

US ENVIRONMENTAL PROTECTION AGENCY  
OFFICE OF PESTICIDES PROGRAMS  
REGISTRATION DIVISION (75-767)  
WASHINGTON, DC 20460

EPA REGISTRATION NO.

DATE OF ISSUANCE

100-720

MAR 5 1992

TERM OF ISSUANCE

Conditional

NAME OF PESTICIDE PRODUCT

Ridomil<sup>TM</sup>/Copper 70W

NOTICE OF PESTICIDE:  REGISTRATION  
 REREGISTRATION

(Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended)

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

CIBA-GEIGY Corporation  
P.O. Box 18300  
Greensboro, NC 27419

NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith

Registration is in no way to be construed as an indorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit 'such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.'

2. Add the phrase, "EPA Registration No. 100-720" and submit five (5) copies of your final printed labeling before you release the product for shipment.

3. Please place the "Reentry Statements" directly under the following statement: "Failure to follow the directions...illegal residues" under the "Directions For Use" section.

4. One year storage stability data at ambient warehouse conditions must be received by EPA within 15 months after the above registration date.

Sincerely,

Cynthia Giles-Parker  
Product Manager (22)  
Fungicide-Herbicide Branch  
Registration Division (H7505C)

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

DATE

MAR 5 1992

Ridomil®/Copper 70W

with COMMENTS  
In EPA Letter Dated:

MAY 5 1980

Fungicide

For the control of certain diseases in various fruits and vegetables

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

100-720

Active Ingredients:

Metalaxyl: N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester .....	10.0%
Copper Hydroxide:* (Cu(OH) <sub>2</sub> ) .....	60.0%
<u>Inert Ingredients:</u> .....	<u>30.0%</u>
Total:	100.0%
*Metallic Copper equivalent .....	39.1%

Ridomil/Copper 70W is a wettable powder packaged in a water soluble bag.

Keep Out of Reach of Children

DANGER/PELIGRO

PRECAUCIÓN AL USUARIO: Si usted no lee inglés, no use este producto hasta que la etiqueta haya sido explicado ampliamente.

See additional precautionary statements on left side of container.

Statement of Practical Treatment

If in eyes: Immediately flush with a steady, gentle stream of water and get medical attention.

If swallowed: Call a physician or Poison Control Center. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available, large quantities of water. Avoid alcohol.

If inhaled: Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

If on skin: Wash promptly with soap and water. Get medical attention.

Note to Physician

If swallowed, probable mucosal damage may contraindicate the use of gastric lavage. Monitor blood for evidence of hemolysis and methemoglobinemia.

If in eyes, specialized ophthalmologic attention may be required.

See directions for use on back of container.

EPA Reg. No. 100-

EPA Est.

This outer protective container contains Ridomil/Copper 70W in an inner water-soluble bag. Entire inner bag and contents dissolve in water. After opening outer container, immediately dump entire unopened inner bag into the partially filled sprayer or mix tank. Do not handle the soluble bag or expose it to moisture, since this may cause rupturing.

CIBA-GEIGY

Five Pounds  
Net Weight

DIRECTIONS FOR USE AND CONDITIONS OF SALE AND WARRANTY

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product. If terms are not acceptable, return the unopened product container at once.

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Conditions of Sale and Warranty

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The Directions for Use of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application all of which are beyond the control of CIBA-GEIGY or the Seller. All such risks shall be assumed by the Buyer.

CIBA-GEIGY warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use subject to the inherent risks referred to above. CIBA-GEIGY makes no other express or implied warranty of Fitness or Merchantability or any other express or implied warranty. In no case shall CIBA-GEIGY or the Seller be liable for consequential, special, or indirect damages resulting from the use or handling of this product. CIBA-GEIGY and the Seller offer this product, and the Buyer and user accept it, subject to the foregoing Conditions of Sale and Warranty, which may be varied only by agreement in writing signed by a duly authorized representative of CIBA-GEIGY.

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DIRECTIONS FOR USE

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

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR DISEASE CONTROL, CROP INJURY, OR ILLEGAL RESIDUES.

Do not apply this product in such a manner as to directly or through drift expose workers or other persons, except those knowingly involved in the application. The area being treated must be vacated by unprotected persons.

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Reentry Statements

Do not enter treated areas without protective clothing until sprays have dried.

Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

Written or oral warnings must be given to workers who are expected to be in the treated area or in an area about to be treated with this product. Oral warnings must be given which inform workers of areas or fields that may not be entered without specific protective clothing until sprays have dried and appropriate actions to take in case of accidental exposure, as described under Precautionary Statements on the back of this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: "DANGER. Area treated with Ridomil/Copper 70W on (date of application). Do not enter without appropriate protective clothing until sprays have dried. Flush eyes or skin with plenty of water. Call a physician if irritation persists. Remove contaminated clothing and wash before reuse."

General Information

Ridomil/Copper 70W is a foliar fungicide containing 10% of the active ingredient metalaxyl and 60% of the active ingredient copper hydroxide. Metalaxyl is a systemic fungicide for use on selected crops to control diseases caused by members of the Phycomycete family of fungi. Copper is effective against a wide range of fungal pathogens.

**Note:** Metalaxyl is a systemic fungicide having a specific mode of action and could be subject to development of resistant strains of fungi. Development of resistance cannot be predicted. Therefore, CIBA-GEIGY cannot assume liability for crop damage resulting from resistant strains of fungi. If treatment is not effective following the use of Ridomil/Copper 70W as recommended, a resistant strain of fungi may be present. If the treatment is ineffective due to the presence of a metalaxyl resistant strain of fungi, neither Ridomil/Copper 70W nor any other fungicide with similar action will effectively control that disease. Consideration should then be given to the prompt use of other types of suitable fungicides. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance in your particular crop and disease control situation. Do not use Ridomil/Copper 70W for disease control in greenhouse crops.

Do not make applications when weather conditions favor drift from target area. Avoid spray overlap as crop injury may result.

Mixing Instructions

Prepare no more spray mixture than is needed for the immediate operation. Thoroughly clean spray equipment before using this product. Vigorous agitation is necessary to maintain tank mix uniformity. Maintain maximum agitation throughout the spraying operation. Flush spray tank thoroughly with water daily after use and dispose of pesticide rinsate by application to an already treated area.

Amount of water needed per acre will vary according to the amount of plant growth. For dilute ground application, the water volume will vary from 20-150 gals./A. For aerial application, 3-10 gals. of water/A are generally needed. To minimize the potential of drift from target area, application at wind speeds greater than 10 mph is not recommended.

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Precautions: (1) Soluble bags of Ridomil/Copper 70W must be dissolved completely in water before any other tank mix partner, including micronutrients, or other dry or liquid fertilizers are added to the solution. (2) A minimum of 5 gallons of water per acre must be used in the mix tank. (3) Do not let spray mixture stand overnight in the spray tank. (4) Rinse spray tank at the end of the day.

Ridomil/Copper 70W Alone: Add 2/3 of the required amount of water to the spray or mixing tank. With the agitator running, drop the required number of unopened soluble bags of Ridomil/Copper 70W into the tank. Continue agitation while adding the remainder of water and during application to maintain a uniform suspension.

BEFORE TANK MIXING RIDOMIL/COPPER 70W WITH OTHER REGISTERED PRODUCTS FOR ANY USE ON THIS LABEL, READ THE LABEL OF THE TANK MIX PARTNER TO BE CERTAIN IT IS LABELED FOR USE ON THE PARTICULAR CROP AND THAT USE PATTERNS ARE COMPATIBLE WITH THOSE OF RIDOMIL/COPPER 70W.

Ridomil/Copper 70W + Tank Mixtures: Add 2/3 of the required amount of water to the spray or mixing tank. With the agitator running, drop the required number of unopened soluble bags of Ridomil/Copper 70W into the tank. Then add the desired amount of the other products recommended for tank mixture. Continue agitation while adding the remainder of the water and during application to maintain a uniform suspension.

#### Application Through Irrigation Systems

Ridomil/Copper 70W alone or in combination with other pesticides which are registered for application through irrigation systems may be applied through irrigation systems.

Apply this product only through center pivot, solid set, or moving wheel irrigation systems. 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 nonuniform distribution of treated 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.

### Posting Requirements

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

### Operating Instructions

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

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5. 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.
6. 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.
7. Do not apply when wind speed favors drift beyond the area intended.

#### Application Instructions

Ridomil/Copper 70W must be applied as the schedule specifies in the specific crop use recommendations, not according to the irrigation schedule. If irrigation schedules are used, ground or aerial applications must supplement chemigation applications to achieve adequate disease control.

Ridomil/Copper 70W has not been sufficiently tested to assure consistent product performance for all labeled uses when applied through chemigation systems. The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler or drip irrigation equipment. Users should check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler or drip irrigation equipment.

Center Pivot Irrigation Equipment (Use only with drive systems which provide uniform water distribution)

1. Determine the size of the area to be treated.
2. Determine the time required to apply 1/4 inch of water over the area to be treated when the system and injection equipment is operated at normal pressures recommended by the equipment manufacturer. Run the system at 80-95% of the manufacturer's rated capacity.
3. Using water, determine the injection pump output when operated at normal line pressure.
4. Determine the amount of Ridomil/Copper 70W required to treat the area covered by the irrigation system.
5. Add the required number of Ridomil/Copper 70W soluble bags and sufficient water to meet the injection time requirements to the solution tank. (See Mixing Instructions section of this label.)

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6. Maintain constant solution tank agitation during the injection period.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the Ridomil/Copper 70W solution has cleared the sprinkler head.

Solid Set and Moving Wheel Irrigation Equipment

1. Determine the acreage covered by the sprinklers.
2. Fill injector solution tank with water and adjust flow rate to use the contents over a 20 to 30-minute interval.
3. Determine the amount of Ridomil/Copper 70W required to treat the area covered by the irrigation system.
4. Add the required number of Ridomil/Copper 70W soluble bags into the same quantity of water used to calibrate the injection period. (See Mixing Instructions section of this label.)
5. Operate system at the same pressure and time interval established during the calibration.
6. Inject Ridomil/Copper 70W at the end of the irrigation cycle or as a separate application to maximize retention of the fungicide by the foliage.
7. Stop injection equipment after treatment is completed. Continue to operate the system until the Ridomil/Copper 70W solution has cleared the last sprinkler head.

Cucurbit Vegetables

Ridomil/Copper 70W, when used as a foliar spray in a preventive disease control program, provides control of downy mildew of cucurbit vegetables.

Apply 1.5 to 2.0 lbs. of Ridomil/Copper 70W/A. Begin applications when conditions are favorable for disease, but before infection and continue at 14-day intervals until the threat of disease is over. Use the higher rate under severe disease pressure.

Notes: (1) To avoid possible illegal residues, do not apply Ridomil/Copper 70W within 5 days of harvest. (2) To minimize the potential for resistance, do not make more than a total of four foliar applications of a Ridomil prepack (Ridomil/Copper 70W or Ridomil/Bravo 80W) per crop.

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Peppers

For control of *Pythium* spp. and *Phytophthora capsici*, follow the treatment scheme below:

Apply Ridomil 2E to the soil at planting at 4 pts./A (1.0 lb. ai/A). followed by one supplemental application of Ridomil 2E at 4 pts./A (1.0 lb. ai/A) 30 days following the soil application followed by foliar applications of Ridomil/Copper 70W at 2.5 lbs./A. Make 3-4 applications of Ridomil/Copper 70W at 10-14 day intervals.

Notes: To avoid possible illegal residues, (1) Do not apply Ridomil/Copper 70W within 7 days of harvest and (2) Do not apply more than a total of 3 lbs. ai of metalaxyl/A/crop.

Potatoes

Apply Ridomil/Copper 70W as a foliar fungicide in a preventive disease control program for control of late blight and tuber rot caused by *Phytophthora infestans*, *Pythium* leak caused by *Pythium* spp., and pink rot caused by *Phytophthora ethroseptica*.

Late Blight: Apply 1.5 to 2.5 lbs. of Ridomil/Copper 70W/A. Begin applications when conditions are favorable for disease, but before infection, and continue at 14-day intervals. Under heavy disease pressure, use the higher rate of Ridomil/Copper 70W.

Tuber Rot, Pythium Leak and Pink Rot: Apply 2.0 to 2.5 lbs. of Ridomil/Copper 70W/A. Make the first application at flowering and another application 14 days later. If the field has a history of tuber disease problems, make a third application 14 days after the second application.

Precaution: If applications of Ridomil/Copper 70W are being made for late blight control that correspond to the timing of applications for tuber disease control, additional applications for tuber disease control are not needed.

Notes: (1) To avoid possible illegal residues, do not apply Ridomil/Copper 70W within 7 days of harvest. (2) To minimize the potential for resistance, do not make more than a total of four foliar applications of a Ridomil prepack (Ridomil/Copper 70W, Ridomil/Bravo 80W, or Ridomil MZ58) per crop. (3) If late blight is still a problem after making four applications of Ridomil/Copper 70W, use other fungicides registered for late blight control. (4) Do not tank mix Ridomil/Copper 70W with Polyram®.

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Carrots and Radishes

Ridomil/Copper 70W will control foliar diseases caused by Oomycete fungi including cavity spot on carrots and white rust on radishes. For season-long control of these diseases, a preplant or at-planting application of Ridomil 2E at 4-8 pts./A (1-2 lbs. ai/A) is recommended. (See the Root and Tuber Vegetable section of the Ridomil 2E label.)

Apply 2.0 lbs. of Ridomil/Copper 70W/A foliarly beginning 40-50 days after the Ridomil 2E at-planting application. Make 2-4 applications of Ridomil/Copper 70W on a 14-day schedule, depending on disease development.

Note: To avoid possible illegal residues, do not apply Ridomil/Copper 70W within 7 days of harvest.

Spinach

Ridomil/Copper 70W will control white rust and downy mildew on spinach when applied foliarly following an at-planting application of Ridomil 2E at 4-8 pts./A (1-2 lbs. ai/A).

Apply 2.5 lbs. of Ridomil/Copper 70W/A 40-50 days after the Ridomil 2E at-planting application or immediately after each repeated cutting. Make one or two applications of Ridomil/Copper 70W at 14-day intervals, depending on cultural practices.

Notes: (1) To avoid possible illegal residues, do not apply Ridomil/Copper 70W within 21 days of harvest, and (2) If Ridomil/Copper 70W use is planned, apply Ridomil 2E either preplant or at planting. Do not make supplemental applications of Ridomil 2E.

Tomatoes

Foliar applications of Ridomil/Copper 70W will control Phytophthora fruit rot (such as buckeye rot), late blight, bacterial speck and bacterial spot, when applied on a regular schedule.

Apply 1.5 to 2.5 lbs. of Ridomil/Copper 70W/A to control bacterial diseases and Phytophthora diseases of tomatoes. Make applications on a 5-7 day schedule depending on disease pressure.

Notes: To avoid possible illegal residues, (1) Do not apply Ridomil/Copper 70W within 7 days of harvest, and (2) if other formulations containing metalaxyl are applied at any time throughout the season, do not exceed a total of 3 lbs. ai of metalaxyl/A/crop.

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Rotation (Plantback) Restrictions

Do not plant any crop which is not registered for use with metalaxyl in metalaxyl-treated soil for a period of 12 months, with the exception of wheat, barley and oats. See list below.

<u>Rotation Crop</u>	<u>Planting Time From Last Ridomil/Copper 70W Application</u>
Alfalfa	-0- days
Almonds	-0- days
Apples	-0- days
Asparagus	-0- days
Avocados	-0- days
Blueberries	-0- days
Broccoli	-0- days
Cabbage	-0- days
Cauliflower	-0- days
Chinese Broccoli (gai lon, white flowering broccoli)	-0- days
Chinese Cabbage (tight-heading varieties only)	-0- days
Citrus	-0- days
Cucurbit Vegetables	-0- days
Deciduous Fruits and Nuts*	-0- days
Eggplant	-0- days
Hops	-0- days
Head Lettuce	-0- days
Legume Vegetables	-0- days
Onions	-0- days
Papaya	-0- days
Peanuts	-0- days
Peppers	-0- days
Pineapples	-0- days
Potatoes	-0- days
Raspberries	-0- days
Root and Tuber Vegetables	-0- days
Soybeans	-0- days
Spinach	-0- days
Stone Fruits	-0- days
Strawberries	-0- days
Sugar Beets	-0- days
Tobacco	-0- days
Tomatoes	-0- days
Walnuts	-0- days
Wheat, Barley, Oats	14 days
Corn	12 months
Crops <u>Not Intended</u> for Food or Feed	-0- days
All Other Crops <u>Intended</u> for Food or Feed	12 months

\*These crops and other perennial crops may be planted immediately following last application of Ridomil/Copper 70W provided they will not bear harvestable fruit within 12 months.

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Storage and Disposal

Storage - Store in a cool, dry place. Do not store this product under wet conditions. Handle outer container carefully when stored at temperatures less than 50°F to avoid breakage of inner soluble bag.

Pesticide Disposal

Do not contaminate water, food or feed by storage, disposal or cleaning of equipment. Open dumping is prohibited. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal

Do not reuse outer container. Dispose of empty outer container in a sanitary landfill or by incineration, or by open burning, if allowed by state and local authorities. If burned, keep out of smoke.

For minor spills, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372 day or night.

Precautionary Statements

Hazards to Humans and Domestic Animals

DANGER

Corrosive. Causes irreversible eye damage. Do not get in eyes or on clothing. Wear goggles or face shield. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with eyes, with skin, or clothing. Avoid breathing dust or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Environmental Hazards

This pesticide is toxic to fish and aquatic organisms. Drift and runoff from treated areas may be hazardous to fish and aquatic organisms in adjacent aquatic sites. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from 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 wash waters or rinsate.

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Ridomil® trademark of CIBA-GEIGY Corporation for metalaxyl  
U.S. Patent 4,151,299

Bravo® trademark of ISK Fermenta for chlorothalonil

Polyram® trademark of BASF Corporation for metiram

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