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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

JUL 18 2002

Luz G. Piwonka
Drexel Chemical Company
1700 Channel Avenue, P.O. Box 13327
Memphis, Tennessee 38113-0327

Subject: Drexel KOP-Hydroxide 50
EPA Reg No. 19713-321
Submission dated April 15, 2002

Dear Ms. Piwonka:

The revised product labeling referred to above, submitted in connection with the registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. The Agency recommends that you submit amended labeling that contains label statements to reduce spray drift to non-target sites. The Agency has enclosed the Draft Pesticide Registration (PR) Notice 2001-X. The Agency also notes that this label does not contain maximum seasonal application rates. Agricultural product should specify how much active ingredient may be applied per year and/or growing season.

A stamped copy of the label is enclosed for your records. Submit one copy of your final printed label before you release the product for shipment. If you have questions about this label review, please contact Dennis McNeilly at (703) 308-6742 or electronically at mcneilly.dennis@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "C. Giles-Parker".

Cynthia Giles-Parker
Product Manager 22
Fungicide Branch
Registration Division (7505C)

enclosure

MASTER LABEL

Note to EPA: Shaded text added for water-soluble package.



KOP -Hydroxide 50W

Agricultural Fungicide-Bactericide

Water-Soluble Packaging

ACTIVE INGREDIENT:	
Copper Hydroxide*	77.0%
OTHER INGREDIENTS:	23.0%
TOTAL:	100.0%

*Metallic copper equivalent 50%.

KEEP OUT OF REACH OF CHILDREN DANGER / PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

See **FIRST AID** Below

EPA Reg. No. 19713-321
EPA Est. No. 19713-GA-1

Net Contents:
20 Pounds

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 eye.
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 or convulsing 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.
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.
<p>Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product, including health concerns, medical emergencies or pesticide incidents, call the National Pesticide Information Center at 1-800-858-7378.</p>	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

DANGER. Corrosive. Causes irreversible eye damage. Do not get in eyes. Causes skin irritation. Harmful if swallowed, absorbed through the skin or inhaled. May cause skin sensitization reactions in certain individuals. Avoid contact with the skin, eyes or clothing. Avoid breathing dust.

(Continued)

PRECAUTIONARY STATEMENTS (Cont.)

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 selection chart.

Applicators and other handlers must wear: Long-sleeved shirt and long pants, chemical-resistant gloves such as polyethylene or polyvinyl chloride, shoes plus socks, protective eyewear and dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH approved respirator with any R, P or HE filter.

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.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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: 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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. For terrestrial uses, 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 sites. Do not contaminate water by disposal of equipment washwaters.

Note: Add this statement to all container sizes 50 pounds and higher. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

GENERAL INFORMATION

Use this product according to "DIRECTIONS FOR USE". This product can be applied from aircraft and ground spraying equipment. Depending upon equipment used and the specific crop, the volume applied per acre differs. Refer to the general "MINIMUM RECOMMENDED SPRAY VOLUME" table.

Manufactured By:

Drexel Chemical Company

P.O. BOX 13327, MEMPHIS, TN 38113-0327

SINCE 1972

MIXING INSTRUCTIONS

This product may be applied as an aerial, ground dilute or ground concentrate spray unless specifically directed otherwise by crop. When selecting a use rate for this product, do not apply less than the label recommended minimum amount. Under heavy disease pressure or when conditions favor such, use the higher rate and shorter spray intervals specified for each crop. In addition, use the higher rates for larger mature tree crops.

The per acre use rate of this product is applicable for both dilute and concentrate spraying. Consult this product label for specific rates and timing of application by crop.

Complete spray coverage is essential to assure optimum performance from this product. When treating on a concentrate basis or by aerial application, unless you have had specific previous experience, it is advisable to test for compatibility and crop tolerance prior to full scale commercial utilization.

While volume is important in obtaining full spray coverage, often factors such as foliage density, environmental conditions and sprayer calibration have a greater impact. Always be sure that sprayers are calibrated to manufacturer's specifications and environmental conditions are within those recommended by state and local regulatory authorities.

When mixing, fill spray tank one-half full with water. Add this product slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Spreaders, stickers, spray and crop oil (cleared for application to growing crops) should be added last. If compatibility is in question, use the compatibility jar test before mixing a whole tank.

Note: THIS PRODUCT SHOULD NOT BE APPLIED IN A SPRAY SOLUTION HAVING A pH LESS THAN 6.5 OR GREATER THAN 9.0 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.

The materials used in the construction of application equipment should be identified before it is used to apply this product. Agricultural chemicals such as this product often react with soft metals such as aluminum and some synthetic materials such as plastics. After completing the application of this product with equipment containing these materials and before overnight storage, thoroughly flush the mixing and application system with clean water.

The following specific instructions are based on general application procedures. The recommendations of State Agricultural Extension Services should be closely followed as to timing, frequency and number of sprays per season.

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, 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS. Do not enter or allow worker entry into treated areas during the REI of 48 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, chemical-resistant gloves such as polyethylene or polyvinyl chloride, shoes plus socks and protective eyewear.

DIRECTIONS FOR WATER-SOLUBLE BAGS

Paks containing this product are water-soluble. Do not allow pak to become wet prior to adding to the spray tank. Do not handle paks with wet hands. To prepare the spray mixture, drop the required number of unopened paks into spray tank while filling with the appropriate amount of water. Operate the agitator while mixing. Depending on the water temperature and the degree of agitation, the paks should be completely dissolved in approximately 5 minutes from the time they are added to the water. Use the specified dosage of this product in the amount of water necessary to give complete coverage. Determine the total amount to be added to the spray tank based on the rates in the "CROP" section.

Note: Products containing boron and/or fertilizers will prevent the water-soluble packet from dissolving. Boron and/or fertilizer products must only be added after packet(s) have completely dissolved.

Minimum Recommended Spray Volume

Given as Gallons per Acre (GPA) to be used when applying this product:

	Aerial	Ground	
		Dilute	Concentrate
Vegetables and Field Crops	3	20	-
Vines	5	150	50
Trees	10	400	50
Citrus	10	800	100 (50 FLORIDA)

GENERAL CHEMIGATION INSTRUCTIONS

Apply this product only through one or more of the following types of systems: sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set or hand move 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 non-uniform distribution of treated water.

If you have questions about calibration, you should contact your 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 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, infirmary 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 location affording maximum visibility to the 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 2.5 inches tall and all letters and the symbol shall be in 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. Note: This sign is in addition to any sign posted to comply with the Worker Protection Standard (WPS).

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 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.

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.

When mixing, fill nurse tank one half full of water. Add this product slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, 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 all cautions and limitations on the labels of all products used in the mixture.

This product should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended.

SPRINKLER CHEMIGATION

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 not a 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.

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 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.

When mixing, fill nurse tank one-half full of water. Add this product slowly to tank while hydraulic or mechanical agitation is operating and continue filling with water. Stickers, spreaders, insecticides, 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 all cautions and limitations on the labels of all products used in the mixture.

This product should be added through a traveling irrigation system continuously or at the last 30 minutes of solid set or hand moved irrigation systems. Agitation is recommended.

APPLICATION FOR 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 on this label, at least 24 hours prior to anticipated frost conditions, will afford control of ice nucleating bacteria (*Pseudomonas syringae*, *Erwinia herbicola* and *Pseudomonas fluorescens*) and may therefore provide some protection against light frost. Not recommended for those geographical areas where weather conditions favor severe frost.

CITRUS

Disease	Rate per Acre	Number of Water Soluble Paks
Melanose, Scab, Pink pitting	4 to 12 lbs.	1 to 3 paks per 5 acres
	USE INSTRUCTIONS: Apply as pre-bloom and post-bloom sprays.	
Greasy spot	2 to 6 lbs.	1 to 3 paks per 10 acres
	USE INSTRUCTIONS: Use higher rates when conditions favor disease.	
Brown rot (CA only)	4 to 8 lbs.	1 to 2 paks per 5 acres
	USE INSTRUCTIONS: Begin application in Fall and continue as needed. Apply to skirts of trees to a height of at least 4 ft. Apply also to bare ground 1 ft. beyond skirt. Use higher rates when conditions favor disease. Note: In CA, in areas subject to copper injury, add 0.33 to 1 lb. of high quality lime per lb. of this product.	
Phytophthora	1 lb.	1 pak per 20 acres
	USE INSTRUCTIONS: Mix with 1 gal. 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 for protection up to one year, but does not cure existing infections.	

FIELD CROPS

Crop	Disease	Rate per Acre	Number of Water Soluble Paks
Alfalfa	Cercospora, Leptosphaerulina leaf spots	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Apply 10 to 14 days before each harvest or earlier if disease threatens. Note: Spray injury may occur with sensitive varieties such as Lahontan.		
Cantaloupes, Honeydews, Muskmelons	Downy mildew	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Begin application when conditions are favorable for disease development and repeat at 5- to 7-day intervals as needed, depending on disease severity.		
Peanuts	Cercospora leaf spot	1.5 to 3 lbs.	1 to 2 paks per 13 acres
	USE INSTRUCTIONS: Begin spraying at 35 to 40 days after planting or when disease symptoms first appear and repeat at 10- to 14-day intervals as needed. Reduce sprays to 7-day intervals during humid weather. Use higher rates when weather conditions favor drift. This product may be blended with talc and/or sulfur to make a 3 to 10% dust. This product may be blended by dealers and should be applied at rates equivalent to above.		
Potatoes	Early blight, Late blight (light infestation)	1 to 1.5 lbs.	2 to 3 paks per 40 acres
	Early blight, Late blight (heavy infestation)	1 to 4 lbs.	1 to 4 paks per 20 acres
	USE INSTRUCTIONS: Apply at 7- to 10-day intervals starting when plants are 8 inches high until 2 weeks before harvest in locations where disease is light. Use 3 to 4 lbs. per acre where disease is more severe.		
Rice	False smut and Panicle blight	1 to 3 lbs.	1 to 3 paks per 20 acres
	Begin applications at late boot stage and repeat at 7- to 10-day intervals or as needed until 100% heading. Use higher rate and shorter spray interval when disease pressure is high or environmental conditions are favorable for disease development. DO NOT drain the field for at least 14 days after last application.		
Strawberries	Leaf spot, Leaf blight	2 to 3 lbs.	2 to 3 paks per 20 acres
	USE INSTRUCTIONS: Begin application when plants are established and continue on a weekly schedule throughout the season. Note: Discontinue application if signs of crop injury appear.		
Sugar beets	Cercospora leaf spot	2 to 5 lbs.	2 to 5 paks per 20 acres
	USE INSTRUCTIONS: Begin application when conditions first favor disease development and repeat at 10- to 14-day intervals as needed. Use the higher rate when disease is severe. Addition of Surf-Ac® 820 or a suitable agricultural oil is recommended.		
Watermelon	Anthracoze	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Apply as soon as plants become established in the field and repeat at weekly intervals as needed, depending upon disease severity.		
	Downy mildew	1.5 to 3 lbs.	1 to 2 paks per 13 acres
USE INSTRUCTIONS: Apply as soon as plants become established in the field and repeat at weekly intervals as needed, depending upon disease severity. Use higher rates when conditions favor disease			
Wheat, Barley	Septoria leaf blotch, Helminthosporium spot blotch	1.5 to 2 lbs.	3 to 4 paks per 40 acres
	USE INSTRUCTIONS: Make first application at early heading and follow with a second spray 10 days later. Use the higher rates when conditions favor disease.		

TREE CROPS

Crop	Disease	Rate per Acre	Number of Water Soluble Paks
Almonds	Coryneum blight, Blossom brown rot	8 to 12 lbs.	2 to 3 paks per 6 acres
	USE INSTRUCTIONS: Dormant application - Apply before foliage buds begin to swell. Use higher rates when rainfall is heavy and disease pressure is high.		
	Coryneum blight, Blossom brown rot	6 to 8 lbs.	3 to 4 paks per 10 acres
	USE INSTRUCTIONS: Early bloom (popcorn) application - Apply before full bloom. Use higher rates when rainfall is heavy and disease pressure is high. Note: To avoid plant injury, do not use above rate after full bloom.		
	Bacterial blight (<i>Pseudomonas</i>)	12 to 16 lbs.	3 to 4 paks per 5 acres
	USE INSTRUCTIONS: Apply at dormant to early pink bud. Note: Injury may occur from post-bloom sprays, especially on Neplus varieties.		
	Bacterial blight (<i>Pseudomonas</i>)	1 lb.	1 pak per 20 acres
USE INSTRUCTIONS: For control in sprinkler irrigated orchards or where disease is severe, apply at 2-week post-bloom intervals or just before sprinkling. Note: Injury may occur from post-bloom sprays, especially on Neplus varieties.			
Apples (Except CA)	Anthracnose, European canker, <i>Pseudomonas</i>	12 to 16 lbs.	3 to 4 paks per 5 acres
	USE INSTRUCTIONS: Apply before Fall rains. Use higher rates under severe disease conditions. Note: Use on yellow varieties may cause discoloration. To avoid, pick before spraying.		
	Fire blight	8 to 16 lbs.	1 to 2 paks per 2.5 acres
	USE INSTRUCTIONS: Make application between silver tip and green tip. Apply as a full cover spray. Note: Crop injury may occur from late application; discontinue use when green tip reaches 0.5 inch.		
	Crown or Collar rot	4 lbs.	1 pak per 5 acres
	USE INSTRUCTIONS: Mix in 100 gals. of water. Apply 4 gals. of suspension as a drench on the lower trunk area of each tree. Apply either in early Spring or late Fall after harvest. Note: Do not use if soil pH is below 5.5 since copper toxicity may result.		
Apricots	Coryneum blight (Shot hole), Blossom brown rot	8 to 12 lbs.	2 to 3 paks per 5 acres
	USE INSTRUCTIONS: Apply at popcorn to full bloom. Use higher rates when conditions favor disease. Note: Applications applied after bloom will result in crop injury.		
Avocados	Scab	8 to 12 lbs.	2 to 3 paks per 5 acres
	USE INSTRUCTIONS: Apply when bloom buds begin to swell and continue application at monthly intervals for 5 to 6 applications. Use higher rate when conditions favor disease.		
Bananas	Sigatoka	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Apply by air in 3 gals. of water combining 0.5 gal. of a suitable agricultural spray oil. Apply on-a 14-day schedule throughout the wet season. Apply at 21-day intervals during dry periods.		
	Black pitting	4 lbs.	1 pak per 5 acres
USE INSTRUCTIONS: Mix in 100 gals. of water (4 lbs. per acre) directly to the fruit stem and include the basal portion of the leaf crown. Apply during the first and second weeks after fruit emergence.			

TREE CROPS (Cont.)

Crop	Disease	Rate per Acre	Number of Water Soluble Paks
Cacao	Black pod	2 to 4.5 lbs.	3 to 7 paks per 30 acres
	USE INSTRUCTIONS: 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 depending on disease severity. For drier areas, where 2 to 4 applications are recommended during critical infection periods and at long intervals, use 8.5 lbs. per acre (3 paks per 7 acres) according to disease incidence and planting density.		
	Dead bud (<i>Pseudomonas syringae</i>), Coryneum blight	8 to 12 lbs.	2 to 3 paks per 5 acres
Cherries	USE INSTRUCTIONS: Make first application in Fall before heavy rains and a second at late dormant. In orchards where the disease is severe, a spray should also be applied shortly after harvest. Add 1 pt. of superior-type oil per 100 gals. of water as a dilute spray.		
	Brown rot, Blossom blight	8 to 12 lbs.	2 to 3 paks per 5 acres
	USE INSTRUCTIONS: Apply a full cover spray at popcorn stage and a second application at full bloom.		
	Coffee berry disease (<i>Colletotrichum coffeanum</i>)	6 to 8 lbs.	3 to 4 paks per 10 acres
Coffee	USE INSTRUCTIONS: Apply first spray after flowering and before onset of long rains and then at 21- to 28-day intervals until picking. Use higher rates when rainfall is heavy and disease pressure is high.		
	Bacterial blight (<i>Pseudomonas syringae</i>)	6 to 8 lbs.	3 to 4 paks per 10 acres
	USE INSTRUCTIONS: Begin spray program before the 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 flower(s), especially when coinciding with wet weather. Use higher rates when rainfall is heavy and disease pressure is high.		
	Leaf rust (<i>Hemileia vastatrix</i>)	2 to 4 lbs.	1 to 2 paks per 10 acres
	USE INSTRUCTIONS: Apply before the onset of rain and then at 21-day intervals while rains continue. Use higher rates when rainfall is heavy and disease pressure is high.		
	Iron spot (<i>Cercospora coffeicola</i>), Pink disease (<i>Corticium salmonicolor</i>)	2 lbs.	1 pak per 10 acres
USE INSTRUCTIONS: Use concentrate or dilute spray. Begin treatment at the start of wet season and continue at monthly intervals for three applications.			
Filberts	Bacterial blight	4 to 6 lbs.	2 to 3 paks per 10 acres
	USE INSTRUCTIONS: Apply as a post-harvest spray. In seasons of heavy rainfall apply a second spray when three-fourths of the leaves have dropped. Add 1 pt. of superior-type oil per 100 gals. of water.		
Mangoes (FL)	Anthracnose	8 lbs.	2 paks per 5 acres
	USE INSTRUCTIONS: Apply monthly after fruit set until harvest.		
Olives (CA)	Peacock spot	8 to 12 lbs.	2 to 3 paks per 5 acres
	USE INSTRUCTIONS: Make first application before Winter rainfall. A second application in early Spring should be made if disease is severe. Apply the high rate for heavy disease pressure or when conditions favor such.		

TREE CROPS (Cont.)

Crop	Disease	Rate per Acre	Number of Water Soluble Paks
Peaches, Nectarines	Leaf curl, Coryneum blight (shot hole)	8 to 16 lbs.	1 to 2 paks per 2.5 acres
	USE INSTRUCTIONS: Apply at leaf fall. Use the highest rate when rainfall is very heavy and disease pressure is high. May be used with agricultural spray oil.		
	Brown rot blossom blight	8 to 12 lbs.	2 to 3 paks per 5 acres
	USE INSTRUCTIONS: Full cover spray at pink bud. Application at this time affords some control of Leaf curl and Coryneum blight.		
	Bacterial spot	1 lb.	1 pak per 20 acres
	USE INSTRUCTIONS: Post-bloom application applied at first and second cover sprays.		
	Bacterial spot	8 lbs.	2 paks per 5 acres.
USE INSTRUCTIONS: Apply as a dormant spray. Note: Do not spray three weeks prior to harvest. Use only recommended rates. Spotting of leaves and defoliation may occur from use in cover sprays.			
Pears	Fire blight	1 lb.	1 pak per 20 acres
	USE INSTRUCTIONS: Apply at 5-day intervals throughout the bloom period.		
	Pseudomonas blight	12 to 16 lbs.	3 to 4 paks per 5 acres
USE INSTRUCTIONS: Apply before Fall rains and again during dormancy before Spring growth starts. Use the higher rates when disease pressure is high or when conditions favor the development of such. Note: Excessive dosages may cause Fruit russet.			
Plums, Prunes	Coryneum blight (shot hole)	8 to 16 lbs.	1 to 2 paks per 2.5 acres
	USE INSTRUCTIONS: Apply as a dormant spray. Use the higher rate when rainfall is heavy and/or disease pressure is high.		
	Brown rot, Blossom blight	8 to 12 lbs.	2 to 3 paks per 5 acres
USE INSTRUCTIONS: Apply full cover application at pink, red or early white stage. Use the higher rate when disease pressure is heavy or conditions favor the development of such.			
Walnuts	Walnut blight	8 to 12.5 lbs.	2 to 3 paks per 5 acres
	USE INSTRUCTIONS: Apply first application spray at early pre-bloom prior to when catkins are partially expanded. Make additional applications during bloom and early nutlet stage or as needed if frequent rainfall occurs.		

ORNAMENTALS

For control of disease of ornamentals used in greenhouses, fields and nurseries, apply as a thorough coverage spray using 1 pound of this product per 100 gallons of water. Begin application at first sign of disease and repeat at 7- to 14-day intervals as needed; use shorter interval during periods of frequent rains or when severe disease conditions persist. One level teaspoon of this product per gallon of water is equivalent to one pound per 100 gallons. This product may be used as a maintenance spray. This product may be used alone or in combination with other fungicides such as dithiocarbamates.

ORNAMENTALS	
Aralia	Alternaria, Cercospora leafspot, Xanthomonas leafspot
Azalea*	Botrytis blight, Cercospora leafspot, Phytophthora dieback, Powdery mildew
Begonia bulbs (Easter Lily), Tulip, Gladiolus	Anthracoze, Botrytis blight, Xanthomonas leafspot
Camation*	Alternaria blight, Botrytis blight, Pseudomonas leafspot
Chrysanthemum*	Botrytis blight, Septoria leafspot

ORNAMENTALS (Cont.)

Cotoneaster	Botrytis blight
Euonymus	Anthracoze, Botrytis blight
Ivy*	Xanthomonas leafspot
Pachysandra	Volutella leaf blight
Periwinkle	Phomopsis stem blight
Pyracantha	Fireblight, Scab
Rose*	Black spot, Powdery mildew
Yucca (Adam's needle)	Cercospora leafspot, Septoria leafspot

*Discoloration of foliage and/or blooms have been noted on some varieties. To prevent residues on commercial plants, do not spray just before selling season.
Note: Phytotoxicity may depend on varietal differences. If unfamiliar with the use of this product, apply the recommended rate to a few plants and observe after 7 to 10 days for symptoms of phytotoxicity.

ORNAMENTAL TREES

Crop	Disease	Rate per Acre	Number of Water Soluble Paks
Live oak	Ball moss	6 lbs.	1 pak per 3 acres
	USE INSTRUCTIONS: Apply in the Spring when Ball moss is actively growing using 1.5 gals. of spray per ft. of tree height. Make sure to wet ball moss tufts thoroughly. A second application may be required after 12 months. Note: This product may be injurious to ornamentals grown under Live oaks.		
Sycamore	Anthracoze	2 to 3 lbs.	2 to 3 paks per 20 acres
	USE INSTRUCTIONS: Apply as a full spray. Apply in 100 gals. of water or sufficient volume for thorough coverage. Make first application at bud crack and second application 7 to 10 days later at 10% expansion.		

VEGETABLES

Crop	Disease	Rate per Acre	Number of Water Soluble Paks
Beans	Bacterial blight (halo and common)	1 to 3 lbs.	1 to 3 paks per 20 acres
	USE INSTRUCTIONS: Use the higher rate for more severe disease. For protective sprays, make first application when plants are 6 inches high; repeat on a 7- to 14-day schedule depending upon local conditions.		
	Broccoli, Brussels sprouts, Cabbage, Cauliflower	Black rot (<i>Xanthomonas</i>), Black leaf spot (<i>Alternaria</i>)	2 lbs.
USE INSTRUCTIONS: Apply at 7- to 10-day intervals. For control of diseases of these crops, begin application after transplants are set in the field or shortly after emergence of field seeded crops or when conditions favor disease development. Note: Reddening of older leaves may occur on Broccoli and flecking of wrapper leaves may occur on Cabbage.			
Carrots	Downy mildew (Cabbage only)	0.5 to 1 lb.	1 to 2 paks per 40 acres
	USE INSTRUCTIONS: Use higher rates when conditions favor disease. Note: Flecking of wrapper leaves may occur.		
Celery	Cercospora leaf spot	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Begin application when disease first threatens and repeat at 7- to 14-day intervals as needed depending on disease.		
Celery	Cercospora early blight, Septoria late blight, Bacterial blight	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Begin application as plants are first established in the field, repeating at 5- to 7-day intervals depending on disease severity and environmental conditions.		

7/7

VEGETABLES (Cont.)

Crop	Disease	Rate per Acre	Number of Water Soluble Paks
Cucumbers	Angular leaf spot, Downy mildew	1.5 to 2 lbs.	3 to 4 paks per 40 acres
	USE INSTRUCTIONS: Apply weekly when plants begin to vine.		
Eggplant (except CA)	Alternaria blight, Anthracnose, Phomopsis	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Begin application prior to development of disease symptoms. Repeat spray at 7- to 10-day intervals or as needed, depending on disease severity.		
Onions	Purple blotch, Downy mildew	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Begin when plants are 4 to 6 inches high and repeat at 7- to 10-day intervals or as needed, depending on disease severity.		
Peas	Powdery mildew	1.5 to 3 lbs.	1 to 2 paks per 13 acres
	USE INSTRUCTIONS: Begin application when disease symptoms first appear and repeat at weekly intervals as needed. Use higher rate for more severe disease.		
Peppers	Bacterial spot	2 to 3 lbs.	2 to 3 paks per 20 acres
	USE INSTRUCTIONS: Begin application when conditions first favor disease development and repeat at 5- to 10-day intervals as needed, depending on disease severity. Use higher rates for severe disease.		
Pumpkin, Squash	Powdery mildew	1.5 to 3 lbs.	1 to 2 paks per 13 acres
	USE INSTRUCTIONS: Begin application when plants are 3 weeks old or when disease symptoms first appear and repeat at 7-day intervals as needed to maintain control. Use the higher rates if disease is heavy or conditions favor such.		
Tomatoes	Early blight, Late blight	2 to 3 lbs.	2 to 3 paks per 20 acres
	USE INSTRUCTIONS: Begin when disease first threatens and repeat at 7- to 10-day intervals or as needed, depending on disease severity. Use higher rate for severe disease.		
	Bacterial speck	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Begin application when disease first threatens and repeat at 10- to 30-day intervals or as needed depending on severity.		
	Bacterial spot, Anthracnose, Gray leaf mold, Septoria leaf spot	2 to 4 lbs.	1 to 2 paks per 10 acres
USE INSTRUCTIONS: Begin application when disease first threatens and repeat at 7- to 10-day intervals. Note: May be combined with no more than 1.8 qts. per acre of Manz Flowable and no more than 2 lbs. per acre of Maneb 80W. Do not apply within 5 days of harvest.			

VINES

Crop	Disease	Rate per Acre	Number of Water Soluble Paks
Blackberries	Leaf spot, Cane spot	4 lbs.	1 pak per 5 acres
	USE INSTRUCTIONS: Apply as delayed dormant spray after training in the Spring. Make Fall application after harvest. Add 1 qt. of crop oil per acre.		
Cranberries	Fruit rot	8 lbs.	1 pak per 2.5 acres
	USE INSTRUCTIONS: Make first application in late bloom. One or two additional applications at 10- to 14-day intervals may be required, depending upon disease severity.		
Currants, Gooseberries	Leaf spot	10 lbs.	1 pak per 2 acres
	USE INSTRUCTIONS: Make 3 applications starting after harvest followed by application before bloom and after petal fall.		
Grapes	Black rot, Powdery mildew, Downy mildew	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Begin application at bud break with subsequent applications throughout the season, depending upon disease severity. Note: Foliage injury may occur on copper sensitive varieties such as Concord, Delaware, Niagra and Rosette. Either test for sensitivity or add 1 to 3 lbs. of hydrated lime per pound of this product.		
Hops	Downy mildew	2 lbs.	1 pak per 10 acres
	USE INSTRUCTIONS: Make crown treatment after pruning, but before training. After training, additional treatments are needed at about 10-day intervals. Note: Discontinue use 2 weeks before harvest.		
Raspberries (except CA)	Leaf spot, Cane spot	4 lbs.	1 pak per 5 acres
	USE INSTRUCTIONS: Apply as delayed dormant spray after training in the Spring. Make Fall application after harvest. Add 1 qt. of crop oil per acre.		

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and 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. Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility. **WATER-SOLUBLE PAKS:** Carefully open outer bag. Never open the water-soluble pouch. **CONTAINER DISPOSAL:** 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.

WARRANTY—CONDITION OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. In no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

ACCEPTED
with **COMMENTS**
In EPA Letter Dated:
JUL 18 2002

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide

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