

PLEASE NOTE

This image contains more than one label approved for this product on this date.

5481-472

6/27/2003

Page 187

BLOCKER 4F A Flowable Soil Fungicide

FOR THE PREVENTION AND CONTROL OF CERTAIN SOILBORNE DISEASES

ACCEPTED
JUN 27 2003
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 5481-472

PLANTS AND ORNAMENTALS AND THE CROPS LISTED HEREIN.

ACTIVE INGREDIENT:	
Pentachloronitrobenzene (PCNB).....	38.3%
OTHER INGREDIENTS:	
	61.7%
TOTAL	
	100.0%

Contains 4 lbs. of PCNB per gallon

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center immediately. Induce vomiting by giving victim 1 or 2 glasses of water and touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious or convulsing person. **IF IN EYES:** Flush eyes with plenty of water. Call a physician if irritation persists. **IF ON SKIN:** Wash with plenty of soap and water. Get medical attention. **IF INHALED:** Remove victim to fresh air. Apply artificial respiration if indicated. Get medical attention.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed. Avoid inhaling spray mist. This material may cause skin irritation. Use with adequate ventilation. Do not contaminate feed or foodstuffs.

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 C on an EPA chemical-resistance category selection chart. Applicators and other handlers must wear long-sleeved shirt and long pants; chemical resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or Viton; shoes plus socks, and for exposure outdoors, dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C). For exposure in enclosed areas, a respirator with either an organic, vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should: Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not contaminate water when disposing of equipment washwaters. This product is toxic to fish. 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 apply where run-off is likely to occur. Apply this product only as specified on this label. Do not apply directly adjacent to potable water supplies.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA Reg. No. 5481-472

EPA Est. No. 37429-GA-1

NET CONTENTS: As Marked on Container

AMVAC CHEMICAL CORPORATION
4100 EAST WASHINGTON BLVD., LOS ANGELES, CA 90023, USA
1-888-GO-AMVAC

PHYSICAL OR CHEMICAL HAZARDS

Do not allow product to freeze.

DIRECTIONS FOR USE

◆◆ SHAKE WELL PRIOR TO USE ◆◆

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Thoroughly mix product in original container prior to use. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR, part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow workers into treated areas during the restricted-entry interval of 12 hours. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is coveralls, chemical-resistant gloves such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, polyvinyl chloride or Viton, and shoes plus socks.

Non-Agricultural Use Requirements

These requirements apply to uses of this product NOT in the scope of the Worker Protection Standard for agricultural pesticides, 40 CFR, Part 170. The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses. Keep children, pets and other unprotected persons out of treated areas until sprays have dried.

USE PRECAUTIONS

If you do not have experience using this product for any plant species not listed on this label, it is recommended that you first use the product on a limited number of plants on a trial basis. This product can not be mixed with any product containing a label restriction against such mixing. Do not tank mix with other chemicals unless prior use has proven they are compatible.

BLOCKER 4F is a preventative fungicide that can be used as a soil treatment for control of a variety of soilborne diseases on certain agricultural crops as listed in Table 1.

TABLE 1				
CROP	DISEASE	QTY PER ACRE	FL. OZ. BLOCKER 4F/ 1,000 FT. OF ROW	RECOMMENDED APPLICATION
Broccoli, Brussels Sprouts, Cabbage, Chinese Broccoli, Cauliflower, Chinese Cabbage (tight-headed varieties only), Collards*, Kale*, Mustard Greens* <i>Do not exceed 30 lbs. of actual PCNB per acre in any one season regardless of the method of application or formulation used.</i> <i>*Use on collards, kale and mustard greens restricted to the State of Georgia</i>	Clubroot <i>(Plasmodiophora brassicae)</i>	Mix 3 pints in 100 gallons of water. Use 0.5 to 0.75 pint of solution per plant.	n/a	<i>Transplant Solution:</i> The specific dosage should be based on the severity of the disease infection. Maintain agitation to hold product in suspension. Thoroughly incorporate solution into the soil.
		5.67 gallons per acre. Apply in 25 gallons of water per acre or 5.5-fl. oz. per 100 ft. of row based on 40-inch row spacing.	55.5 fl. oz.	<i>Band Application:</i> Spray as a 12-inch band centered on row and incorporate to a depth of 4 to 6 inches immediately prior to planting. May be used on direct seeded cole crops. Thoroughly incorporate solution into the soil.
		7.5 gallons per acre in 30 gallons of water.	n/a	<i>Broadcast Application:</i> Apply as a pre-plant broadcast spray prior to planting. Thoroughly incorporate to a depth of 4 to 6 inches using a disc or other suitable equipment. Thoroughly incorporate solution into the soil.
		Wire Stem or Black Rot <i>(Corticium solani)</i>	2.8 to 3.75 gallons per acre in 50 gallons of water per acre.	n/a
1.9 to 2.8 gallons per acre. Apply in 35 gallons of water per acre based on 40-inch row spacing.			18 to 27 fl. oz.	<i>Row Drench Treatments:</i> Spray as an 8-inch band centered on the row at time of or immediately after seeding.

TABLE 1 (CONT'D)

CROP	DISEASE	QTY PER ACRE	FL. OZ. BLOCKER 4F/ 1,000 FT. OF ROW	RECOMMENDED APPLICATION
Beans (Dry, Snap or Succulent) <i>Do not exceed 10 lbs. of actual PCNB per acre in any one season regardless of the method of application or formulation used.</i>	Root/Stem Rot (<i>Rhizoctonia solani</i>)	2 to 3 pints per acre (1.5 to 2 pints in AZ/CA) based on a 36-inch row spacing. Apply in 8 to 10 gallons of water per acre.	2.2 to 3.3 fl. oz. (1.7 to 2.2 fl. oz. in AZ/CA)	Apply as a directed spray in the seed furrow and to the covering soil at planting time. Use lower rate on lighter soils. Avoid application directly to seed since delayed emergence may occur.
Beans (Snap or Dry) <i>Do not exceed 10 lbs. of actual PCNB per acre in any one season regardless of the method of application or formulation used.</i> <i>* Not for use in California on Snap or Dry Beans for control of White Mold.</i>	White Mold (<i>Sclerotinia sclerotiorum</i>)	4 pints per acre. Apply in 8 to 10 gallons of water per acre based on 36-inch row spacing.	4.4 fl. oz.	BAND ROW TREATMENT: Apply specified dosage as a spray on 8-inch band centered on a row immediately after or at time of planting. Avoid application directly to seed since delayed emergence may occur. If disease is severe, additional applications may be made at 2 to 3 week intervals directing the spray to the soil at the base of the plants. Do <i>not</i> apply after start of pod formation. Do <i>not</i> feed treated vines to livestock.
Garlic <i>Do not exceed 20 lbs. of actual PCNB per acre in any one season regardless of the method of application or formulation used.</i> <i>*Not for use in California on garlic.</i>	White Rot (<i>Sclerotium cepivorum</i>)	5 gallons per acre. Apply in 100 gallons water per acre based on 24-inch row spacing.	29 fl. oz.	IN-FURROW APPLICATION: Apply as an in-furrow spray at planting time. Attach a spray rig to the machine planter and spray 8 to 12-inch band using 2 nozzles per furrow. Direct front nozzle to spray the seed as it is dropped. Direct the rear nozzle to spray the covering soil.
		2.5 gallons per 1,000 lbs. of seed cloves.	n/a	CLOVE TREATMENTS: Mix in sufficient water to apply dosage as a uniform mist spray for complete coverage of treated cloves.
Peppers, Tomatoes <i>Do not exceed 7.5 lbs. of actual PCNB per acre in any one season regardless of the method of application or formulation used.</i> <i>* Not for use in California on tomatoes.</i>	Southern Blight (<i>Sclerotium rolfsii</i>)	4.5 to 7.5 pints in 100 gallons of water. Use 0.5 pint of solution per plant.	n/a	TRANSPLANT SOLUTION: Apply at the time of transplanting. The solution should be agitated often to maintain a uniform mixture to assure proper dosage.
		1.2 to 1.875 gallons per acre. Apply in 8 to 10 gallons of water per acre based on 36-inch row spacing.	10.6 to 16.7 fl. oz.	IN-FURROW APPLICATION: Apply as in-furrow sprays to the open "V" trench just prior to planting. When cultivating, set plows as flat as possible to avoid getting untreated soil against stems or plants.
Peanuts <i>Do not exceed 10 lbs. of PCNB active ingredient per acre in any one season. Do not apply within 45 days of harvest. Do not feed treated vines to livestock. Do not allow hogging down of peanuts.</i>	Root/Stem Rot (<i>Rhizoctonia solani</i>)	2 to 4 pints per acre. Apply in 8 to 10 gallons of water per acre based on 36-inch row spacing.	2.2 to 4.4 fl. oz.	PRE-PLANT SOIL MIX: Apply specified dosage as a spray in 8 to 12-inch band centered on the row and incorporated to a depth of 2 to 4 inches. Application may be made simultaneously with planting using suitable application equipment. <i>At Planting:</i> Apply specified dosage as a directed in-furrow spray to the seed and surrounding soil at planting time. Do <i>not</i> use in California.
	Southern Blight (<i>Sclerotium rolfsii</i>)	2.5 gallons per acre. Apply in 8 to 10 gallons of water per acre based on 36-inch row spacing.	22 fl. oz.	AT PEGGING BANDS: Apply specified dosage as a spray in 12-inch band centered on the row so as to cover the crown and pegging zones of the plant. If the row middles are cultivated at the same time, attach 2 spray nozzles (one per side) in front of inside cultivator sweeps. Do <i>not</i> move any untreated soil into the area. If necessary, remove inside sweep.
	6.5 pints per acre. Apply in 8 to 10 gallons of water per acre based on 36-inch row spacing.	7.2 fl. oz.	AT CULTIVATION: Apply specified dosage at cultivation. Do <i>not</i> apply more than 3 times per crop season. Attach 2 spray nozzles on the inside of the cultivator sweeps (one per side) and adjust so as to treat a total band of 12 inches centered on the row. Do <i>not</i> pile untreated soil on crown of plant.	
Potatoes <i>Do not exceed 20 lbs. of actual PCNB per acre in any one season regardless of the method of application or formulation used.</i> <i>California Only: Do not exceed 16 lbs of actual PCNB per acre in any one season regardless of the method of application.</i>	Stem Canker/Black Scurf (<i>Rhizoctonia solani</i>)	5 to 10 pints per acre. Apply in 10 to 20 gallons of water per acre based on 34-inch row spacing.	5.2 to 10.4 fl. oz.	BAND APPLICATION: Spray an 8½-inch band in seed furrow at time of planting. Direct spray into furrow over the seed and cover as a part of the hilling operation during planting.
Cotton <i>Do not exceed 2 lbs. of PCNB active ingredient per acre in any one season.</i>	Damping Off (<i>Rhizoctonia solani</i>)	1.5 to 3 pints per acre (2 to 4 pints in AZ/CA). Apply in 5 to 15 gallons of water per acre based on 40-inch row spacing.	1.8 to 3.6 fl. oz. (2.4 to 4.8 fl. oz. in AZ/CA)	IN-FURROW APPLICATION: Apply to soil around seed and to the covering soil as it lies in the furrows. Two (2) nozzles work best. Center the front nozzle over the open furrow to spray the soil surrounding the seed. Spray the covering soil from the back nozzle as it fills the furrow. The higher rate should be used on heavy soils or when weather conditions are expected to be favorable to rapid germination. The higher rate should also be used on fields that have a history of disease problems or when minimum or low till programs are utilized. Do <i>not</i> allow livestock to graze or feed on cotton foliage in PCNB-treated fields.

ROTATION RESTRICTIONS: Do not plant root crops in PCNB-treated fields within 12 months of broadcast or banding applications unless PCNB is registered for use on those crops.

Application to Beans Through Sprinkler Irrigation Equipment

Apply BLOCKER 4F only to bean foliage (snap or dry) before the start of pod formation only through overhead sprinklers, including center pivot, solid set or portable (wheel 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 State Extension 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.

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 the 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. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur. Do not apply when wind speed favors drift beyond the area intended for treatment. Apply sprinkler irrigation applications in 0.1 to 0.5 inches of water.

CALIBRATION AND APPLICATION TECHNIQUES

Center Pivot Irrigation Equipment: Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank of injection equipment with water. Operate system for one complete cycle, measuring the time required, amount of water injected and acreage contained in cycle. Mix recommended amount of BLOCKER 4F for acreage to be covered into the same amount of water used during calibration and inject into system continuously for one revolution. Shut off injection equipment after one revolution, but continue to operate irrigation system until BLOCKER 4F has been cleared from the last sprinkler head.

Solid-Set And Portable (Wheel Move) Irrigation Equipment - Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over 10-30 minute period. Mix desired amount of BLOCKER 4F for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. BLOCKER 4F should be injected at the end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is complete and continue to operate irrigation system until BLOCKER 4F has been cleared from the last sprinkler head.

Do not run irrigation system without safety valves or other devices to prevent back siphoning of BLOCKER 4F into water source. Irrigation water treated with BLOCKER 4F should be maintained on the treated area until the water is absorbed into the soil. The tank containing BLOCKER 4F should be connected to the suction side of the irrigation pump or other pressurized equipment attached to the irrigation line. Agitation of the diluted BLOCKER 4F in the chemical source (or slurry) tank should be maintained during the entire application period.

TURFGRASS

Use as a fungicide for the prevention and control of the listed soilborne diseases which attack turfgrasses.

Diseases Controlled

- Brown Patch (*Rhizoctonia solani*)
- Dollar Spot (*Sclerotinia homoeocarpa*)*
- Pink Snow Mold (*Microdochium nivale*)
- Leaf Spot (*Drechslera spp.*)*
- Gray Snow Mold (*Typhula spp.*)

*NOT REGISTERED FOR USE IN CALIFORNIA

For best results, use as a preventive application before diseases appear or apply at the first sign of the infection. If heavy rainfall or flooding occurs after treatment or if disease is severe or reappears, treat area again. Follow the rates and comments as listed in Table 2 for control of turfgrass diseases.

NOTE:

- Apply in sufficient water to assure uniform ground coverage.
- Treated area should be watered lightly as soon as possible after the application to wash the fungicide down to the soil level.
- Apply the high rate when disease is severe and use low rate when disease pressure is light.

TABLE 2

Disease/Host	fl. oz. BLOCKER 4F in Gallons of Water/1,000 sq. ft.	Application Directions
St. Augustine, Bermuda & similar warm season grasses Brown Patch (<i>Rhizoctonia solani</i>)	16 to 24 fl. oz. in 1 - 10 gallons of water	Apply at first sign of disease. If it reappears, retreat 3 to 4 weeks later.
Dichondra Brown Patch (<i>Rhizoctonia solani</i>)	16 to 24 fl. oz. in 5 - 10 gallons of water	Treat as above.
Bluegrass, Rye, Fescue, Bent & similar cool season grasses Brown Patch (<i>Rhizoctonia solani</i>)	5 to 6 fl. oz. in 1 - 10 gallons of water	Apply at first sign of disease. Repeat every 7 to 10 days during warm damp weather.
All Turfgrass Species Leaf Spot (<i>Drechslera spp.</i>)* Dollar Spot (<i>Sclerotinia homoeocarpa</i>)* *Do not use in California	11 to 16 fl. oz. in 1 - 10 gallons of water	For preventative, apply in spring or fall of each year. If disease is present, apply 16 fl. oz as soon as possible. If disease is severe, retreat areas 3 to 4 weeks later.
Cool Climate Grasses Gray Snow Mold (<i>Typhula spp.</i>) Pink Snow Mold (<i>Microdochium nivale</i>)	12 to 16 fl. oz. in 1 - 10 gallons of water	First treatment should be made prior to first snowfall. Reapply 6 fl. oz. at 4 to 6 week intervals if a Winter thaw and loss of snow cover occurs.

Do not graze treated areas or feed grass clippings to livestock. Under certain growing conditions, a temporary discoloration of the grass may occasionally occur. This causes no harm and will disappear in a short time.

ORNAMENTALS

BLOCKER 4F is a preventative fungicide that can be used as a soil treatment for control of a variety of soilborne diseases of ornamentals grown in greenhouses, shadehouses, nurseries, landscaping, and interiorscapes as indicated in Table 3.

NOTE:

- Spray solution containing BLOCKER 4F must be continuously agitated.
- Drench or incorporate the spray solution thoroughly into the soil.
- When a rate range is shown, use the lower rates on light or coarse textured soils or when disease pressure is expected to be low. Use the higher rates on heavy or fine textured soils or in fields with a history of disease problems and when weather conditions are anticipated to be unfavorable for germination and growth of seedlings.

TABLE 3

CROP	DISEASE	QTY OF BLOCKER 4F	RECOMMENDED APPLICATION																												
AZALEAS	Azalea Petal Blight (<i>Ovulinia azaleae</i>)	1.5 pts.	Apply specified amount in sufficient water to cover 150 square feet. Apply to soil underneath the bushes and immediate surrounding area. Begin application prior to opening of buds. Repeat every 3 to 4 weeks through bloom period.																												
CAMELLIAS	Camellia Flower Blight (<i>Sclerotinia camelliae</i>)																														
BEDDING PLANTS, FLOWERING PLANTS, FOLIAGE PLANTS, TROPICAL PLANTS, and WOODY PLANTS such as, but not limited to: Ajuga, Anthurium, Aphelandra, Azalea, Chrysanthemum, Dianthus, Dieffenbachia, Dracaena, Ficus, Fittonia, Gardenia, Gynura, Hoya, Impatiens, Lilies, Marigold, Pansy, Peperomia, Petunia, Poinsettia, Pathos, Rhododendron, Schefflera, Spathiphyllum, Syngonium, Tradescantia Do not apply to <i>Philodendron</i> or <i>Pilea</i> as injury may occur.	Root/Stem Rot Damping Off (<i>Rhizoctonia solani</i>) Black Rot (<i>Sclerotinia sclerotiorum</i>)	6 to 12 fl. oz.	SOIL DRENCH: Mix specified amount in 100 gallons of water and apply as follows: BED, BENCH, CONTAINER & FIELD GROWN PLANTS <table border="1"> <thead> <tr> <th rowspan="2">Depth of Soil (Inches)</th> <th colspan="2">Quantity of BLOCKER 4F Drench Solution</th> </tr> <tr> <th>Fl. Oz./Sq. Ft.</th> <th>(Sq. Ft./100 gals of soil)</th> </tr> </thead> <tbody> <tr> <td>≤ 2</td> <td>16</td> <td>800</td> </tr> <tr> <td>3</td> <td>24</td> <td>530</td> </tr> <tr> <td>≥ 4</td> <td>32</td> <td>400</td> </tr> </tbody> </table> POTTED PLANTS <table border="1"> <thead> <tr> <th>Pot Diameter (Inches)</th> <th>Minimum Quantity of BLOCKER 4F Drench Solution (Fl. Oz./Pot)</th> </tr> </thead> <tbody> <tr> <td>4</td> <td>1.5</td> </tr> <tr> <td>5</td> <td>3</td> </tr> <tr> <td>6</td> <td>4</td> </tr> <tr> <td>8</td> <td>7</td> </tr> <tr> <td>10</td> <td>13</td> </tr> <tr> <td>12</td> <td>18</td> </tr> </tbody> </table> If necessary, one repeat application may be made 4 to 6 weeks following the first application.	Depth of Soil (Inches)	Quantity of BLOCKER 4F Drench Solution		Fl. Oz./Sq. Ft.	(Sq. Ft./100 gals of soil)	≤ 2	16	800	3	24	530	≥ 4	32	400	Pot Diameter (Inches)	Minimum Quantity of BLOCKER 4F Drench Solution (Fl. Oz./Pot)	4	1.5	5	3	6	4	8	7	10	13	12	18
		Depth of Soil (Inches)	Quantity of BLOCKER 4F Drench Solution																												
			Fl. Oz./Sq. Ft.	(Sq. Ft./100 gals of soil)																											
		≤ 2	16	800																											
		3	24	530																											
		≥ 4	32	400																											
		Pot Diameter (Inches)	Minimum Quantity of BLOCKER 4F Drench Solution (Fl. Oz./Pot)																												
		4	1.5																												
		5	3																												
		6	4																												
8	7																														
10	13																														
12	18																														
5 pts.	BROADCAST APPLICATION: Apply as a pre-plant broadcast spray prior to planting to 1,000 square feet of soil. Apply in sufficient water for uniform coverage. Thoroughly incorporate to a depth of 4 inches.																														
1 to 3 pts.	DIP APPLICATION: Dip prior to storage. Mix specified amount in 100 gallons of water. Agitation must be maintained in dip tanks. SPRAY APPLICATION: Thoroughly spray plants prior to storage. Mix specified amount in 100 gallons of water.																														
5 to 10 pts.	BROADCAST APPLICATION: Apply as a pre-plant broadcast spray prior to planting to 1,000 square feet of soil. Apply in sufficient water for uniform coverage. Thoroughly incorporate to a depth of 6 inches. *For <i>Bulbous Irises</i> , use 5 to 7 pints and incorporate to a depth of 2 to 3 inches.																														
6 to 9 pts.	IN-FURROW APPLICATION: Apply as an in-furrow spray at planting time. Apply in 5 to 10 gallons of water to 1,000 linear feet of row. Direct spray into open furrow so that it covers entire furrow and bulbs. Close furrow in normal manner. For Black Rot control, always use the higher rate.																														
3 pts.	BULB DIP: Use before planting or storing. It is important to maintain continuous agitation of dip solution to assure uniform application. Add 1% sticker to the solution. Utilize wire mesh for dipping and drain boards to return excess solution to dip tank. Dispose of unused dip solution according to "Storage and Disposal" section on this label. Mix in 3.2 gallons of water (7.5% solution) and soak bulbs for 5 minutes.																														
12 fl. oz.	BAND APPLICATION: Mix in sufficient water for good coverage of soil. Spray a 10-inch band centered on row at planting time. Apply to 1,000 linear feet of row. Follow with 3 additional applications at 15-day intervals.																														
6 pts.	BROADCAST APPLICATION: Apply as a pre-plant broadcast spray prior to planting to 1,000 square feet of soil. Apply in sufficient water for uniform coverage. Thoroughly incorporate to a depth of 4 to 6 inches. Bulbs may be planted immediately after planting.																														
8 pts.	BAND APPLICATION: Mix in sufficient water for good coverage of soil. Spray a 12-inch band centered on row at planting time. Apply to 1,000 linear feet of row. Thoroughly incorporate to a depth of 4 to 6 inches. Bulbs may be planted immediately after incorporation.																														
LILIIUM (Lilies)	Root/Stem Rot (<i>Rhizoctonia solani</i>) Bulb/Crown Rot (<i>Sclerotium rolfii</i>) Stem/Black Rot (<i>Sclerotinia sclerotiorum</i>)	5 to 10 pts.	BROADCAST APPLICATION: Apply as a pre-plant broadcast spray prior to planting to 1,000 square feet of soil. Apply in sufficient water for uniform coverage. Thoroughly incorporate to a depth of 6 to 7 inches.																												
		7 to 9 pts.	IN-FURROW APPLICATION: Apply as an in-furrow spray at planting time. Apply in 5 to 10 gallons of water to 1,000 linear feet of row. Direct spray into open furrow so that it covers entire furrow and bulbs. Close furrow in normal manner. For Black Rot control, always use the higher rate.																												
		6 to 9 pts.	BULB DIP: Use before planting or storing. It is important to maintain continuous agitation of dip solution to assure uniform application. Add 1% sticker to the solution. Utilize wire mesh for dipping and drain boards to return excess solution to dip tank. Dispose of unused dip solution according to "Storage and Disposal" section on this label. Mix in 100 gallons of water and soak bulbs for 5 to 15 minutes.																												

TABLE 3 (CONT'D)					
CROP	DISEASE	QTY OF BLOCKER 4F	RECOMMENDED APPLICATION		
SOUTHERN PINE SEEDLINGS	Root/Stem Rot Damping Off <i>(Rhizoctonia spp.)</i> <i>(Pellicularia filamentosa)</i> Southern Pine Needle Blight <i>(Dothistroma pini)</i>	2 pts.	BROADCAST APPLICATION: Apply as a pre-plant broadcast spray prior to planting to 1,000 square feet of soil. Apply in sufficient water for uniform coverage. An additional 1/2 inch of water should be applied by irrigation prior to planting. Seed may be planted immediately after irrigation or within one week of this date.		
VEGETABLE BEDDING PLANTS (Limited to only container-grown) Broccoli Brussels Sprouts Cabbage Cauliflower Peppers Tomatoes	Root/Stem Rot <i>(Rhizoctonia solani)</i> <i>(Pellicularia filamentosa)</i>	6 to 12 fl. oz.	SOIL DRENCH APPLICATION: For use in nurseries or greenhouses, mix in 100 gallons of water and apply per the chart below.		
			CONTAINER GROWN PLANTS		
			Depth of Soil (inches)	Coverage of Drench Mlx	
				Fl. Oz./Sq. Ft.	(Sq. Ft./100 gals of soln)
	≤ 2	16	800		
	3	24	530		
	≥ 4	32	400		
If necessary, one repeat application may be made 4 to 6 weeks later.					

STORAGE AND DISPOSAL

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

STORAGE: Store product in its original container in a cool, dry, locked place out of reach of children. Protect from temperatures below 20°F.

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

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved procedures by State or local authorities.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY	
Transportation: CHEMTREC	1-800-424-9300
Other: AMVAC	1-323-264-3910

BLOCKER 4F is a trademark of AMVAC Chemical Corporation.

NEXT

LABEL

**AMVAC
AGRICULTURAL
BULLETIN**

BLOCKER 4F

Application to Beans through
Sprinkler Irrigation Equipment

ACCEPTED
JUN 27 2003
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 5481-472

**SUPPLEMENTAL LABELING
EPA REG. NO. 5481-472**

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. All applicable directions, restrictions and precautions on the EPA-registered label are to be followed.

This label updates irrigation requirements, replacing the restriction against irrigation systems present on the main container label. This supplemental label must be in the possession of the user at the time of pesticide application.

CROP	DISEASE	QTY PER ACRE	FL. OZ. BLOCKER 4F/ 1,000 FT. OF ROW	RECOMMENDED APPLICATION
Beans (Dry, Snap or Succulent) <i>Do not exceed 10 lbs. of actual PCNB per acre in any one season regardless of the method of application or formulation used.</i>	Root/Stem Rot (<i>Rhizoctonia solani</i>)	2 to 3 pints per acre (1.5 to 2 pints in AZ/CA) based on a 36-inch row spacing. Apply in 8 to 10 gallons of water per acre.	2.2 to 3.3 fl. oz. (1.7 to 2.2 fl. oz. in AZ/CA)	Apply as a directed spray in the seed furrow and to the covering soil at planting time. Use lower rate on lighter soils. Avoid application directly to seed since delayed emergence may occur.
Beans (Snap or Dry) <i>Do not exceed 10 lbs. of actual PCNB per acre in any one season regardless of the method of application or formulation used.</i> <i>* Not for use in California on Snap or Dry Beans for control of White Mold.</i>	White Mold (<i>Sclerotinia sclerotiorum</i>)	4 pints per acre. Apply in 8 to 10 gallons of water per acre based on 36-inch row spacing.	4.4 fl. oz.	BAND ROW TREATMENT: Apply specified dosage as a spray on 8-inch band centered on a row immediately after or at time of planting. Avoid application directly to seed since delayed emergence may occur. If disease is severe, additional applications may be made at 2 to 3 week intervals directing the spray to the soil at the base of the plants. Do not apply after start of pod formation. Do not feed treated vines to livestock.

APPLICATION TO BEANS THROUGH SPRINKLER IRRIGATION EQUIPMENT

Apply BLOCKER 4F only to bean foliage (snap or dry) before the start of pod formation only through overhead sprinklers, including center pivot, solid set or portable (wheel 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 State Extension 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.

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 the 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.

2 22

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. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur. Do not apply when wind speed favors drift beyond the area intended for treatment. Apply sprinkler irrigation applications in 0.1 to 0.5 inches of water.

CALIBRATION AND APPLICATION TECHNIQUES

Center Pivot Irrigation Equipment: Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank of injection equipment with water. Operate system for one complete cycle, measuring the time required, amount of water injected and acreage contained in cycle. Mix recommended amount of BLOCKER 4F for acreage to be covered into the same amount of water used during calibration and inject into system continuously for one revolution. Shut off injection equipment after one revolution, but continue to operate irrigation system until BLOCKER 4F has been cleared from the last sprinkler head.

Solid-Set And Portable (Wheel Move) Irrigation Equipment - Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over 10-30 minute period. Mix desired amount of BLOCKER 4F for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. BLOCKER 4F should be injected at the end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is complete and continue to operate irrigation system until BLOCKER 4F has been cleared from the last sprinkler head.

Do not run irrigation system without safety valves or other devices to prevent back siphoning of BLOCKER 4F into water source. Irrigation water treated with BLOCKER 4F should be maintained on the treated area until the water is absorbed into the soil. The tank containing BLOCKER 4F should be connected to the suction side of the irrigation pump or other pressurized equipment attached to the irrigation line. Agitation of the diluted BLOCKER 4F in the chemical source (or slurry) tank should be maintained during the entire application period.

REGISTRANT:

AMVAC Chemical Corporation
4100 E. Washington Boulevard
Los Angeles, CA 90023 U.S.A.
1-323-264-3910
www.amvac-chemical.com