York, Ohio, Pennsylvania, Rhode Island, Vermont, and Wisconsin when a 3-day PHI is allowed). Do not apply more than 11.2 lbs of mancozeb active ingredient (36.8 lbs product) per acre per crop.
Squash (summer squash)	Anthrachnose, Downy Mildew, Powdery Mildew (suppression)	5 to 7.25	Apply weekly when plants begin to vine or when disease symptoms first appear. Use higher rates and apply every 3 to 7 days with moderate to severe disease pressure and when conditions favor disease. Use sufficient water and direct spray to provide thorough coverage of both upper and lower leaf surfaces. Do not apply within 5 days of harvest. Do not apply more than 19.2 lbs of mancozeb active ingredient (63.1 lbs product) per acre per season.
Sugarbeet	Cercospora Leaf Spot	3.75 to 4.75	Begin when disease first threatens. Repeat at 7 to 10 day intervals. Use higher rates and apply every 3 to 7 days with moderate to severe disease pressure and when conditions favor disease. Use higher rates when conditions favor disease. Do not apply within 14 days of harvest. Do not apply more than 11.2 lbs of mancozeb active ingredient (36.8 lbs product) per acre per season. Do not feed treated sugarbeet tops to livestock.

Tomato	Anthracnose, Early Blight, Gray Leaf Spot, Late Blight, Leaf Mold, Septoria Leaf Spot, Bacterial Spot, Bacterial Speck	1.75 to 7.25 <b>East of the Mississippi River</b>	Begin applications when disease first threatens and repeat at 7 to 10 day intervals as needed. Use higher rates and apply every 3 to 7 days with moderate to severe disease pressure and when conditions favor disease. Do not apply within 5 days of harvest.
			Do not apply more than 16.8 lbs of mancozeb active ingredient (55.2 lbs product) per acre per season <b>East of the Mississippi River.</b>
		1.75 to 4.75 <b>West of the Mississippi River</b>	Do not apply more than 6.4 lbs of mancozeb active ingredient (21.0 lbs product) per acre per season <b>West of the Mississippi River.</b>
			Cuprofix MZ Disperss is a specially formulated product which can provide control of copper tolerant bacteria; therefore, tank mixing with products containing maneb or mancozeb is not necessary. If copper tolerant bacterial blight is not a concern, these products can be tank mixed if enhanced fungicidal activity is desired.

## SEED TREATMENT

Seeds to be treated should be cleaned and well cured prior to treatment. Cuprofix MZ Disperss may be applied to dry seed with conventional slurry or mist seed treating equipment or as a planter-box application. For best results, the seed must be completely and uniformly covered with fungicide.

For planter-box applications, place half the amount of seed into the planter box and apply half the amount of pesticide to the seed. Stir the seed thoroughly with a paddle until the seed is uniformly coated. Place the remaining half of the seed into the planter box and add the remaining half of pesticide. Again stir the seed with a paddle until all seed is thoroughly coated.

For Commercial seed treatment or seed treated for sale, an EPA approved dye must be added to Cuprofix MZ Disperss which will impart an unnatural color to the seed. All treated seed should be labeled, "Seed treated with Cuprofix MZ Disperss fungicide containing the active ingredients basic copper sulfate and mancozeb. Must not be used for food, feed, or oil purposes."

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SEED TYPE	DISEASE	RATE of Cuprofix MZ Disperss
Rice	Achlya spp., Pythium spp.	5 to 10 oz. / 100 lbs. of seed
Wheat, Barley	Pseudomonas syringae, Xanthomonas translucens, Tilletia caries	8 oz. / 100 lbs. of seed

### **NON-CROP AGRICULTURAL USE**

CROP	DISEASE	RATE in LBS Cuprofix MZ Disperss/A	USE INSTRUCTIONS
Mineola, Citrus (non-bearing)	Alternaria	10 to 14.75	To maintain disease free trees used for bud wood, apply every 7 to 14 days when trees are actively growing.

### **ORNAMENTALS**

For outdoor or greenhouse use, apply as a thorough coverage spray using 3.75 to 8.75 pounds Cuprofix MZ Disperss per 100 gallons dilute spray, applied to run-off or as a drench. Use the higher rates when conditions favor disease. One tablespoon of Cuprofix MZ Disperss per gallon of water is equivalent to 3.0 pounds per 100 gallons. Begin application at first sign of disease and repeat at 7 to 14 day intervals as needed. Use shorter intervals when severe disease conditions exist.

**Notice to User:** Plant sensitivities to Cuprofix MZ Disperss have been found to be acceptable in specific genera and species listed on this label, however, phytotoxicity may occur. Due to the large number of species and varieties of ornamentals and nursery plants, it is impossible to test every one for sensitivity to Cuprofix MZ Disperss. Neither the manufacturer nor seller has determined whether or not Cuprofix MZ Disperss can be safely used on ornamental or nursery plants not listed on this label. The user should determine if Cuprofix MZ Disperss can be used safely prior to commercial use. In a small area, apply the recommended rate(s) to the plants in question, i.e. bedding plants, foliage, etc. and observe for 7 to 10 days for symptoms of phytotoxicity prior to commercial use.

Not intended for use on fruit trees by homeowners. Do not use for food or feed purposes.

CROP	DISEASES	USE INSTRUCTIONS
Apple (Including Crab Apple)	Fire Blight (suppression)	Make a single application between silver tip and green tip as a full cover spray. Injury may occur from late application; discontinue use when green tip reaches ½ inch.
Arborvitae	Cercospora Blight, Alternaria Twig Blight, Phomopsis Needle Blight	
Ash	Anthracnose	
Azalea	Cercospora Leaf Spot, Botrytis Blight, Phytophthora Twig, Bud Blight, Powdery Mildew (suppression)	Discoloration of foliage and/or blooms has been noted on some varieties. To prevent residues on commercial plants, do not spray just before selling season.
Banana	Sigatoka	Apply when leaves first appear and repeat every 14 to 21 days or as required. Use sufficient water to provide adequate coverage. The addition of a surfactant to spray solutions will improve performance.
Barberry	Bacterial Leaf, Twig Blight	
Beech	Fungal Leaf Spot	
Begonia	Botrytis Blight, Bacterial Leaf Spot	
Birch	Leaf Blister Rust	
Bittersweet	Fungal Leaf Spot	
Camellia	Anthracnose, Bacterial Leaf Spot, Petal Blight	
Carnation	Alternaria Blight, Pseudomonas Leaf Spot, Botrytis Blight, Septoria Leaf Spot	Discoloration of foliage and/or blooms has been noted on some varieties. To prevent residues on commercial plants, do not spray just before selling season.
Catalpa	Fungal Leaf Spot	
Cherry-Laurel	Brown Rot, Blossom Blight, Twig Blight, Fungal Leaf Spot, Bacterial Spot	

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Chrysanthemum	Septoria Leaf Spot, Botrytis Blight	Discoloration of foliage and/or blooms has been noted on some varieties. To prevent residues on commercial plants, do not spray just before selling season.
Cotoneaster	Scab, Fungal Leaf Spot, Botrytis Blight	
Currant, Alpine	Anthrachnose, Fungal Leaf Spot	
Dahlia	Alternaria Leaf Spot, Cercospora Leaf Spot, Botrytis Blight	
Dogwood	Anthrachnose, Fungal Leaf Spot, Leaf Blotch, Spot Anthracnose, Flower Blight, Leaf Blight,	Apply when buds begin to open, when bracts have fallen, 4 weeks later and again in late summer after flower buds for next season have formed.
Easter Lily	Botrytis Blight	Use 10 to 16.5 lbs Cuprofix MZ Disperss in 100 gallons of water.
Elm	Xanthomonas Leaf Spot, Anthrachnose, Black Leaf Spot, Other Fungal Leaf Spots, Twig Blight	
Euonymus	Anthrachnose, Botrytis Blight, Fungal Leaf Spots, Scab	
Fir	Needle Blight, Twig Blight, Leaf Casts	
Forsythia	Fungal Leaf Spot	
Geranium	Alternaria Leaf Spot, Botrytis Gray Mold. Cercospora Leaf Spot	
Gladiolus	Alternaria Leaf Spot, Botrytis Gray Mold, Bacterial Leaf Blight	
Hickory	Anthrachnose, Fungal Leaf Spot, Fungal Leaf Blotch, Scab, Spot Anthracnose	

Holly	Fungal Leaf Spot, Tar Spot, Anthracnose, Spot Anthracnose, Leaf Blight, Twig Blight, Algae	
Honeysuckle	Herpobasidium Leaf Blight, Fungal Leaf Spot	
Horse-Chestnut, Buckeye	Leaf Blotch, Fungal Leaf Spot, Fungal Leaf Blight, Anthracnose, Spot Anthracnose	
Hydrangea	Fungal Leaf Spot, Rust, Botrytis Leaf Blight, Flower Blight, Gray Mold	
Indian Hawthorn	Anthracnose, Entomosporium Leaf Spot	Use 6.25 to 12.5 lbs Cuprofix MZ Disperss per 100 gallons.
Juniper (Eastern Red Cedar)	Anthracnose, Rust, Phomopsis Twig Blight, Cercospora Leaf Blight	
Lilac	Bacteria Blight, Phytophthora Blight	
Linden, Basswood	Anthracnose, Fungal Leaf Spots, Leaf Blight, Spot Anthracnose	
Magnolia	Gleosporium Leaf Spot, Algal Leaf Spot, Anthracnose, Bacterial Leaf Spot, Leaf Blights	
Maple, Boxelder	Anthracnose, Fungal Leaf Spots, Leaf Blight, Blotch, Leaf Scab, Tar Spot, Leaf Blister	
Marigold	Botrytis Leaf Blight, Blossom Blight, Alternaria Leaf Spot, Cercospora Leaf Spot	Not recommended for use on French Marigold as phytotoxicity may occur.



Mountain-Ash	Leaf Blight, Scab, Fungal Leaf Spot, Rust, Fire Blight (suppression)	
Mulberry	Bacterial Blight, Leaf Spot, Fungal Leaf Spot, False Mildew	
Oak, Laurel	Algal Leaf Spot (Cephaleuros virescens), Anthracnose, Fungal Leaf Spots, Fungal Leaf Blights, Spot Anthracnose, Leaf Blotch, Leaf Blister	
Pachysandra	Volutella Leaf Blight	
Pansy	Anthracnose, Downy Mildew	
Pear	Fire Blight (suppression)	Apply at 5-day intervals throughout the bloom period. Do not apply after bloom.
Peony	Altemaria Leaf Spot, Botrytis Blight	
Photinia	Anthracnose, Entomosporium Leaf Spot, Powdery Mildew (suppression)	
Pine	Dothistroma Needle Blight, Scirrhia Brown Spot, Needle Blight, Rhizosphaera Needle Cast, Sirococcus Tip Blight, Sphaeropsis Tip Blight, Diplodia Tip Blight, Dieback, Rhabdocline Needle Cast, Lophodermium Needle Cast, Cyclaneusma Needle Cast	
Poplar, Aspen, Cottonwood	Leaf Rust, Fungal Leaf Spot, Yellow Leaf Blister	
Privet	Anthracnose, Fungal Leaf Spots,	

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	Twig Blight	
Pyracantha	Fire Blight (suppression), Scab	
Redbud	Cercospora, Other Fungal Leaf Spots	
Rhododendron, Azalea	Alternaria Flower Spot, Cercospora Leaf Spot, Ovulinia Petal Blight, Flower Blight, Fungal Leaf Spots, Rust, Galls (Leaf, Flower and Stem), Botrytis Blight, Bud Blight, Twig Blight Dieback	
Rose	Black Spot, Cercospora Leaf Spot, Powdery Mildew (suppression), Botrytis Blight, Canker, Cane Blight, Spot Anthracnose, Rust, Anthracnose, Fungal Leaf Spot	Discoloration of foliage and/or blooms has been noted on some varieties. To prevent residues on commercial plants, do not spray just before selling season.
Russian-Olive	Fungal Leaf Spots	-
Stone Fruit (Ornamental) Almond, Apricot, Cherry, Nectarine, Peach, Plum	Black Knot, Brown Rot, Blossom Blight, Twig Blight, Botrytis Blight, Gray Mold, Leaf Blister, Curl, Plum Pockets, Witches'-boom, Scab, Shot Hole, Fungal Leaf Spot, Bacterial Spot	No post-bloom application.
Sumac	Fungal Leaf Spots	
Sycamore, Planetree	Anthracnose, Leaf Blight, Fungal Leaf Spots	
Tulip	Botrytis Blight, Anthracnose	

Viburnum	Downy Mildew, Anthracnose	
Walnut, Butternut, Pecan	Bacterial Blight, Anthracnose, Yellow Leaf Blotch, Fungal Leaf Spots, Fungal Leaf Blights	
Willow	Tar Spot, Leaf Blight, Scab, Black Canker Spot, Anthracnose	
Witchhazel	Fungal Leaf Spots	
Zinnia	Alternaria Leaf Blight, Botrytis Blight	

### **TURF**

For golf courses, sod farms, industrial or municipal turf areas and professional applications to residential lawns. Not for use by homeowners.

Start applications when grass greens-up in spring or when disease threatens. Repeat at 7 to 14 day intervals as needed. Use the shorter interval and maximum rate when disease is severe or expected to be so. Apply in sufficient water to provide adequate coverage.

Do not use for food or feed. Do not graze treated areas. Do not use on grasses intended for grazing, such as range or pasture grasses. Do not feed clippings to livestock. Do not use for grasses grown for seed.

**NOTE:** Phytotoxicity may occur depending upon varietal differences. Apply recommended rate to small area and observe for 7 to 10 days for signs of injury. If phytotoxicity occurs, discontinue use. Do not apply in spray solutions with a pH of less than 6.5.

<b>DISEASES</b>	<b>RATE in oz. Cuprofix MZ Disperss/ 1000 sq. ft.</b>	<b>RATE in lbs. Cuprofix MZ Disperss/A</b>	<b>USE INSTRUCTIONS</b>
Helminthosporium Melting-out Rusts (Leaf, Stem, Stripe)	4 to 6	10 to 16	Apply at an interval of 14 days. Discontinue use if phytotoxicity occurs.
Copper Spot, Fusarium Blight, Powdery Mildew (suppression), Red Thread, Slime Mold,	4 to 6	10 to 16	

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Algae			
Dollar Spot	4 to 6	10 to 16	
Rhizoctonia Brown Patch	4 to 6	10 to 16	Apply on a 7 to 14 day schedule.
Pythium Blight	4 to 6	10 to 16	Apply at 5-day intervals, or more frequently, if conditions are especially favorable for disease development.
Fusarium Snow Mold	4 to 6	10 to 16	Apply at 2 to 6 week intervals during winter.

## GENERAL CHEMIGATION INSTRUCTIONS

Apply this product only through one or more of the following types of sprinkler irrigation systems: center pivot, lateral move, traveler, big gun, plastic pipe solid set systems which contain no aluminum parts or components. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of chemigation water.

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.

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.

Shut off injection equipment after treatment and continue to operate irrigation system until Cuprofix MZ Disperss has been cleared from the last sprinkler head.

**NOTE:** It must be determined in the selection process if proper application equipment is available and if the waste associated with its use can be properly handled. Materials used in the construction of application equipment is also an important factor as agricultural chemicals are often reactive with soft metals such as aluminum and even some synthetic material such as plastics, rubbers, etc. Therefore, it is necessary when working with equipment containing these materials that they are thoroughly flushed with clean water after each day's use.

Do not apply this product through any type of irrigation (chemigation) system using aluminum parts or components as damage to the system may occur. Such application is prohibited regardless of whether the irrigation system is flushed with water after use of this product.

## CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

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 the 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.

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 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 shut down.

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.

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 wind speed favors drift beyond the area intended for treatment.

When mixing, fill nurse tank half full with water. Add Cuprofix MZ Disperss slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. DO NOT PRE-MIX OR SLURRY Cuprofix MZ Disperss before adding to the nurse tank. Stickers, spreaders (cleared for use on growing crops), nutrients, etc. should be added last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations which can be encountered, observe the most stringent cautions and limitations on the label of all products used in mixtures.

Cuprofix MZ Disperss should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Agitation of the mixture in the nurse tank is recommended.

Shut off injection equipment after treatment and continue to operate irrigation system until Cuprofix MZ Disperss has been cleared from the system.

### **SPRINKLER CHEMIGATION**

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 shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch that 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 wind speed favors drift beyond the area intended for treatment.

When mixing, fill nurse tank half full with water. Add Cuprofix MZ Disperss slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. DO NOT PRE-MIX OR SLURRY Cuprofix MZ Disperss. Stickers, spreaders (cleared for use on growing crops), nutrients, etc. should be added last. If compatibility is in question, use the Compatibility Jar Test before mixing a whole tank. Because of the wide variety of possible combinations that can be encountered, observe the most stringent cautions and limitations on the label of all products used in mixtures.

Cuprofix MZ Disperss should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set irrigation systems. Agitation of the mixture in the nurse tank is recommended.

Shut off injection equipment after treatment and continue to operate irrigation system until Cuprofix MZ Disperss has been cleared from the system.

#### **WARRANTY AND DISCLAIMER**

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