



Vireo™ FUNGICIDE MEC

Active Ingredient:

Metalaxyl: N-(2,6-dimethylphenyl)-N-(methoxyacetyl) alanine methyl ester 23.0%

Other Ingredients: 77.0%

Total: 100.0%

Contains 2 lbs. active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN WARNING

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

FIRST AID

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|--------------------------------|--|
| IF IN EYES: | <ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice. |
| IF SWALLOWED: | <ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person. |
| IF ON SKIN OR CLOTHING: | <ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice. |
| IF INHALED: | <ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice. |

Note to Physician: Consideration should be given to gastric lavage with an endotracheal tube in place. A slurry of activated charcoal in water may be left in stomach. Give a saline laxative followed by symptomatic and supportive care.

EMERGENCY TELEPHONE NUMBERS:

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

You may also contact:

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE CALL: 1-888-875-1724

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident call CHEMTREC 1-800-424-9300

Phoenix Environmental Care, LLC

P.O. Box 370
Valdosta, GA 31603-0370

EPA Reg. No. 81943-28

PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals
WARNING/AVISO

Causes substantial but temporary eye injury. Harmful if swallowed, absorbed through the skin or if inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not get in eyes or on clothing. Avoid contact with skin. Avoid breathing vapors or spray mist. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove and wash contaminated clothing before reuse.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves (such as Barrier laminate, Nitrile Rubber, Neoprene Rubber, Viton, Selection Category E)
- Shoes plus socks
- Protective eyewear such as goggles, face shield or safety glasses.

Follow manufacturer's instructions for cleaning/maintaining PPE. If not such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Control 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.

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.

Environmental Hazards

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Apply only as specified on this label. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

Groundwater Advisory Statement

This chemical is known to leach through soil into ground water under certain conditions as a result of agricultural use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

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 interval. 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 worker entry into treated areas during the restricted entry interval (REI) of 48 hours. Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours. Exception: If the product is soil-incorporated, or applied by drenching, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

There is no restricted-entry interval (REI) requirement following soil injection, soil incorporated, or a soil drench application to ornamentals.

The REI for soil surface applications is zero hours after sufficient rainfall occurs or overhead or handheld irrigation is used to thoroughly wash the product into the soil and off any foliage.

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 made of any waterproof material.
- Shoes plus socks
- Protective eyewear such as goggles, face shield or safety glasses.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within 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.

Do not enter or allow others or pets to enter the treated area until sprays have dried.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY, POOR DISEASE CONTROL, OR ILLEGAL RESIDUES.

GENERAL INFORMATION

Maximum usage when applying both metalaxyl and mefenoxam containing products to the same crop within the same season: Do not apply more than the maximum seasonal total for the active ingredient as stated on the label of the product containing the lowest seasonal total on that crop.

Vireo MEC is a systemic fungicide for use on selected crops to control certain diseases caused by members of the Oomycete class of fungi. Other fungicides must be used to control diseases incited by other classes of fungi.

THIS PRODUCT IS NOT TO BE USED IN FOLIAR APPLICATIONS UNLESS SPECIFIED ON THIS LABEL OR IN SOLUTIONS USED TO DIP PLANTS.

Resistance Management: **Vireo MEC** is a systemic fungicide having a specific mode of action and could be subject to development of insensitive strains of fungi. Development of insensitivity cannot be predicted. Therefore Phoenix cannot assume liability for crop damage resulting from insensitive strains of fungi. If treatment is not effective following the use of **Vireo MEC** as recommended, an insensitive strain of fungi may be present. If the treatment is ineffective due to the presence of a **Vireo MEC** insensitive strain of fungi, neither **Vireo MEC** nor any other fungicide with similar action will effectively control that disease. Consideration should then be given to the prompt use of other types of suitable fungicides. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance on your particular crop and disease control situation.

Do not make foliar applications to field grown tobacco or other crops unless specified, since this practice may encourage more rapid development of insensitivity.

To avoid spray drift, do not apply under windy conditions. Avoid spray overlap, as crop injury may result.

Where rate ranges are specified on this label, use the higher rate when heavy disease pressure is expected and the lower rate when disease pressure is expected to be light unless otherwise noted.

ATTENTION: UNDER CONDITIONS CONDUCIVE TO EXTENDED INFECTION PERIODS, ADDITIONAL FUNGICIDE APPLICATIONS BEYOND THE NUMBER ALLOWED BY THIS LABEL MAY BE NEEDED. UNDER THESE CONDITIONS, USE ANOTHER FUNGICIDE REGISTERED FOR THE CROP/DISEASE APPEARING ON THIS LABEL.

Conditions conducive to extension of infection periods include: (1) a cool and wet environment for *Pythium* seeding disease, (2) long growing seasons, (3) a cool and humid environment for downy mildew and (4) use of susceptible varieties.

Mixing Instructions

Add $\frac{1}{4}$ – $\frac{1}{2}$ of the required amount of water to the spray tank, add the proper amount of **Vireo MEC** then add the rest of the water. When tank mixing other products with **Vireo MEC** follow the proper sequence of adding products to the spray tank. Wettable powders or water dispersible granules should be added to the water in the tank first, followed by flowable products, with emulsifiable concentrates, such as **Vireo MEC** added last. Provide sufficient agitation during mixing and application to maintain a uniform emulsion.

Vireo MEC is usually compatible with Pegasus Brand Chlorothalonil Products, WingMan Brand mancozeb products, and products based on the following active ingredients: benefin, disulfoton, fenamiphos, diazinon, carbofuran, chlorpyrifos, ethoprop, pentachloronitrobenzene, and pebulate.

To assure the compatibility of **Vireo MEC** with these and other products, pour the products into a small container of water in the correct proportions. After thorough mixing, let stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture is compatible.

BEFORE TANK MIXING VIREO MEC WITH OTHER REGISTERED PRODUCTS FOR ANY USE ON THIS LABEL, READ THE LABEL OF THE TANK MIX PARTNER TO BE CERTAIN IT IS LABELED FOR USE ON THE PARTICULAR CROP AND THAT USE PATTERNS ARE COMPATIBLE WITH THOSE OF VIREO MEC. DO NOT TANK MIX WITH ANY PRODUCT WHICH CONTAINS A LABELING PROHIBITION ON TANK MIXING. FOLLOW THE MOST RESTRICTIVE LABEL REQUIREMENTS OF TANK MIX PARTNERS.

Application Instructions

Apply **Vireo MEC** by ground or air in sufficient water or liquid fertilizer to provide uniform coverage of the soil surface. Apply in a minimum of 20 gals. per acre for ground applications and 5 gals. per acre by air. Refer to the specific crop directions for use for application directions.

For banded applications, the area actually is the area covered by the band, not total cropland area planted. Some row-crop recommendations are, based on treating in-the-row and these rates generally are specified as amounts (fl. oz.) of product per certain row length (often 1,000 ft.). Others express rates as amount per treated acre which means the total area treated with the pesticide. If rates are expressed as amount per treated acre and banded applications are used, the amount of pesticide used per acre will be proportionately less. The following formula can be used to calculate the amount of **Vireo MEC** needed per acre of crop when banded applications are made.

Calculate the amount of **Vireo MEC** needed for band treatment by the formula:

$$\frac{\text{band width in inches}}{\text{row spacing in inches}} \times \frac{\text{broadcast rate}}{\text{per acre}} = \frac{\text{amount needed}}{\text{per acre of field}}$$

Application Through Irrigation Systems

Vireo MEC alone or in combination with other pesticides which are registered for application through irrigation systems, may be applied through irrigation systems. Apply this product only through center pivot, solid set, hand move, moving wheel, micro-sprinkler or drip 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 Service, specialists, equipment manufacturers or other experts. Do not connect irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety device for the 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.

Operating Instructions

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing valve to prevent the flow of fluid back toward the injection pump.
3. 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.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. 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.
6. 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.
7. Do not apply when wind speed favors drift beyond the area intended.

Application Instructions

Vireo MEC must be applied on the schedule specified in the specific crop use directions, not according to the irrigation schedule.

With the exception of avocados and citrus, **Vireo MEC** has not been sufficiently tested when applied through irrigation systems to assure consistent product performance for all labeled uses. The following calibration and application techniques are provided for user reference, **but do not constitute a warranty of fitness for application through sprinkler or drip irrigation equipment**. Users must check the state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler or drip irrigation equipment.

NOTE: Do not inject **Vireo MEC** at full strength or deterioration of valves and seals may occur. Use a dilution ratio of at least 10 parts water to 1 part **Vireo MEC** in the mix tank. **Vireo MEC** is corrosive to many seal materials. Leather seals are best. EPDM or silicone rubber seals can be used but should be replaced once a year. Do not use Viton, Buna-N, Neoprene or PVC seals.

Micro Sprinkler or Drip Irrigation Systems

General Instructions

1. Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters in the system are putting out the same amount of water.
2. Only pressure injection or venturi equipment is recommended.
3. Determine the area to be treated in each irrigation run.
4. Measure the output of each of the emitter or drip tubes closest to and farthest from the injector site.
5. For calibration, substitute a concentrated detergent (such as Wisk) or a soluble fertilizer for the **Vireo MEC** in the injector tank. The detergent will bubble as it leaves the emitters. The time period over which bubbles occur should be checked for both the closest and farthest emitters. If these times are not within 2 minutes of each other, adjust the dilution ratio and/or the injector rate.
6. If a soluble fertilizer is used, measure the time intervals with a salt bridge. If a drip system is being calibrated, substitute soluble fertilizer for the **Vireo MEC** in the injector and measure the time intervals with a salt bridge.

Step-by-Step Instructions

1. Before starting to calibrate, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
2. Make up an indicator solution of detergent or fertilizer, using the same ratio to be used when mixing **Vireo MEC**.
3. Set the injector to apply the indicator solution at the injection rate to be used in the actual **Vireo MEC** application.
4. Attach a 5-inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Both emitters should be monitored to determine the time intervals that the indicator solutions are observed.
5. Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected, stop timing when the indicator solutions are no longer detected.
6. If the period of detection of the indicator solution between the two emitters are within two minutes of each other, comparable coverage will be obtained. If they are not, make adjustments by increasing the dilution ratio, using more water per part of **Vireo MEC**, or adjust the injector to a slower flow rate.
7. Once the system is calibrated, dilute the needed amount of **Vireo MEC** with water using a minimum of 10 parts water to 1 part **Vireo MEC**.
8. Do not begin to inject **Vireo MEC** into the system until all emitters are producing equal flow rates, or until the system is at full pressure.
9. Inject the **Vireo MEC** into the system at the end of the irrigation set in ½ to 1 inch or irrigation water.

CONIFERS, NON-BEARING CITRUS, NON-BEARING DECIDUOUS FRUITS AND NUTS, ORNAMENTALS AND TURF

Vireo MEC is a systemic fungicide for use on ornamentals, turf, nonbearing citrus grown in nurseries and as landscape plantings, conifers grown in nurseries and plantations, including Christmas trees and nonbearing deciduous fruit and nut trees grown in nurseries.

Resistance Management: **Vireo MEC** is a systemic fungicide having a specific mode of action and could be subject to development of resistant strains of fungi. Development of resistance cannot be predicted. Therefore Phoenix Environmental Care, LLC cannot assume liability for crop damage resulting from resistant strains of fungi. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance and ways to control any possible **Vireo MEC** resistant strains of fungi which may occur.

To help decrease the chance of downy mildew resistance, do not use **Vireo MEC** for the control of downy mildew diseases, except for use in turf. Use **Vireo MEC** only as a soil application for control of soil-borne diseases with the exception of azalea petal blight.

To avoid drift, do not apply under windy conditions. Avoid spray overlap, or crop injury may result.

Mixing Instructions

Vireo MEC is usually compatible with Kestrel® MEX, Pegasus® Brand chlorothalonil products, WingMan® brand mancozeb products, azoxystrobin based products, and metolachlor based products.

To assure the compatibility of **Vireo MEC** with these and other products, pour the products into a small container of water in the correct proportions. After thorough mixing, let stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture should be considered compatible.

Prepare no more spray mixture than is required for the immediate operation. Agitate the spray solution continuously during mixing and during application. Rinse the spray tank thoroughly with clean water after each day's use and dispose of pesticide rinsate by application to an already treated area.

Vireo MEC Alone

Add ¼ – ½ of the required amount of water to the spray tank. With the agitator running, add the **Vireo MEC** to the tank. Continue agitation while adding the remainder of the water. Begin application of the spray solution after the **Vireo MEC** has completely dispersed into the mix water. Maintain agitation until all the mixture has been sprayed.

Vireo MEC + Tank Mixtures

Add ¼ – ½ of the required amount of water to the spray tank. Start the agitator before adding any tank mix partners. In general, tank mix partners should be added in this order: wettable powders, dry flowable formulations, liquid flowable formulations, microencapsulated formulations, and emulsifiable concentrates. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water and the **Vireo MEC** to the spray tank. Allow the **Vireo MEC** to completely disperse into the mix water. Maintain agitation until all of the mixture has been sprayed.

NOTE: When using **Vireo MEC** in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner, including **Vireo MEC**. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using **Vireo MEC** in a tank mixture, observe all directions for use, sites, use rates, dilution ratios, precautions and limitations which appear on the tank mix partner label. No label dosage may be exceeded and the most restrictive label precautions and limitations must be followed. This product may not be mixed with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the products are registered.

Application Instructions

For banded applications, calculate the amount of **Vireo MEC** needed as follows:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \begin{matrix} \text{broadcast rate} \\ \text{per acre} \end{matrix} = \begin{matrix} \text{amount needed} \\ \text{per acre} \end{matrix}$$

Application Through Irrigation Systems

Vireo MEC alone or in tank mixture with other pesticides registered for application through irrigation systems may be applied in irrigation water at rates recommended on this label. This product may be applied through micro sprinkler or drip irrigation systems. Do not apply this product through any other type of irrigation system. Plant injury or lack of effectiveness may result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the label-prescribed safety devices for public water supplies are in place. A person knowledgeable of the chemigation system and responsible for its operation shall shut the system down and make necessary adjustments should the need arise.

Vireo MEC can be injected into the irrigation line in concentrated form, or diluted with water or liquid fertilizer solutions with pH levels less than 7.5. If diluted, a pesticide supply tank should be used. Agitation is not needed unless the diluted solution will remain in the supply tank more than 24 hours. **Vireo MEC** is normally diluted at a ratio of 10:1 to 50:1, depending on injection setups. Injecting a larger volume of a more dilute mixture will usually allow a more accurate calibration of the metering equipment. Meter the fungicide into the irrigation water during the first part of the irrigation cycle.

NOTE: Vireo MEC is highly corrosive to seals and other pump components. Recommended components are Teflon, polyethylene, polypropylene and nylon. When **Vireo MEC** is diluted at least 50:1, silicone rubber and viton can be used. Do not use PVC or EPDM based components.

Safety Devices for Irrigation Systems Connected to Public Water Supplies

If the source of water for your irrigation system is a public water supply, follow the instructions below.

1. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
4. The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. 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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Safety Devices for Irrigation Systems Not Connected to a Public Water Supply

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check-valve to prevent the flow of fluid back toward the injection pump.
3. 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 irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where the pesticide distribution is adversely affected.
6. 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.
7. Do not apply when wind speed favors drift beyond the area intended for treatment.

Application Instructions

Vireo MEC must be applied on the schedule specified in the use recommendations, not according to the irrigation schedule.

The following calibration and application techniques are provided for the user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Users should check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

General Instructions

1. Each run of the irrigation system must be calibrated separately to determine the time it takes water to move through the system and to make sure all emitters in all system are putting out the same amount of water.
2. Only pressure injection or venture equipment is recommended.
3. Determine the area to be treated in each irrigation run.
4. Measure the output of each of the emitters or drip tubes closest to and farthest from the injector site.
5. For calibration, substitute a concentrated detergent (such as Wisk) for the **Vireo MEC** in the injector tank. It is important to use the same volume of soap solution as the planned volume of **Vireo MEC** solution when calibrating the system. The detergent will bubble as it leaves the emitters. The time period over which the bubbles occur should be checked for both the closest and farthest emitters. If these times are not within 2 minutes of each other, adjust the dilution ratio and/or the injection rate.

Step-by-Step Instructions

1. Before starting to calibrate, operate the system until all the emitters are putting out at equal flow rates or until the system is operating at full pressure.
2. Make up an indicator solution of detergent or fertilizer, using the same ratio to be used with mixing **Vireo MEC**.
3. Set the injector to apply the indicator solution at the injection rate to be used in the actual **Vireo MEC** application.
4. Attach a 5-inch length of flexible tubing over the emitter closest to the injection point, another length over the emitter farthest away. Both emitters should be monitored to determine the time intervals that the indicator solutions are observed.
5. Begin injecting the indicator solution. Direct the flow from the tubes at the emitters into a small container. Begin timing when the indicator solution is first detected, stop timing when the indicator solutions are no longer detected.
6. If the period of detection of the indicator solution between the 2 emitters are within 2 minutes of each other, comparable coverage will be obtained. If they are not, make adjustments by increasing the dilution ratio, using more water per part of **Vireo MEC**, or adjust the injector to a slower flow rate.
7. Once the system is calibrated, dilute the needed amount of **Vireo MEC** with water using a minimum of 15 parts water to 1 part of **Vireo MEC** in the solution tank.
8. Do not begin to inject **Vireo MEC** into the system until all emitters are producing equal flow rates, or until the system is at full pressure.
9. Inject the **Vireo MEC** into the system at the beginning of the irrigation set in $\frac{1}{2}$ – 1 inch of irrigation water.

ORNAMENTALS

Use **Vireo MEC** on Container, bench, or bed grown ornamentals in greenhouses or outdoor nurseries, and for use on ornamentals grown for indoor and outdoor landscaping, for control of damping-off, and root and stem rot diseases caused by *Pythium* and *Phytophthora*. **Vireo MEC** may be applied through irrigation systems, as a soil drench or as a soil surface spray, or incorporated into a soil mix for subsequent seeding or transplanting of ornamentals. **Vireo MEC** may be applied as a foliar spray on azaleas. Within a **rate range given for a specific group of ornamentals, use the lower rate for the shortest interval listed and the higher rate for the longest interval. Under severe disease conditions, use the highest rate and the shortest interval specified.**

For drench applications, use enough of the specified **Vireo MEC** water solution to wet the root zone of plants. In general, 1 pt. per sq. ft. of this solution is sufficient for ornamentals growing in containers with 4 inches of growth media. Containers with growth media depth greater than 4 inches generally require 1½ – 2 pts. per sq. ft. of the solution. If soil surface applications are made, irrigate with at least ½ inch of water if rainfall does not occur within 7 days.

NOTICE TO USER: Due to the large number of species and varieties of ornamentals and nursery plants, it is impossible to test every one for tolerance to **Vireo MEC**. Neither the manufacturer nor the seller has determined whether or not **Vireo MEC** can be used safely on ornamental and nursery plants not specified on this label. The professional user should determine if **Vireo MEC** can be used safely prior to commercial use. In a small area, test the recommended rates for a particular group of unlabeled plants, i.e., bedding plants, foliage, etc., for phytotoxicity prior to widespread use.

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| <p>Foliage Plants Aglaonema, Aphelandra, Dieffenbachia, Peperomia, Philodendron*, Pothos, Schefflera, Sedum, Sempervivum, Zygocactus</p> | <p>Drench: Mix ½ – 1¼ fl. oz. with 100 gals. of water. Apply 1 pt. solution per sq. ft. For growth media depth greater than 4 inches, apply 1½ – 2 pts. solution per sq. ft. Repeat applications at two to three month intervals if necessary.</p> <p>*NOTE: On Philodendron, use 1 – 2 fl. oz./100 gals.</p> <p>NOTE: To minimize the potential for injury to Pothos, do not use more than ¾ fl. oz./100 gals. and do not apply more frequently than once every 3 months.</p> <p>Soil Mix: Thoroughly mix ¼ – ½ fl. oz. with each cu. yd. of soil mixture.</p> <p>Soil Surface Spray to Foliage Plants in the Landscape: Apply 2 fl. oz./1,000 sq. ft. to the soil surface in a broadcast, or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of ½ inch of water if rainfall does not occur within seven days.</p> |
| <p>Bedding Plants Ageratum, Algerian ivy, Artemisia, Aster, Begonia, Caladium, Carnation, Chrysanthemum, Coleus, Daisy, English ivy*, Foxglove, Gaillardia, Geranium, Impatiens, Marigold, Pansy, Petunia, Phlox, Pinks, Primrose, Prostrate, Rosemary, Salvia, Snapdragon, Verbena, Vinca, Zinnia</p> | <p>Drench at Seeding: (Soil 2 – 3 inches deep) Mix ¼ – ½ fl. oz. with 100 gals. of water and apply 1 pt. solution per sq. ft.</p> <p>Drench at Transplanting: (Soil 2 – 3 inches deep) Mix ½ – 2 fl. oz. with 100 gals. of water and apply 1 pt. solution per sq. ft. For growth media depth greater than 4 inches, apply 1½ – 2 pts. solution per sq. ft. Repeat applications at one to two month intervals if necessary. Do not apply rates of 1½ – 2 fl. oz./100 gals. more often than once every six weeks.</p> <p>Soil Mix at Seeding and at Transplanting: Thoroughly mix ¼ fl. oz. with each cu. yd. of soil mixture.</p> <p>Soil Surface Spray to Bedding Plants in the Landscape: Apply 2 fl. oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of ½ inch of water if rainfall does not occur within seven days.</p> <p>*NOTE: Do not apply to English ivy more than once every 6 months or injury may occur.</p> |
| <p>Flowers African violet, Anthurium, Baby's breath, Carnation, Chrysanthemum, Columbine, Delphinium, Easter lily*, Geranium, Gloxinia, Poinsettia, Rose</p> | <p>Drench: Mix ½ – 2 fl. oz. with 100 gals. of water and apply 1 pt. solution per sq. ft. For growth media depth greater than 4 inches, apply 1½ – 2 pts. solution per sq. ft. Repeat applications at one to two month intervals if necessary. Do not apply rates of 1½ – 2 fl. oz. /100 gals. more often than every six weeks.</p> <p>*NOTE: Do not apply more than 1 fl. oz./100 gals. of water to Easter lily and only make one at-planting application.</p> <p>Soil Surface Spray to Flowers in the Landscape: Apply 2 fl. oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of ½ inch of water if rainfall does not occur within seven days.</p> |

(continued)

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| <p>Rhododendrons and Azaleas</p> | <p>Drench: <i>Phytophthora</i> root and crown rot – Mix 1 – 2½ fl. oz. with 100 gals. of water and apply 1 pt. solution per sq. ft. For growth media depth greater than 4 inches, apply 1½ – 2 pts. solution per sq. ft. Repeat applications at two to four month intervals if necessary.</p> <p>Soil Surface Spray: Apply 2 – 4 fl. oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of ½ inch of water if rainfall does not occur within seven days.</p> <p>Foliar Spray: <i>Phytophthora</i> shoot blight – Mix at 1¼ – 2½ fl. oz. with 100 gals. of water. Spray to runoff. Repeat at two to three month intervals if necessary.</p> <p>NOTE: 1) To minimize the potential for injury to azaleas, do not apply repeat soil applications of 2½ fl. oz./100 gals. closer than every three months and do not exceed a total of 4 fl. oz. in six months, 2) Use the lower rate for “Coral Bell” variety.</p> |
| <p>Woody Ornamentals other than Azaleas <i>Aucuba japonica</i>, Arborvitae, Boxwood, Ceanothus, Cotoneaster, Dogwood, Ficus, “Halls” Honeysuckle, Ilex, <i>Juniperus</i> spp., Photinia, <i>Pieris japonica</i>, <i>Pinus</i> spp., Pittosporum, White cedar, White pine, Yew</p> | <p>Drench: Mix 1 – 4 fl. oz. with 100 gals. of water and apply 1 pt. solution/sq. ft. For growth media depth greater than 4 inches, apply 1½ – 2 pts. solution/sq. ft. Repeat applications at two to three month intervals if necessary. Do not apply rates greater than 3¼ fl. oz./100 gals. more often than once every ten weeks.</p> <p>Soil Surface Spray: Apply 2 – 5 fl. oz./1,000 sq. ft. to the soil surface in a broadcast or banded spray in sufficient water to obtain thorough coverage of the plant root zone. After application irrigate with a minimum of ½ inch of water if rainfall does not occur within seven days.</p> <p>NOTE: Do not apply to <i>Euonymus</i> or injury may occur.</p> |

INTERIORSCAPES AND INDIVIDUAL PLANT USE

In situations where water volumes used are much less than 100 gals. and the area treated is small, the following table provides the **Vireo MEC** rates to make small quantities of solution. Refer to the plant type for the correct fl. oz. of product to use when utilizing this table.

| Rate of Vireo MEC (fl. oz.) | Amount of Vireo MEC to Add to Water to Make the Following Quantities | | | |
|------------------------------------|---|------------------|-----------------|--------------------------|
| | 1 gal. | 5 gals. | 10 gals. | 25 gals. |
| 0.5 | 7 drops | 37 drops/0.75 ml | 75 drops/1.5 ml | 3.75 ml/¼ tsp. |
| 1.0 | 15 drops | 75 drops/1.5 ml | 3.0 ml/½ tsp. | 7.5 ml/1½ tsp./½ Tbsp. |
| 2.0 | 30 drops | 3.0 ml/½ tsp. | 6.0 ml/1¼ tsp. | 15.0 ml/3.0 tsp./1 Tbsp. |
| 3.0 | 45 drops | 4.5 ml/1 tsp. | 9.0 ml/2 tsp. | 22.5 ml/4½ tsp./1½ Tbsp. |
| 4.0 | 60 drops/1.25 ml | 6.0 ml/1¼ tsp. | 12.0 ml/2½ tsp. | 30.0 ml/2 Tbsp./1 oz. |

Soil Drench: Apply enough solution to wet the root area of the plants; apply at least one pint of solution per square foot.

CITRUS IN NURSERIES AND LANDSCAPE PLANTINGS (NONBEARING)

Use **Vireo MEC** on nonbearing citrus for control of citrus foot rot, root rot, and trunk canker caused by *Phytophthora* spp. Apply to the soil as a drench or as a spray in a banded application.

Make the first application of **Vireo MEC** at the time of planting. Make repeated applications at three-month intervals during the period when trees are actively growing.

Soil Drench: Mix 4 – 6 fl. oz./100 gals. of water and apply as a drench over the row at the rate of 100 – 250 gals./1,000 feet of row. The width of the drench treatment should be wide enough to cover the root systems of the plants.

Soil Surface Spray: Apply 2 gals. per acre of treated soil in a broadcast or banded surface spray to seedbeds, liners, or bedded stock in sufficient water to obtain uniform coverage. If applications are banded, the treated area should be wide enough to cover the root systems of the plants. Follow with a ½-inch irrigation.

Calculate the amount of **Vireo MEC** needed for a banded treatment by using the formula at the end of the **General Information** section of this label.

NOTE: Do not use in greenhouse citrus nursery stock intended for commercial fruit production.

CONIFERS IN NURSERIES AND PLANTATIONS (INCLUDING CHRISTMAS TREES)

Vireo MEC provides control of *Phytophthora* root rot of conifers. For best results, apply ½ to 1 inch of water after application if rain is not expected within three days.

Conifers in Nurseries

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| Seedbeds and Plug-Plantings | Apply 2½ pts. of Vireo MEC in at least 50 gals. of water per acre in the spring and again in the fall. |
| 2-0 Transplants | Apply 5 pts. Vireo MEC in at least 50 gals. of water per acre in the spring and again in the fall. |

Conifers in Plantations

Use of **Vireo MEC** will aid in the control of *Phytophthora* root rot when used in conjunction with good cultural practices. The use of **Vireo MEC** will not overcome poor management practices such as planting on sites that are prone to flooding or are poorly drained. **Vireo MEC** fungicide will not revitalize trees showing moderate to severe disease symptoms.

Apply 1¼ – 2½ gals. of **Vireo MEC** in a minimum of 50 gals. of water as a directed soil spray. Do not apply as a foliar spray. Applications should be made in early spring before growth starts and in the fall before the ground freezes. Calculate the amount of **Vireo MEC** needed for a banded treatment by using the formula at the end of the **General Information** section of the label.

DECIDUOUS FRUITS AND NUTS IN NURSERIES (NONBEARING)

Vireo MEC provides control of *Pythium* root rot and *Phytophthora* root, crown, and collar rot of nonbearing deciduous fruits and nuts.

Apply 6 fl. oz. per 1,000 sq. ft. in sufficient water to obtain thorough coverage of the soil under the canopy of the trees. Treat sufficient surface area in nurseries to cover the root zone of the plants. Additional applications may be made as necessary at three-month intervals during the growing season.

NOTE: 1) Do not apply to trees that will bear harvestable fruit within 12 months of the last application, or possible illegal residues may result. 2) Do not apply more than 17.6 oz. per 1,000 sq. ft. (6 gals. per acre) of **Vireo MEC** per year.

TURF (Golf Courses, Lawns, Landscape Areas, Around Residential, Institutional, Public, Commercial and Industrial Buildings, Parks, Recreational Areas, and Athletic Fields, Sod Farms)

Vireo MEC controls *Pythium* blight and *Pythium* damping-off in turf, yellow tuft (downy mildew) in bluegrass, and downy mildew in St. Augustinegrass. **Within the rate range given for turf, use the lower rate for the shortest interval listed and the higher rate for the longest interval. Under severe disease conditions, use the highest rate and shortest interval specified.**

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| Established Turf <i>Pythium</i> Blight Yellow Tuft Downy Mildew | Apply as a preventative treatment at 1 – 2 fl. oz. in 3 – 5 gals. of water per 1,000 sq. ft. Retreat at 10-21 day intervals. During periods of prolonged conditions favorable for disease development, use 2 fl. oz. on a 14-day schedule. |
| Newly Seeded Areas <i>Pythium</i> Damping-Off <i>Pythium</i> Blight Yellow Tuft Downy Mildew | Apply 1 – 2 fl. oz. in 5 – 10 gals. of water per 1,000 sq. ft. immediately after seeding. Retreat at 7-14 day intervals if conditions remain favorable for disease. Note: For long-term control of <i>Pythium</i> in areas when using seed treated with the active ingredient contained in Vireo MEC , make application of Vireo MEC 7-10 days after seeding. |

NOTE: For control of other diseases of turf, use propiconazole alone or in tank mix combination with **Vireo MEC**. Refer to the propiconazole label for rates, precautions, restrictions, etc.

Resistance Management: To minimize the potential for resistance: 1) Make no more than three applications of **Vireo MEC** per season and 2) Apply an alternate EPA-registered fungicide for *Pythium* control at least once during the season.

ROTATIONAL CROPS

Do not plant any crop which is not registered for use with metalaxyl in metalaxyl-treated soil for a period of 12 months.

SEED TREATMENT

Vireo MEC is a systemic fungicide for use as a seed dressing.

Resistance Management: **Vireo MEC** is a systemic fungicide having a specific mode of action. **Vireo MEC** could be subject to development of resistant strains of fungi.

Development of resistance cannot be predicted. Therefore, to the extent consistent with applicable law, Phoenix Environmental Care, LLC cannot assume liability for crop damage resulting from resistant strains of fungi. Consult with your State Agricultural Experiment Station or Extension Service Specialist for guidance and ways to control any possible **Vireo MEC** resistant strains of fungi which may occur.

Vireo MEC may be applied as a water-based slurry with other registered seed treatment insecticides and fungicides through standard slurry or mist-type commercial seed treatment equipment.

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| Grain Sorghum | For <i>Pythium</i> damping-off control: Apply Vireo MEC as a seed treatment at the rate of 1 – 2 fl. oz. per 100 lbs. of seed. |
| Soybeans | For <i>Pythium</i> damping-off and early season <i>Phytophthora</i> control: Apply Vireo MEC as a seed treatment at the rate of 1 – 2 fl. oz per 100 lbs. of seed. |
| Sunflower | For control of systemic downy mildew: Apply Vireo MEC as a seed treatment as the rate of 4 fl. oz. per 100 lbs. of seed. |

NOTE: Federal law requires that bags containing treated seeds shall be labeled with the following information: "This seed has been treated with metalaxyl fungicide. Do not use for feed, food or oil purposes. Store away from feeds and foodstuffs." Use with an EPA-approved dye that imparts an unnatural color to the seed.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

Pesticide Storage: Store at temperatures above 40°F. Crystals may form at lower storage temperatures. If this occurs, place the product in a warm room (68°F or above) and roll or shake the container at frequent intervals until all crystals are dissolved.

For minor spills, leaks, etc. follow all precautions indicated on this label and clean-up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes.

Pesticide Disposal: Wastes resulting from the use of this product are toxic. Improper disposal of unused pesticide spray mixture, or rinsate is a violation, of Federal law. Pesticide, spray mixture or rinsate that cannot be used according to label instructions must be disposed of according to Federal, State or local procedures. For guidance in proper disposal methods, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional office.

Container Disposal: Do not reuse empty container. Triple rinse (or equivalent) and offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

Returnable/Refillable Containers: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

Conditions of Sale and Limitation of Warranty and Liability

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying and using this product. If the terms are not acceptable, return the product at once, Unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Phoenix Environmental Care, LLC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Phoenix Environmental Care, LLC and Seller harmless for any claims relating to such factors.

Phoenix Environmental Care, LLC warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Phoenix Environmental Care, LLC and Buyer and User assume the risk of any such use. To the extent permitted by law, Phoenix Environmental Care, LLC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall Phoenix Environmental Care, LLC or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT PERMITTED BY LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF PHOENIX ENVIRONMENTAL CARE, LLC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF PHOENIX ENVIRONMENTAL CARE, LLC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

Phoenix Environmental Care, LLC and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty of liability, which may not be modified except by written agreement signed by a duly authorized representative of Phoenix Environmental Care, LLC