



Velifer®

Bioinsecticide/Miticide

Oil Dispersion Spore Concentrate of *Beauveria bassiana* strain PPRI 5339

For biological control of labeled insect or mite pests in commercial greenhouses

Active Ingredient:

Beauveria bassiana strain PPRI 5339*	8.00%
Other Ingredients:	92.00%
Total:	100.00%
444.44	

* Velifer contains a minimum of 8x109 viable spores per mL

EPA Reg. No. 71840-22

EPA Est. No.

CAUTION/PRECAUCION

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.)

See inside for complete First Aid, Precautionary Statements, Directions For Use, and Conditions of Sale and Warranty.

You may contact BASF Corporation for emergency medical treatment information at 1-800-832-HELP (4357).

Shake well before using.

Store this product under refrigerated conditions (approximately 39.2°F (4°C)), in a dry area, out of direct sunlight, and away from heat sources.

See product container for expiration date.

Net Contents:

Batch Code: [Located on physical container]

BASF Corporation 26 Davis Drive, Research Triangle Park, NC 27709

FIRST AID Hold eye open and rinse slowly and gently with water for 15 to 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.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-832-HELP (4357) for emergency medical treatment information.

Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Protective eyewear

Mixers/loaders and applicators must wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any R or P filter; OR a NIOSH-approved elastomeric particulate respirator with any R or P filter; OR a NIOSH-approved powered air-purifying respirator with an HE filter. Repeated exposures to high concentrations of microbial proteins can cause allergic sensitization.

Follow the 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:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product.
 As soon as possible, wash thoroughly and change into clean clothing.

Environmental Hazards

DO NOT contaminate water when disposing of equipment washwater or rinsate.

This product is potentially pathogenic to beneficial insects and honey bees. **DO NOT** apply while bees or other pollinating insects are foraging the treatment area.

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 State or Tribal 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 worker entry into treated areas during the restricted-entry interval of **12 hours**.

For early entry into 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, wear:

- Coveralls
- Barrier laminate, nitrile rubber, neoprene rubber, or Viton® gloves
- Shoes plus socks
- Protective eyewear

In Case of Emergency

In case of large-scale spill of this product, call:

• CHEMTREC 1-800-424-9300

• BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

Product Information

Velifer® bioinsecticide/miticide is a broad spectrum biological insecticide/miticide used for biological control of aphids, mealybugs, mites, thrips, and whiteflies on ornamentals, fruit and nut trees*, vines*, brambles*, bushberries*, fruits, vegetables, herbs and spices grown in commercial greenhouses. This includes commercial production of transplants for agriculture and the home consumer market.

* Not registered for use in California.

Velifer is an oil dispersion spore concentrate of *Beauveria bassiana* strain PPRI 5339 and is a contact insecticide/miticide. For optimal results, apply **Velifer** when the target pests are first observed, and follow instructions and precautions on this label. To maximize activity against target pests, apply **Velifer** on a regularly scheduled interval as part of an integrated pest management (IPM) program.

Velifer can be used on plants in the following use sites: - commercial greenhouses

Velifer is formulated as a spore suspension. Following application, the spores in **Velifer** make contact with the pest, germinate and begin secreting enzymes that degrade the cuticle, allowing for fungal entry into the body of the pest. The fungus colonizes the pest and kills it. The pest does not need to consume the spores; physical contact is the main mode of infection.

Restrictions and Limitations

• Velifer is for commercial greenhouse use only.

Mixing Instructions

- Shake well before using.
- Clean spray equipment and mixing area thoroughly before and after applying **Velifer**. Failure to provide a clean spray tank may reduce product efficacy.
- Utilize clean, food-grade measuring and mixing containers with no scratches or damage.
- Calibrate equipment prior to use.
- Fill spray tank with 1/2 of the final planned water volume.
- Add the desired amount of **Velifer** to be applied.
- Begin agitation, add any tank mix partners, and remaining water.

Tank Mixing Information

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Velifer can be tank mixed with most recommended biological control products, fungicides, insecticides, liquid fertilizers, and additives. Always follow the most restrictive label use directions. For more information, consult the **Plant Safety and Phytotoxicity Notice**.

Consult a BASF representative for more information concerning tank-mix compatibility.

Application Instructions

Velifer can be applied as a foliar spray, soil-directed spray, drench, or dip to ornamentals, fruit and nut trees*, vines*, brambles*, bushberries*, fruits, vegetables, herbs and spices.

* Not registered for use in California.

Exposure of product to extreme heat (as in thermal application equipment) or freezing temperatures, or direct ultraviolet radiation can interfere with product performance.

Velifer should be applied when pest populations are low, or when target pests are first observed. **Velifer** can be used in an IPM program that includes other tools such as conventional insecticides, cultural practices, and mechanical controls. Including regular scouting as part of an IPM program will ensure applications are made when pest pressure is low.

Apply **Velifer** on a 3 to 14 day interval depending on pest pressure. Reduce application interval and increase the rate when pest populations are building, environmental conditions are dry, or plants are growing rapidly.

Overhead irrigation that occurs while spray residues are wet may wash off spores and reduce efficacy. Resume irrigation when spray residues have dried.

Dilutions Table

Velifer®	Velifer Volume per Application Volume						
bioinsecticide/ miticide Rate Per 100 gal	1 gallon	3 gallon	5 gallon	10 gallon	25 gallon	50 gallon	100 gallon
3.0 fl ozs	0.03 fl oz	0.09 fl oz	0.15 fl oz	0.30 fl oz	0.75 fl oz	1.50 fl ozs	3.00 fl ozs
	0.89 mL	2.66 mL	4.44 mL	8.87 mL	22.18 mL	44.36 mL	88.72 mL
6.0 fl ozs	0.06 fl oz	0.18 fl oz	0.30 fl oz	0.60 fl oz	1.50 fl ozs	3.00 fl ozs	6.00 fl ozs
	1.77 mL	5.32 mL	8.87 mL	17.74 mL	44.36 mL	88.72 mL	177.44 mL
10.0 fl ozs	0.10 fl oz	0.30 fl oz	0.50 fl oz	1.00 fl oz	2.50 fl ozs	5.00 fl ozs	10.00 fl ozs
	2.96 mL	8.87 mL	14.79 mL	29.57 mL	73.93 mL	147.87 mL	295.74 mL
13.0 fl ozs	0.13 fl oz	0.39 fl oz	0.65 fl oz	1.30 fl ozs	3.25 fl ozs	6.50 fl ozs	13.00 fl ozs
	3.84 mL	11.53 mL	19.22 mL	38.45 mL	96.11 mL	192.23 mL	384.46 mL

Table 1. Foliar, Soil-Directed, and Drench Application Instructions

Pest	Application Rate (fl ozs/100 gal)	Use Directions
Aphids Mealybugs Mites Thrips Whiteflies	3 to 13 fl ozs	Foliar: apply Velifer in an application volume sufficient for uniform coverage, but not to the point of runoff.*
		Soil-Directed Spray: apply Velifer to soil surface and irrigate soil with enough water to move product into the root zone.
		Drench: apply as a drench to thoroughly soak the growing media.
		Test a small number of plants before making a full-scale application. Consult the Plant Safety and Phytotoxicity Notice for more information.

^{*} BASF recommends 100 gallons/acre of spray solution to ensure complete coverage of all leaf surfaces. If applying at less than 100 gallons/acre, ensure that equipment is calibrated to deliver complete coverage and the same amount of **Velifer** per unit area as recommended in the **Dilutions Table**.

Preharvest Interval (PHI) for **Velifer** is 0 days. **Velifer** can be applied up until the day of harvest.

Table 2. Dip Application Instructions

Pest	Application Rate (fl ozs/100 gal)	Use Directions
Aphids Mealybugs Mites Thrips Whiteflies	3 to 13 fl ozs	Prepare only as much dip solution as can be used in one day; not for use over multiple days.
		Rooted and Unrooted Cuttings: dip plants making sure to wet all surfaces. Allow unrooted cuttings to dry completely before sticking; rooted cuttings can be planted immediately. Allow all treated plants to dry before watering or placing under mist.
		Test a small number of plants before making a full-scale application. Consult the Plant Safety and Phytotoxicity Notice for more information.

Plant Tolerance

Plant Safety and Phytotoxicity Notice

Velifer® bioinsecticide/miticide has been applied to a wide variety of common ornamental plants without observed plant injury. Not all species, varieties, and cultivars have been tested for phytotoxicity following Velifer application. In addition, not all possible tank mix combinations with Velifer, pesticide treatments preceding or following those with Velifer, or combinations of Velifer with surfactants or adjuvants have been tested. Local conditions can also influence plant response and may not match those under which BASF has conducted testing. Because many cultivars within a plant species vary in response to chemical applications and growing conditions, the grower must recognize these differences and test the product accordingly. At a minimum, always test a small group of representative plants for response to Velifer under local growing conditions and prior to large-scale use.

Grower assumes responsibility for testing species suitability under local growing conditions by treating a small number of plants at the specified label rate. At a minimum, this should include evaluating treated plants for several weeks following treatment for possible injury or other effects. To the extent consistent with applicable law, by applying **Velifer**, the user assumes responsibility for any crop damage or other liability associated with factors beyond the manufacturer's control, such as weather, presence of other materials, and manner or use of application.

CHEMIGATION

Overall Instructions for All Chemigation Types

Applications made through irrigation systems must deliver rates of **Velifer** consistent with the rates specified in **Table 1** and **Table 2**.

See the section on **Mixing Instructions** for directions on preparing liquid solutions.

Apply this product only through sprinkler or drip irrigation systems, including moving track sprayers. **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 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.

For best results, time **Velifer** chemigation with the end of the irrigation water application. Time injection to apply **Velifer** in the minimum irrigation volume necessary to achieve uniform coverage immediately prior to shutting off irrigation water. Excessive irrigation during and after chemigation will wash active ingredient (spores) off foliage, reducing effectiveness. Maintain good agitation during the entire application period. Allow sufficient time for pesticide to be flushed through all lines and all nozzles before turning off irrigation water.

Specific Instructions for Velifer Applications through Sprinkler and Drip (Trickle) Chemigation

- 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 back flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

Specific Instructions for Velifer Applications Through Public Water Systems

- 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.
- Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the 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 flow 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.

- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must 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, or in cases where there is no water pump, 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.
- DO NOT apply when wind speed favors drift beyond the area intended for treatment.

STORAGE AND DISPOSAL

DO NOT contaminate water, food, or feed by storage or disposal.

Pesticide Storage

Store this product under refrigerated conditions (approximately 39.2°F (4°C)), in a dry area, out of direct sunlight, and away from heat sources. Keep container closed when not in use. **DO NOT** store near food or feed.

Pesticide Disposal

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container Handling

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

Container is not safe for food, feed or drinking water.

Conditions of Sale and Warranty

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, 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 the presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product 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 inherent risks, referred to above.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THIS PRODUCT.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** that may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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