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PROPOSED LABEL

ACCEPTED

APR 20 1992

4581-357

PENNCOZEB

Turf and Ornamentals Fungicide

An 80% Coordination Product of Manganese and Zinc
and Ethylenebis(3-thio)urathionate

ACTIVE INGREDIENT

A coordination product of zinc and manganese
ethylenediurathionate
Manganese + +
Zinc + +
Ethylenebis(3-thio)urathionate
(C₄H₆N₂S₄)

INERT INGREDIENTS

TOTAL

80%

11%
2%
6%

2%

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.

EPA Registration No. 4581-357

EPA Establishment No. 33010-HL-01

NET CONTENTS 3 LBS./1.36 Kg

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

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**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 product 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. 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 TURF AND ORNAMENTALS FUNGICIDE is a wettable powder containing a coordination product of zinc ion and manganese ethylenebis(dithiocarbamate) and is recommended for use as a spray for the control of many important plant diseases. When used according to directions, it provides very high fungicidal activity and can be safely used on both turf grasses and certain ornamentals. PENNCOZEB provides control of most common turf grass diseases and it is also effective in controlling major fungus diseases of certain ornamentals.

Diseases of turf grass and ornamentals can attack suddenly and unexpectedly causing severe damage and may even result in total loss of large areas of valuable turf grass and ornamental plants. The use of a regular protective spray program will minimize the risk of disease damage and can generally be accomplished with lower rates and less frequent fungicide applications. Once diseases have become established, higher rates of fungicide and more frequent applications are required to bring them under control. Follow a regular protective program for maximum product performance.

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.

COMMERCIAL USE:

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.

HOME GARDEN USE:

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Home gardeners applying this product must wear a long-sleeved shirt, long pants, and chemical-resistant gloves. The gloves must be washed thoroughly with soap and water before removing. Clothes must be changed immediately after using this EBDC product and must be laundered separately from other laundry items before reuse.

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 drenched with maneb must be destroyed according to state and local regulations.

DRENCHED CLOTHING CANNOT BE ADEQUATELY DECONTAMINATED.

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

REENTRY STATEMENT

COMMERCIAL USE:

ALL TURF AND ORNAMENTAL USES EXCEPT GOLF COURSE USE:

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.

GOLF COURSE USE:

Do not enter or allow entry into treated areas until sprays have dried unless wearing the personal protective equipment listed on this label.

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 TURF AND ORNAMENTALS FUNGICIDE on (date of application)."

HOME GARDEN USE:

Do not enter or allow entry into treated areas until sprays have dried unless wearing the personal protective equipment listed on this label.

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INSTRUCTIONS FOR APPLICATION

To mix, slowly sift PENNCOZEB TURF AND ORNAMENTALS FUNGICIDE into spray tank while it is being filled and the agitator is running. Add insecticide and nutritional sprays last. PENNCOZEB TURF AND ORNAMENTALS FUNGICIDE is compatible with most commonly used pesticides. Read and observe the precautionary statements and other information appearing on product labels used in mixtures.

FOR AIR APPLICATION use at rate indicated in sufficient water for thorough coverage or a minimum of 2 gallons per acre.

Use a Spreader/Sticker 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.

DO NOT USE ANY OF THESE CROPS FOR FOOD OR FEED PURPOSES

CROP	DISEASES	RATE OF PENNCOZEB PER APPLICATION OZ./1000 SQ. FT.	REMARKS
TURF COMMERCIAL USE ONLY NOT FOR HOMEGARDEN USE			Refer to General Use Instructions except when more specific directions are given for individual crops or diseases.
GENERAL USE INSTRUCTIONS - To be used on golf courses, sod farms and for professional applications to industrial, municipal and residential lawns. Do not use on pasture or range grasses. Do not feed clippings to livestock. Do not use if grass is grown for seed.			Start applications when grass greens up in the spring or when disease first appears and repeat at 7 to 14 day intervals or until disease threat is past. When conditions are especially favorable for disease development, apply maximum fungicide use rate on a 7 day spray schedule. Apply in sufficient water for adequate coverage. Do not graze treated areas. Do not feed clippings to livestock.
	Copper Spot Red Thread Fusarium Blight (F. Roseum) Slime Molds	4-8	BEST AVAILABLE COPY
	Helminthosporium Melting Out Rhizoctonia Brown Patch Rust	4	
	Pythium Blight	8	
	Dollar Spot	6-8	
	Algae Fusarium Snow Mold	6 6-8	

CROP	DISEASES	REMARKS
ORNAMENTALS COMMERCIAL AND HOMEGARDEN USE		Refer to General Use Instructions except when more specific directions are given for individual crops or diseases.
GENERAL USE INSTRUCTIONS		Apply the equivalent of 1½ lbs. PENNCOZEB TURF AND ORNAMENTALS FUNGICIDE per 100 gallons of water (1½ level tablespoons per gallon) in full coverage spray. To improve performance, add 2 to 4 oz. spreader-sticker per 100 gallons of spray. Begin spraying when plants are well leaved out or at first sign of disease and apply at 7 to 10 day intervals throughout the season, or follow State Extension Service recommendations for disease control on the following ornamental plants.
Azaleas	Petal Blight	Spray 2 to 3 times a week while flowers are opening. Direct spray into flowers and spray ground under bushes thoroughly.
Camelias	Petal Blight	Refer to Azaleas
Carnation	Leaf Spot	
Chrysanthemum	Botrytis Petal Spot	Apply at 1 to 2 lbs. per 100 gallons or 1½ level tablespoons per gallon in full coverage spray. Apply twice weekly during the blooming season.
Crabapple (ornamental)	Scab Cedar-Apple Rust	
Dahlia	Botrytis Blight	
Dogwood, Flowering	Anthracnose	Apply when buds begin to open, when bracts have fallen, 4 weeks later, and again in late summer after flower buds for next season are formed.
Gladiolus	Curvularia Leaf Spot Botrytis Blossom Blight	On flower spikes, use at ¾ lb. per 100 gallons. Make weekly applications starting before diseases appear and increase to 2 or 3 applications per week during periods of heavy disease and during rainy weather.
Holly	Purple Spot	
Honeysuckle	Herpobasidium Blight	
Iris	Leaf Spot	
Lily	Botrytis Blight	
Pachysandra	Voluteella Blight	Use a drenching spray of 2 lbs. per 50 gallons of water per 5,000 sq. ft. of bed area. Start application at first sign of disease and make at least 5 applications at 10 to 14 day intervals.
Pansy	Anthracnose	
Peony	Phytophthora Blight Botrytis Blight	Apply in early spring and early fall, drenching soil around plants as well as the foliage. Promptly destroy all infected plant parts.
Rhododendron	Petal Blight	Refer to azalea.
Roses	Black Spot	
Snapdragon	Rust	
Tulip	Botrytis Blight (fire)	
Zinnia	Leaf Blight	

CHEMIGATION

NOT FOR THIS USE IN CALIFORNIA GENERAL INSTRUCTIONS

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end row, 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 public 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, back-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 include 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 operation.

Maintain a gentle, continuous agitation in the 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, nozzle in a center pivot irrigation 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 potassium 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 1/4 or 1/2 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.

BEST AVAILABLE

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or 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

El Aachen Earth 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. EL AACHEM MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. IN NO CASE SHALL EL AACHEM 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.

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