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4581-358

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Mr. Gary R. Sandberg
 Atochem North America
 #3 Parkway, Room 619
 Philadelphia, PA 19102

Subject: Amended Labeling
 Penncozeb Fungicide
 EPA Reg. No. 4581-358
 Your Submission Dated May 10, 1993

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable with the following comment:

Note that this acceptance of your label does not relieve you of your obligation to comply with the Worker Protection Standard (WPS). If any of your products are covered by the WPS, you are required to submit, and receive the Agency's approval by April 21, 1994, of a revised label reflecting the required label statements of 40 CFR 156, published in the **FEDERAL REGISTER** on August 21, 1992 (57 FR 38102). Further guidance will be issued. According to 40 CFR 156, subpart K, specifically §156.200(c)(3): "No product to which this subpart applies shall be distributed or sold without amended labeling by any registrant after April 21, 1994." Should you have questions regarding the WPS, call 1-800-777-2185.

A stamped copy of the label is enclosed for your records.

Sincerely yours,



Clarence O. Lewis, III
 Acting Product Manager (21)
 Fungicide-Herbicide Branch
 Registration Division (H7505C)

Enclosure

CONCURRENCES

SYMBOL	H7505C	H7505C					
SURNAME	Clarence O. Lewis						
DATE	9/24/93	9/24/93					

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

4581-358

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PROPOSED LABEL

PENNCOZEB®

Fungicide

NOT FOR USE IN CALIFORNIA

**An 80% Coordination Product of Manganese and Zinc
and Ethylenebisdithiocarbamate**

ACTIVE INGREDIENT:

A coordination product of zinc ion and manganese ethylene

bisdithiocarbamate	80%
Manganese + +	16%
Zinc + +	2%
Ethylenebisdithiocarbamate ion	62%
(C ₄ H ₆ N ₂ S ₄)	

INERT INGREDIENTS: 20%

TOTAL: 100%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED, call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

IF ON SKIN, wash with plenty of soap and water. Get medical attention.

IF IN EYES, flush eyes with plenty of water. Call a physician if irritation persists.

See Inside Panel for Additional Precautionary Statements

EPA Registration No. 4581-358

EPA Establishment No. 33910-HL-01

NET CONTENTS 50 Lbs./22.6 Kg.

Sold by:

ELF ATOCHEM NORTH AMERICA, INC.—AGCHEM DIVISION
Philadelphia, PA

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

CAUTION

May cause irritation of eyes. Harmful if swallowed, inhaled, or absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark, except as specified for the labeled use on cranberries. Do not contaminate water when disposing of equipment washwaters.

CHEMICAL HAZARDS

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

GENERAL INFORMATION

PENNCOZEB is a wettable powder containing a coordination product of zinc ion and manganese ethylenedithiocarbamate, and is recommended for use as a spray for the control of many important plant diseases.

DIRECTIONS FOR USE

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

WORKER SAFETY RULES

Keep all unprotected persons, children, livestock, and pets away from treated area or where there is danger of drift.

Do not rub eyes or mouth with hands. See Statement of Practical Treatment.

PERSONAL PROTECTIVE EQUIPMENT

HANDLERS (MIXERS, LOADERS, AND APPLICATORS) AND EARLY REENTRY WORKERS MUST WEAR THE FOLLOWING PROTECTIVE CLOTHING AND EQUIPMENT: coveralls over long-sleeved shirt and long pants, shoes, socks, and chemical-resistant gloves. During mixing and loading, a chemical-resistant apron and goggles or a face shield must also be worn. For agricultural workers, where completely enclosed cabs with positive pressure filtration or an enclosed cockpit for aerial application are used, a long-sleeved shirt and long pants may be worn in place of the protective clothing described above. Chemical-resistant gloves must be available in the cab or cockpit and worn upon exiting. The gloves must be kept in an enclosed container in the cab or cockpit to prevent contamination of the inside of the cab or cockpit.

IMPORTANT! Before removing gloves, wash them with soap and water. Always wash hands, face, and arms with soap and water before eating, smoking or drinking. Always wash hands and arms with soap and water before using the toilet.

After work take off all clothes and shoes. Shower using soap and water. Wear only clean clothes. Do not use contaminated clothing. Wash protective clothing and protective equipment with soap and water after each use. Personal clothing worn during use must be laundered separately from household articles. Clothing and protective equipment heavily contaminated or drenched with PENNCOZEB must be destroyed according to state and local regulations. HEAVILY CONTAMINATED OR DRENCHED CLOTHING CANNOT BE ADEQUATELY DECONTAMINATED.

During aerial application, human flaggers are prohibited unless in totally enclosed vehicles.

REENTRY STATEMENT

Do not enter treated areas without protective clothing within 24 hours after application. 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 a treated area or in an area about to be treated with this product. When oral warnings are given, such warnings shall be given in a language customarily understood by the workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by the workers. Written warnings must include the following information: "CAUTION. Area treated with PENNCOZEB Fungicide on (date of application)." Do not enter without protective clothing within 24 hours of application.

After sprays have dried do not enter or allow entry into treated areas until the 24-hour reentry interval has expired unless wearing the personal protective equipment listed on this label.

INSTRUCTIONS FOR APPLICATION

FOR AIR APPLICATION use at the rate indicated in sufficient water for thorough coverage, a minimum of 2 gallons per acre for field crops and 10 gallons per acre for orchard crops.

Use a Sprayer-Slicker at rate of 4 fl. oz. per 100 gallons spray if needed. Add product slowly to water in the spray tank with agitation, or premix thoroughly in separate holding tank for concentrate or aircraft sprayers. Continuous agitation is required to keep the product in suspension.

When dosage ranges are given, use the higher rate and shorter intervals under severe disease pressure, but do not exceed the maximum rate or apply more frequently than the minimum interval given in the directions for that crop.

If this product is used on a crop, no other product containing a different EBOC active ingredient may be used on the same crop during the same growing season.

FIELD CROPS

CROPS	DISEASES	RATE LB/ACRE	INSTRUCTIONS
Field Corn and Corn Grown for Seed	Common Rust Helminthosporium Leaf Blight	1.0-1.5	Start application at the onset of disease and repeat as needed. Do not apply more than 12 lb. active ingredient per season (10 lb. product). Do not apply within 40 days of harvest.
Cotton	Rust	1.5-2.0	Start applications at the onset of disease. Apply as needed. Do not apply more than 8.0 lb. active ingredient per season (6.0 lb. product). Do not apply within 60 days of harvest for other ball opening.
Peanuts	Coronopsis Leaf Spot Rust	1.0-2.0	Begin applications when disease first appears and repeat at 7- to 14-day intervals, using shorter interval during humid weather. Do not feed treated vines to livestock. Do not use more than 12.0 lb. active ingredient (10 lb. product) per acre per season. Do not apply within 14 days of harvest.
Soybeans	Coronopsis Leaf Spot Rust	1.5-2.0	Begin applications when disease first threatens and repeat at 7-10 day intervals. Do not apply more than 11.2 lb. active ingredient (10 lb. product) per acre per season. Do not apply within 14 days of harvest.
Wheat Barley Oats Rye	Helminthosporium Leaf Spot Septoria Leaf Spot Septoria Glume Blight Leaf Rust Tan Spot	1.5-2.0	Start application at onset of disease or when plants are in flowering to jointing stage and repeat at 7- to 10-day intervals. Do not make more than 3 applications in one season. Do not apply more than 4.0 lb. active ingredient (3.0 lb. product) per acre per crop. Do not apply within 30 days of harvest. Do not graze livestock in treated areas prior to harvest. Do not apply after heading (ground 10.0 feeding).

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CROPS	DISEASES	RATE LB/ACRE	DIRECTIONS
Asparagus	Rust Caricopers Leaf Spot	2.0	Begin applications when rust first appears and repeat at 10 day intervals as needed. Use only on rows after spears have been harvested. Do not apply more than 6.4 lbs. active ingredient (8 lbs. product) per acre per season. Do not apply within 100 days of harvest. (In Arizona, the PHI is 120 days).
Sweet Corn Papaya Sweet Corn used for seed production	Common Rust Hymenochaetium Leaf Blight	1.0-1.5	West of the Mississippi (including Arkansas & Louisiana) Apply in sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4-7 day intervals. Do not apply within 7 days of harvest. Do not feed treated forage (plant stalk and leaves) to livestock. Do not apply more than 16 lbs. active ingredient (22.5 lbs. product) per acre per crop.
		1.0-1.5	West of the Mississippi (except Arkansas & Louisiana) Apply in sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4-7 day intervals. Do not apply within 7 days of harvest. Do not feed treated forage (plant stalk and leaves) to livestock. Do not apply more than 6.0 lbs. active ingredient (7.5 lbs. product) per acre per crop.
Cucumbers	Alternaria (Hymenochaetium) Leaf Spot Angular Leaf Spot Anthracnose Downy Mildew Pythium Fruit Rot	1.5-3.0	Begin when disease threatens or plants begin to run. Spray on a 7-10 day interval using higher rate and/or shorter intervals under severe disease pressure. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per season. Do not apply within 5 days of harvest.
and	Early Blight Late Blight	1.5-2.0	Apply when disease threatens. Make applications as needed on a 7-10 day interval. Do not use more than 12.8 lbs. active ingredient per season (16 lbs. product). Do not apply within 14 days of harvest.
Melons including: cantaloup, cassia, crenshaw, honeydew, watermelon	Alternaria Leaf Spot Anthracnose Caricopers Leaf Spot Downy Mildew Gummy Stem Blight	2.0-3.0	Apply as soon as plants begin to run or when disease threatens. Spray on a 7-10 day interval as necessary using higher rate and/or shorter intervals under severe disease pressure. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per season. Do not apply within 5 days of harvest.
Onions (Dry Bulb)	Botrytis Leaf Blight Downy Mildew Neck Rot Purple Blotch	2.0-3.0	Begin applications when diseases are first reported in the area. Repeat at 7 day intervals throughout the season. Do not apply within 7 days of harvest; do not apply to exposed bulbs. Do not apply more than 24.0 lbs. active ingredient (30 lbs. product) per acre per crop.
(Furrow Drench)	Smut	3.0	Apply as a furrow drench at time of planting onion seeds. Use 75 to 125 gallons of water per acre. Do not use more than 2.4 lbs. active ingredient (3.0 lbs. product) per 29,800 linear feet of row (18 inch spacing).
Potatoes	Early Blight Late Blight	1.0-2.0	Begin applications when plants are 4-6 inches high, and repeat at 5-10 day intervals, (more frequently under severe disease conditions) throughout the season. Do not apply more than 11.2 lbs. active ingredient (14 lbs. product) per acre per crop. 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, Wisconsin, when a 3 day PHI is allowed). It is recommended that this product be used within an Integrated Pest Management Program. Vine kill should occur 14 days before harvest. Dip whole or cut seed pieces in mixture of 1 1/4 lbs. of product per 50 gallons of water, drain and plant immediately. If seed pieces are to be held before planting, spread out to dry in a cool place. Do not use treated seed pieces for food or feed purposes.
Potato Tuber Treatment	Fusarium Seed Piece Decay		
Squash (Summer)	Anthracnose Downy Mildew	2.0-3.0	Begin when plants start to run. Spray on a 7-10 day interval as needed using higher rate and/or shorter intervals under severe disease pressure. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per season. Do not apply within 5 days of harvest.
Tomatoes	Anthracnose Early Blight Late Blight Gray Leaf Mold Gray Leaf Spot Septoria Leaf Spot	1.5-3.0	East of the Mississippi Begin applications when seedlings emerge or transplants are set and repeat at 7-10 day intervals throughout the season. Do not apply within 5 days of harvest. Do not apply more than 16.8 lbs. active ingredient (21 lbs. product) per acre per crop.
		1.5-2.0	West of the Mississippi Apply on a 7-10 day interval as needed. Do not apply more than 6.4 lbs. active ingredient (8 lbs. product) per acre per season. Do not apply within 5 days of harvest.

FRUIT CROPS

CROPS	DISEASES	RATE LB/ACRE	DIRECTIONS
FOR POME FRUITS Use either the "Pre-Bloom" or "Extended Application" schedule. DO NOT COMBINE OR INTEGRATE THE TWO TREATMENT SCHEDULES.			
Apples, Cran- apples, Pears Quince	Rusts (including Cedar apple) Fusiclone Leaf Spot Pyroneck Scab Sooty Blotch	6.0 or (1.5 lbs. per 100 gal. in dilute spray)	PRE-BLOOM: Begin applications at 1/4 to 1/2 inch green tip and continue on a 7- to 10-day application schedule through bloom. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per year. Do not graze livestock in treated areas.
		3.0 or (0.75 lbs. per 100 gal. in dilute spray)	EXTENDED APPLICATION OR TANK MIX: For implementation of IPM programs, applications based on tree-row volume or for use as a resistance management test: begin applications at 1/4 to 1/2 inch green tip and continue applications on a 7- to 10-day schedule through the second cover spray or to within 77 days of harvest. Do not apply within 77 days of harvest. Do not apply more than 16.8 lbs. active ingredient (21 lbs. product) per acre per year. Do not graze livestock in treated areas. It is recommended that this product be used in an Integrated Pest Management Program.
Bananas	Sigatoka	2.0-3.0	Apply when leaves first appear and repeat as needed on a 14-21 day interval. Do not apply more than 24 lbs. active ingredient (30 lbs. product) per acre per season. May be applied up to the day of harvest.
Cranberries	Fruit Rot	3.0-6.0	Begin applications at mid-bloom and repeat at 7- to 10-day intervals. Do not apply within 30 days of harvest. Do not apply more than 14.4 lbs. active ingredient (18 lbs. product) per acre per season.
Grapes	Black Rot Bunch Rot Downy Mildew	1.5-4.0 or (0.375- 1.0 lbs. per 100 gal. in a dilute spray)	East of the Rocky Mountains Apply when shoots are 1/4 to 1 1/2 inches long. Continue at 7-10 day intervals. Do not apply within 60 days of harvest. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per season.
		1.5-2.5 or (0.375- 0.625 lbs. per 100 gal. in a dilute spray)	West of the Rocky Mountains Apply when shoots are 1/4 to 1 1/2 inches long. Continue at 7-10 day intervals. Do not apply within 60 days of harvest. Do not apply more than 6.0 lbs. active ingredient (7.5 lbs. product).
Papayas	Anthracnose Phytophthora Fruit Rot Black Spot (Caricopers)	1.5-2.5 or (0.375- 0.625 lbs. per 100 gal. in a dilute spray)	Apply first when disease pressure threatens and continue on a 14-21 day interval. Do not apply more than 20 lbs. active ingredient (35 lbs. product) per acre per season. Applications can be made up to the day of harvest.

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**CHEMIGATION
NOT FOR THIS USE IN CALIFORNIA
GENERAL INSTRUCTIONS**

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, and low, side (wheel) roll, traveler, big gun, solid set, or hand move. 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 any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

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.

Do not connect chemigation system to any public water system. Public water system means a system for the provision 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.

SYSTEM REQUIREMENTS

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

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.

INSTRUCTIONS FOR SPRINKLER (OVERHEAD) IRRIGATION:

Observe the requirements in the System Requirements section above.

Do not apply, when wind speed favors drift beyond the area intended for treatment.

Apply PENNCOZEB only through systems containing anti-siphon and check valves designed to prevent water source contamination or overflow of the mix tank and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off.

Provide a gentle continuous agitation in mix tank during mixing and application to assure a uniform suspension.

Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute suspension per unit time.

Application of more than recommended quantities of irrigation water per acre may result in decreased product performance.

Do not apply when wind speed favors drift, when system connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product cannot be flushed and must be dismantled and drained. In a center pivot system, block the nozzle set nearest the well/pivot/injection unit to prevent spray being applied to this area.

Where sprinkler distribution patterns do not overlap sufficiently, unacceptable disease control may result.

Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.

PENNCOZEB may be applied in conjunction with chemically neutral liquid fertilizers. Application in conjunction with highly alkaline fertilizers, such as aqueous ammonia, may cause a degradation of the pesticide, resulting in reduced performance and should be avoided.

Check local restrictions and requirements regarding sprinkler irrigation applications, as they may vary from state to state.

SPRAY PREPARATION:

Remove scale, pesticide residues, and other foreign matter from the chemical tank and entire injector system. Flush with clean water.

Prepare a suspension of PENNCOZEB in a mix tank. Fill the tank with 1/2 or 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of PENNCOZEB and then the remaining volume of water.

APPLICATION INSTRUCTIONS:

Set sprinkler system to deliver 0.1 to 1.25 inches of water per acre. Volumes of water higher than this may reduce efficacy. Start sprinkler and then uniformly inject the suspension of PENNCOZEB into the irrigation water line so as to deliver the desired rate per acre. The suspension of PENNCOZEB should be injected with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

NOTE: When treatment with PENNCOZEB has been completed, do not irrigate the treated area for 24 to 48 hours to prevent washing the chemical off the crop.

STORAGE AND DISPOSAL

STORAGE INSTRUCTIONS: Store in the original container in a dry area. If allowed to become wet the product will deteriorate and represent a fire hazard. Keep away from sources of ignition (e.g. sparks and open flame). Close bag when not in use. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. If spilled during storage or handling sweep up spillage and dispose of in accordance with the Pesticide Disposal Instructions listed below.

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

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

WARRANTY AND DISCLAIMER

Elf Atochem North America warrants that this material 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 risks referred to therein. ELF ATOCHEM MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL ELF ATOCHEM OR SELLER BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, BUSINESS REPUTATION, OR CUSTOMERS; LABOR COST; OR OTHER EXPENSES INCURRED IN PLANTING OR HARVESTING.

Elf Atochem and 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 Elf Atochem.

Made and Printed in Holland

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