

48273-20

4-29-2003

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# Marman Mancozeb 80% WP

Fungicide

An 80% Coordination Product of Manganese, Zinc and Ethylenebisdithiocarbamate

**Active Ingredient:**

A coordination product of zinc ion and manganese ethylene bisdithiocarbamate .....	80%
Manganese++ .....	16%
Zinc++ .....	2%
Ehtylenebisdithiocarbamate ion (C <sub>4</sub> H <sub>6</sub> N <sub>2</sub> S <sub>4</sub> ) ..	62%

<b>Other Ingredients</b> .....	20%
<b>Total</b> .....	100%

**ACCEPTED**  
APR 29 2003  
Under the Federal Insecticide, Fungicide, and Rodenticide Act, registered under EPA Reg. No. 48273-20

**Keep Out of Reach of Children**

### CAUTION

**Precaucion al usuario:** Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliament. (If you do not understand the label find someone to explain it to you in detail.)

**See back panel for additional precautionary statements.**

{Back Panel/Booklet}

## PRECAUTIONARY STATEMENTS

### Hazards to Humans & Domestic Animals

**CAUTION:** May cause irritation of eyes. Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with eyes, skin or clothing.

### Personal Protective Equipment (PPE)

**Applicators and other handlers must wear** coveralls over long-sleeved shirt and long pants; chemical-resistant gloves made of any waterproof material; protective eyewear when mixing or loading; shoes plus socks; chemical-resistant apron when cleaning equipment, mixing or loading.

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.

### Engineering Controls Statements

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. Human flaggers must be in enclosed cabs. The enclosed cabs must be used 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.

### 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.

### First Aid

**If Inhaled**

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

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<b>If on Skin or Clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Immediately rinse skin with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in Eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If Swallowed</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<p>Have the product container or label with you when calling a poison control center or doctor or going for treatment. [You may also call 1-800-222-1222 {or other appropriate number} for emergency medical treatment advice.]</p>	

{Note: The first aid statements' grid format will be used if label space permits; otherwise a paragraph format will be used.}

**Environmental Hazards**

This pesticide is toxic to fish. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Except as specified for the label use on cranberries, 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.

**Physical or Chemical Hazards**

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

**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, 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 intervals. The requirements in this box apply only to uses of this product that are covered by the Worker Protection Standard. Only protected handlers may be in the area during application.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 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 over long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material and shoes plus socks.

**General Information**

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

**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 spreader/sticker at the 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.

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**Maximum Seasonal Poundage When Used in Conjunction with One or More Other EBDC Products  
Foliar Applications**

**Where EBDC products used allow the same maximum poundage of active ingredient per acre per season:** If more than one product containing an EBDC active ingredient (maneb, mancozeb or metiram) is used on a crop during the same growing season and the EBDC products used allow the same maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed any one of the specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

**Where EBDC products used allow different maximum poundage of active ingredient per acre per season:** If more than one product containing an EBDC active ingredient is used on a crop during the same growing season and the EBDC products used allow different maximum poundage of active ingredient per acre per season, then the total poundage of all such EBDC products used must not exceed the lowest specified individual EBDC product maximum seasonal poundage of active ingredient allowed per acre.

**Seed Treatment**

In addition to the maximum number of foliar applications permitted by the formula stated above, a single application for seed treatment may be made on crops that have registered seed treatment uses.

**Field Crops**

Crops	Diseases	Rate (lbs./acre)	Directions
Field Corn and Corn Grown for Seed	Common Rust, Gray Leaf Spot, Helminthosporium Leaf Blight	1.0 to 1.5	Start application at the onset of disease and repeat as needed. Do not apply more than 12 lbs. active ingredient (15 lbs. product) per season. Do not apply within 40 days of harvest.
Cotton	Rust Alternaria Leaf Spot	1.5 to 2.0	Start applications at the onset of disease. Apply as needed. Do not apply more than 6.4 lbs. active ingredient (8.0 lbs. product) per season. Do not apply within 45 days of harvest (or after boll opening).
Peanuts	Cercospora Leaf Spot Rust	1.0 to 2.0	Begin applications when disease first appears and repeat at 7- to 14-day intervals using shorter interval under severe disease pressure. Do not feed treated vines to livestock. Do not use more than 12.8 lbs. active ingredient (16 lbs. product) per acre per season. Do not apply within 14 days of harvest.
Peanuts (tank-mix with Topsin® M)	Cercospora Leaf Spot Rust, Ascochyta Web Blotch, Limb Rot	1.5 lb. plus 4-8 oz. Topsin® M 70WSB Fungicide	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 16 lbs. product per acre per season. Do not apply within 14 days of harvest.
Sugarbeets	Cercospora Leaf Spot Rust	1.5 to 2.0	Begin applications when disease first threatens and repeat at 7- to 10-day intervals. Do not apply more than 11.2 lbs. active ingredient (14 lbs. product) per acre per season. Do not apply within 14 days of harvest.
Wheat (including triticale), Barley, Oats, Rye	Helminthosporium Leaf Spot, Septoria Leaf Spot, Septoria Glume Blotch, Leaf Rust, Tan Spot, Scab (headblight)*	1.0 to 2.0	Start application at onset of disease or when plants are in tillering 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 4.8 lbs. active ingredient (6.0 lbs. product) per acre per crop. Do not apply within 26 days of harvest. (46-day preharvest interval in California.) Do not graze livestock in treated areas prior to harvest. Do not apply after heading (around 10.5 feekes).

\*In California - on seed control on wheat

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Vegetable Crops

Crops	Diseases	Rate (lbs./acre)	Directions
Asparagus	Rust, Cercospora Leaf Spot	2.0	Begin applications when rust first appears and repeat at 10-day intervals as needed. Use only on ferns 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 180 days of harvest. (In Arizona and California the PHI is 120 days).
Corn, Sweet Corn used for fresh and processing, popcorn and sweetcorn used for seed production, including hybrid seed	Common Rust, Gray Leaf Spot, Helminthosporium Leaf Blight	1.0 to 1.5	<b>East of the Mississippi</b> (including Arkansas and Louisiana): Apply in sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4- to 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 18 lbs. active ingredient (22.5 lbs. product) per acre per crop. <b>West of the Mississippi</b> (except Arkansas and Louisiana): Apply in sufficient water for thorough coverage. Start applications when disease first appears and repeat at 4- to 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 (Macrosporium) Leaf Spot, Anthracnose, Downy Mildew, Pythium Fruit Rot, Cercospora Leaf Spot, Gummy Stem Blight, Scab	1.5 to 3.0	Begin when disease threatens or plants begin to run. Spray on a 7- to 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.
Fennel	Early Blight, Late Blight	1.5 to 2.0	Apply when disease threatens. Make applications as needed on a 7- to 10-day interval. Do not use more than 12.8 lbs. active ingredient (16 lbs. product) per season. Do not apply within 14 days of harvest.
Melons including: cantaloupes, casabas, crenshaws, honeydews, muskmelons, watermelons	Alternaria Leaf Spot, Anthracnose, Cercospora Leaf Spot, Downy Mildew, Gummy Stem Blight	2.0 to 3.0	Apply as soon as plants begin to run or when disease threatens. Spray on a 7- to 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. Some cantaloupe varieties (i.e., Harvest Queen, Gold Star, Super Star, Sweet and Early and Saticoy) are sensitive to this product. Consult state and cooperative extension service specialist prior to use.
Onions (Dry Bulb) including garlic and shallots	Botrytis Leaf Blight, Downy Mildew, Neck Rot, Purple Blotch, Rust	2.0 to 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. Do not allow spray or drift to contact bulbs after lifting from soil.
Onions (Furrow Drench)	Smut, Damping Off Seed Rots, Seedling Blights	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 29,000 linear feet of row (18 inch spacing).

Crops	Diseases	Rate (lbs./acre)	Directions
Potatoes	Early Blight, Late Blight	0.5 to 2.0	Begin applications when plants are 4 to 6 inches high by applying 0.4 to 0.8 lb. active ingredient (0.5 to 1.1 lb. product) per acre. As the vines increase in size, apply 1.2 to 1.6 lb. active ingredient (1.6 to 2.1 lbs. product) per acre at 5- to 10-day intervals or 0.6 to 0.8 lb. active ingredient (0.8 to 1.1 lb. product) per acre at 3- to 5-day intervals. Do not apply more than 11.2 lbs. active ingredient (15 lbs. product) per acre per crop. Do not apply within 14 days of harvest (except in: CT, DE, FL, ME, MA, MI, NH, NY, OH, PA, RI, VT and WI 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.
Potato Seedpiece Treatment	Fusarium Seed Piece Decay, Seedborne Common Scab		Dip whole or cut seed pieces in mixture of 1¼ 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.
Squash (Summer) including edible gourds	Anthracnose Downy Mildew	2.0 to 3.0	Start applications when plants are in the two-leaf stage. Spray on a 7- to 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	0.75 to 3.0	<b>East of the Mississippi:</b> Begin applications when seedlings emerge or transplants are set. Repeat applications of 0.6 to 1.2 lb. active ingredient (0.75 to 1.5 lb. product) per acre at 3- to 7-day intervals, or 1.2 to 2.4 lbs. active ingredient (1.5 to 3.0 lbs. product) per acre at 7- to 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.
	Bacterial Speck and Spot	0.75 to 2.0	<b>West of the Mississippi:</b> Begin applications when seedlings emerge or transplants are set. Repeat applications of 0.6 to 0.8 lb. active ingredient (0.75 to 1.0 lb. product) per acre at 3- to 7-day intervals, or 1.2 to 1.6 lb. active ingredient (1.5 to 2.0 lbs. product) per acre at 7- to 10-day intervals throughout the season. 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.
			Use a full rate of a fixed copper fungicide in a tank mix combination with a half to full rate of this product. Follow application intervals specified on the copper fungicide label.

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### Fruit Crops

For Pome Fruits			
Use either the "Prebloom/Bloom Use" or "Extended Application" schedule. Do not combine or integrate the two treatment schedules.			
Crops	Diseases	Rate (lbs./acre)	Directions
Apples, Crabapples, Pears, Quince	Rusts (including Cedar apple), Fabraca Leaf Spot, Flyspeck, Scab, Sooty Blotch	6.0 or 1.5 lbs. per 100 gal. in dilute spray	<b>Prebloom/Bloom Use:</b> Begin applications at ¼ to ½ 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 gals. in dilute spray	<b>Extended Application or Tank Mix:</b> For implementation of IPM programs, applications based on tree-row volume or for use as a resistance management tool: begin applications at ¼ to ½ 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. <b>It is recommended that this product be used in an Integrated Pest Management Program.</b> Apply a minimum of 50 gallons of water per acre.
Bananas (including Plantains)	Sigatoka	2.0 to 3.0	Apply when leaves first appear and repeat as needed on a 14- to 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 to 6.0	Begin applications at early-bloom and repeat at 7- to 10-day intervals. Do not apply within 35 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, Phomopsis (Deadarm), Downy Mildew	1.5 to 4.0 or 0.375 to 1.0 lbs. per 100 gal. in a dilute spray	<b>East of the Rocky Mountains:</b> Apply when shoots are ½ to 1½ inches long. Continue at 7- to 10-day intervals. Do not apply within 66 days of harvest. Do not apply more than 19.2 lbs. active ingredient (24 lbs. product) per acre per season.
		1.5 to 2.5 or 0.375 to 0.625 lbs. per 100 gals. in a dilute spray	<b>West of the Rocky Mountains:</b> Apply when shoots are ½ to 1½ inches long. Continue at 7- to 10-day intervals. Do not apply within 66 days of harvest. Do not apply more than 6.0 lbs. active ingredient (7.5 lbs. product). <b>California:</b> Do not apply after bloom. For late season control of black rot, deadarm and downy mildew, the use of other approved fungicides is suggested.
Papayas	Anthrachnose, Phytophthora Fruit Rot, Black Spot, Cerospora	1.5 to 2.5 or 0.375 to 0.625 lbs. per 100 gals. in a dilute spray	Apply first when disease pressure threatens and continue on a 14- to 21-day interval. Do not apply more than 28 lbs. active ingredient (35 lbs. product) per acre per season. Applications can be made up to the day of harvest.

### Miscellaneous

Crops	Diseases	Rate (lbs./acre)	Comments
Christmas Trees	Lophodermium Needle Cast, Pine Gail Rust, Scirrhia Brown Spot	2 to 4 lbs. per acre	Begin application in spring or early summer before infection occurs. Repeat after heavy rains and at 2-week intervals as long as needed.
Douglas Fir	Swiss Needle Cast		

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Crops	Diseases	Rate (lbs./acre)	Comments
Asparagus Crown (Planting Stock)	Crown Rot	1 lb. per 100 gals.	Place loosely packed crowns into a burlap bag and soak, with gentle agitation, in the fungicide solution for 5 minutes. Remove bag, drain well and plant crowns as soon as possible. A tank large enough to hold a single burlap bag will treat 2 bags of crowns. Prepare clean dipping suspension in a clean tank. Pre-wash dirty crowns to remove excess soil.
Caprifig	Assorted molds, Endosepsis (Fusarium)	1 lb. per 25 gals.	Prepare mamme figs by making a shallow cut through the eye and then hand dividing to avoid wasp injury. Submerge mamme figs in the fungicide suspension for a minimum of 15 minutes. Frequently stir the fungicide suspension to prevent settling out. Prepare and use fresh dipping solution after treating 4 or 5 batches of figs. Drain figs after treatment prior to placement in trees.
Pineapple	Phytophthora Heart Rot	3.2 lbs. per 10 gals.	Dip planting material in fungicide solution prior to planting. Stir solution frequently to prevent settling out. Prepare a new solution when at least two-thirds of the volume has been used or sooner if soil from plant material has noticeably discolored the solution. Depending on the cleanliness and size of planting stock, use up to 100 gallons of fungicide solution to treat the propagative materials used to plant one acre.

**Turf – Commercial Sod Farms  
Not for Use by Homeowners**

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 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 to provide adequate coverage.

**Turf Tolerance:** Maintain treated turfgrass in a vigorous growing condition. Turfgrass under stress will not respond to fungicide treatments as well as well-maintained turfgrass. Turfgrass tolerance to this product has been found to be acceptable, however, this product and tank mixtures with other products have not been tested on all varieties of every turfgrass species or under all possible growing conditions. If user is unfamiliar with the performance of this product or tank mixtures under user growing conditions, treat a limited area of turfgrass prior to initiating large-scale applications. Always exercise reasonable judgement and caution when using this product.

**Assorted Grasses**

**Restrictions:** Do not graze treated areas. Do not use on grasses intended for grazing, such as range or pasture grasses. Do not feed clippings to livestock. Do not use on grasses grown for seed.

Diseases Controlled	Application Rate (oz. per 100 sq. ft.)	Remarks (also refer to Directions for Use)
Helminthosporium Melting Out	4	
Rust (leaf, stem, stripe)	4	
Copper Spot, Fusarium Blight, Red Thread, Slime Mold	4 to 8	
Algae	6	
Dollar Spot	6 to 8	
Rhizoctonia Brown Patch	4	Apply on a 7-day spray schedule.
Pythium Blight	8	Apply at 5-day intervals or more frequently if conditions are especially favorable for disease development.
Fusarium Snow Mold	6 to 8	Apply at 2- to 6-week intervals during winter.

**Seed Treatment\*\***

Prior to treatment clean and well-cure seeds to be treated. This product may be applied to dry seed with conventional slurry or mist seed treating equipment or as a planter-box application. For best results, the seed must be completely and uniformly covered with fungicide. For seed treatment a dye that will impart an unnatural color to the seed must be added to the treatment solution.

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Crop	Diseases Controlled	Rate of This Product Per Application		Remarks (Also refer to Directions for Use)	Restrictions
		oz./bu. lbs.	oz./100		
Barley	Covered smut Damping-off False loose smut Seed rots Seedling blights	1.3 to 2.0	2.7 to 4.2	Only for planter box treatment	Label treated seed "Must not be used for food, feed or oil purposes."
Corn (field)	Damping-off Seed rots Seedling blights	1.5 to 3.0	2.7 to 5.4		
Cotton (acid delinted)	Damping-off Seedling blights		3.0		
Cotton (reginned)	Damping-off Seedling blights		6.0		
Flax	Damping-off Seed rots Seedling blights	2.0 to 4.0	3.6 to 7.1		
Oats	Damping-off Seed rots Seedling blights Smuts	1.3 to 2.0	4.0 to 6.3	Only for planter box treatment	
Peanuts (shelled)	Damping-off Seed rots Seedling blights	2.0 to 4.0	8.0 to 16.0		
Rice	Damping-off Seed rots Seedling blights		2.0 to 4.0	Apply before, during and after soaking in water	
Rye	Bunt Damping-off Seed rots Seedling blights	1.3 to 2.0	2.3 to 3.6	Only for planter box treatment	
Safflower	Seedborne rust (Puccinia carthami)		2.0		
Sorghum	Covered kernel smut Damping-off Seed rots Seedling blights	1.5 to 2.5	2.7 to 4.5		
Tomatoes	Damping-off Seed rots Seedling blights		8.0		
Wheat	Bunt Damping-off Seed rots Seedling blights	1.3 to 2.0	2.2 to 3.3	Only for planter box treatment	

\*\*Not for use in California

### Chemigation General Instructions

Apply this product only through sprinkler irrigation systems including center pivot, lateral move, end tow, side (wheel) roll, traveler, bug 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 non-uniform 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 adjustment 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 or at least 60 days out of the year.



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### 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. This 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 that 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 this product 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 ensure simultaneous shutoff. Maintain 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 sufficiently overlap, unacceptable disease control may result. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water. This product 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 this product in a mix tank. Fill the tank with  $\frac{1}{2}$  or  $\frac{3}{4}$  the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of this product 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 this product into the irrigation water line so as to deliver the desired rate per acre. The suspension of this product should be injected with a positive displacement pump into the main line ahead of a right angle turn to ensure adequate mixing.

**Note:** When treatment with this product 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

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

**Storage:** Store in the original container in a dry area. If allowed to become wet the product will deteriorate and present 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 fertilizers, food, feed or other pesticides 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:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. **Container Disposal:** Completely empty bag into application equipment. Then 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 and Disclaimer

Marman USA, Inc. 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. Marman USA makes no other express or implied warranty of fitness or merchantability or any other express or implied warranty. In no case shall Marman USA 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. Marman USA and the seller offer this product and the buyer and user accept it subject

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to the foregoing conditions of sale and warranty which may be varied only by agreement in writing signed by a duly authorized representative of Marman USA,

**Net Contents:** \_\_\_\_\_  
{ 1 pound through bulk)

**EPA Reg. No. 48273-20      EPA Est. \_\_\_\_\_**

**Marman USA, Inc.  
P.O. Box 22829  
Tampa, FL 33622-2829**

- [ ] Denotes alternate/optional language
- { } Denotes language that does not appear on the market label

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