



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

October 3, 2023

Scott Jackson
Sr. Federal Registration manager
Envu- Environmental Science U.S. LLC
5000 CentreGreen Way, Suite 400
Cary, NC 27513

Subject: Registration Review Label Mitigation for Spiromesifen
Product Name: Forbid 4F Ornamental Insecticide/Miticide
EPA Registration Number: 101563-55
Application Date: 9/22/2022 & 3/29/2022
Decision Number: 590455 and 593657

Dear Mr. Jackson:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Spiromesifen Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

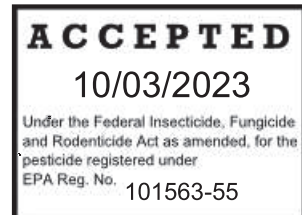
A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions about this letter, please contact Scott Campbell via email at Campbell.Scott@epa.gov

Sincerely,

A handwritten signature in blue ink, appearing to read "Gene Benbow", is located below the "Sincerely," text.

Gene Benbow, Senior Biologist
Invertebrate & Vertebrate Branch
Registration Division (7505P)
Office of Pesticide Programs

Forbid® 4 F



Ornamental Insecticide/Miticide

For professional use only. For control of mites and whiteflies on ornamental plants in and around areas such as parks, golf courses, recreational areas, and residential or commercial buildings.

ACTIVE INGREDIENT:

Spiromesifen: 2-oxo-3-(2, 4, 6-trimethylphenyl)-1-oxaspiro [4, 4] non-3-en-4-yl

3, 3-dimethylbutanoate.....45.2%

OTHER INGREDIENTS:54.8%

TOTAL:100.0%

Forbid 4F contains 4 pounds of spiromesifen per US gallon (480 grams ai per liter).

EPA Reg. No. 101563-55

EPA EST NO.

Net Contents: 8 oz, 1 Gal

STOP - Read the label before use.

Keep out of reach of children.

CAUTION

For MEDICAL And TRANSPORTATION Emergencies ONLY Call 24 Hours A Day 1-800-424-9300

For PRODUCT USE Information Call 1-800-331-2867

See [Back][Side] Panel for First Aid Instructions and [Leaflet][Booklet] for Complete Precautionary Statements and Directions for Use. (Note to reviewer: Location of additional precautionary statements, directions for use will vary between those listed, depending on container type/size.)

FIRST AID	
IF INHALED:	<ul style="list-style-type: none"> Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration. Call a poison control center or doctor for further 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 to 20 minutes. Call a poison control center or doctor for treatment advice.
Note To Physician: No specific antidote is known. Treat symptomatically. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

Personal Protective Equipment (PPE)

Mixers, loaders and other handlers must wear:

- Chemical resistant gloves made out of: barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, natural rubber ≥ 14 mils, polyethylene, polyvinyl chloride (PVC) ≥ 14 mils, or Viton® ≥ 14 mils

- Shoes and socks

Applicators must wear:

- Long-sleeved shirt and long pants
- Shoes and socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS

Users should:

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

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. Avoid contamination of surface water through runoff or spray drift. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwater.

SURFACE WATER ADVISORY

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having a high potential for reaching surface water via runoff for several months or more after application.

A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of spiromesifen from runoff water and sediment. Runoff of this product will be reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours. Sound erosion control practices will reduce this product's potential to reach aquatic sediment via runoff.

GROUNDWATER ADVISORY

Degradates of spiromesifen have properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Not for use on plants being grown for sale or commercial production, or for commercial seed production, or for research purposes. For use on plants intended for aesthetic purposes or climatic modification in areas such as landscapes, interior plantscapes, campgrounds, golf courses, athletic fields, parks, gardens, rights of way and other easements, and around residential, institutional, public, commercial, and industrial buildings.

IMPORTANT: Read entire label and Conditions of Sale before using this product.

STORAGE AND DISPOSAL

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

STORAGE:

Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area. Handle and open container in a manner as to prevent spillage.

PESTICIDE DISPOSAL:

Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:

Non-refillable 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 ¼ 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.

Offer for recycling, if available or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

FORBID® 4F Ornamental Insecticide/Miticide is a Flowable (Suspension Concentrate) formulation that is intended for control of mites and whiteflies on ornamental plants, flowers and foliage plants. The active ingredient contained in FORBID 4F is active on all mite development stages. However, mite juvenile stages are often more susceptible than adults. Application should be timed to coincide with early threshold levels in a developing mite population.

FORBID 4F Ornamental Insecticide/Miticide is also highly effective against whitefly nymphs, plus it has a significant effect on the otherwise difficult to control pupal stage. For best results against whitefly, applications should target these life stages.

FORBID 4F Ornamental Insecticide/Miticide can be applied by ground equipment. However, thorough coverage of all plant parts is required for optimum performance. Performance evaluations should be made 4 – 10 days after application.

Apply specific dosage of FORBID 4F Insecticide/Miticide as needed for control. For best results, uniform coverage of the upper and lower leaf surfaces is recommended. Avoid excess application that results in runoff from plant foliage. An adjuvant may be used to improve coverage on hard to wet foliage. For best results, the treatment should be made when whitefly or mite population begins to build and before a damaging population becomes established. Rate range is provided and is generally dependent on size of the plant and density of the foliage.

PRODUCT FEATURES

Controls all stages of whiteflies.

Provides knockdown and residual control of all developmental stages of mites.

PESTS CONTROLLED	USE RATE
Spider mites (including twospotted spider mite, southern red mite, maple spider mite, spruce spider mite, honeylocust spider mite, Euonymus mite, boxwood spider mite, tumid mite and Lewis mite) False spider mites Rust and blister mites (family Eriophyidae) Tarsonemid mites (including broad mites and cyclamen mites)	1 to 4 fl oz (30 - 120 mL)/100 gallons of spray solution for shrubs, trees (including non-bearing fruit and nut trees), in outdoor landscapes and interior plantscapes. or 1.5 - 6 mL/5 gallons of spray solution 1-2 fl oz (30-60 mL)/100 gallons of spray solution for flowers and foliage in outdoor landscapes or 1.5-3 mL/5 gallons of spray solution
Whiteflies (Including silverleaf, greenhouse, and sweet potato whitefly)	2 to 4 fl oz (60 - 120 mL)/100 gallons of spray solution for shrubs, trees (including non-bearing fruit and nut trees), in outdoor landscapes and interior plantscapes. or 3 - 6 mL/5 gallons of spray solution 2 oz (60)/100 gallons of spray solution for flowers and foliage in outdoor landscapes or 3 mL/5 gallons of spray solution

WHERE TO APPLY	To shrubs, trees (including non-bearing fruit and nut trees), flowers and foliage plants in outdoor landscapes and interior plantscapes.
HOW TO APPLY	<p>Apply specific dosage of FORBID 4F Ornamental Insecticide/Miticide as needed for control. Good coverage of the foliage is recommended. An adjuvant may be used to improve coverage on hard to wet foliage. For best results the treatment should be made when the whitefly or mite population begins to build and before a damaging population becomes established.</p> <p>FORBID 4F Ornamental Insecticide/Miticide is highly effective against the egg and nymphal stages of whiteflies and mites. For best results, applications should target these stages.</p> <p>For maximum efficacy against adult whiteflies, use the 4 fl oz rate of FORBID 4F Ornamental Insecticide/Miticide to shrubs, trees (including non-bearing fruit and nut trees), in outdoor landscapes and interior plantscapes. Use 2 fl oz for flowers and foliage plants in outdoor landscapes and interior plantscapes.</p> <p>Rate range is provided and is generally dependent on size of the plant and density of the foliage. Apply when pests first appear and prior to leaf damage or discoloration. Apply with ground application equipment in adequate water for uniform coverage.</p> <p>Do not apply via chemigation.</p> <p>Do not apply FORBID 4F Ornamental Insecticide/Miticide more than three times per season.</p> <p>For shrubs, trees (including non-bearing fruit and nut trees) in outdoor landscapes and interior plantscapes do not use more than 0.35 lbs spiromesifen per acre per year.</p> <p>For flowers and foliage plants in outdoor landscapes do not use more than 0.188 lbs spiromesifen per acre per year.</p>

<p>RESISTANCE MANAGEMENT</p>	<p>For resistance management, Forbid 4F Ornamental Insecticide/Miticide contains a Group 23 insecticide (or acaricide). Any insect/mite population may contain individuals naturally resistant to Forbid 4F Ornamental Insecticide/Miticide and other Group 23 insecticides/acaricides. The resistant individuals may dominate the insect/mite population if this group of insecticides/acaricides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.</p> <p>To delay insecticide/acaricide resistance, take the following steps:</p> <ul style="list-style-type: none"> ☑ Rotate the use of Forbid 4F Ornamental Insecticide/Miticide or other Group 23 insecticides/acaricides within a growing season, or among growing seasons, with different groups that control the same pests. ☑ Use tank mixtures with insecticides/acaricides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC): <ul style="list-style-type: none"> ○ Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species. ○ Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management. ○ When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s). ○ Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits. ○ The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. ○ Adopt an integrated pest management program for insecticide/acaricides use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices. ○ Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor. ○ Contact your local extension specialist or certified crop advisors for any additional pesticide resistance management and/or IPM recommendations for the specific site and pest problems in your area. ○ For further information or to report suspected resistance contact Envu representatives at 1-800-331-2867
<p>PLANT TOLERANCE</p>	<p>FORBID 4F Ornamental Insecticide/Miticide has been evaluated for phytotoxicity on a wide range of ornamental plants. However, due to the large number of species and varieties of ornamental plants, it is impossible to test every one for tolerance to FORBID 4F. The professional user should determine if FORBID 4F Ornamental Insecticide/Miticide could be used safely prior to commercial use. In a small area, test the recommended rates on a small number of plants for phytotoxicity prior to widespread use. Before using FORBID 4F Ornamental Insecticide/Miticide in tank mixture with other products and adjuvants, test the mixture on a small number of plants for phytotoxicity prior to widespread use.</p> <p>Use of FORBID 4 F Ornamental Insecticide/Miticide on ferns, English ivy (<i>Hedera helix</i>), lily-of-the-Incas (<i>Alstroemeria</i>), <i>Dracaena</i>, <i>Peperomia</i>, croton, <i>Cordyline</i>, Mexican heather, fuschia, geraniums (<i>Pelargonium</i> spp.), <i>Schefflera</i>, and <i>Impatiens</i> spp. is not recommended.</p>

IRRIGATION TIMING	If irrigation is used, conduct irrigations efficiently to prevent excessive loss of irrigation waters through runoff. Time applications to allow sprays to dry prior to rain or sprinkle irrigations.
SPRAY DRIFT	Avoid drift or runoff into lakes, reservoirs, rivers, permanent streams, marshes, potholes, vernal pools, natural ponds, estuaries, or commercial fish farm ponds. Do not apply when winds are greater than 15 mph and avoid gusty conditions.
SPRAY DRIFT ADVISORIES	<p>THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.</p> <p>IMPORTANCE OF DROPLET SIZE An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.</p> <p>SHIELDED SPRAYERS Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.</p> <p>TEMPERATURE AND HUMIDITY When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.</p> <p>TEMPERATURE INVERSIONS Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.</p> <p>WIND Drift potential generally increases with wind speed. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.</p> <p>Boomless Ground Applications: Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.</p> <p>Handheld Technology Applications: • Take precautions to minimize spray drift.</p>
ENDANGERED SPECIES ADVISORY	The use of any pesticide in a manner that may kill or otherwise harm endangered species or adversely modify their habitat is a violation of Federal law.
RESTRICTIONS	<p>Do not use on vegetable gardens.</p> <p>Do not use on plants intended for use as feed or forage.</p> <p>Not for use in commercial greenhouses or nurseries, or on fruit or nut trees.</p>
PACKAGE HANDLING	FORBID 4F Ornamental Insecticide/Miticide is packaged in polyethylene containers. Do not allow product or containers to freeze.

COMPATIBILITY / MIXING / ORDER-OF-MIXING

FORBID 4F Ornamental Insecticide/Miticide is physically and biologically compatible with many registered pesticides and fertilizers or micronutrients. When considering mixing FORBID 4F with other pesticides or other additives, first contact your supplier for advice. For further information, contact your local Environmental Science U.S., LLC representative. If your supplier and Environmental Science U.S., LLC representative have no experience with the combination you are considering, you should conduct a test to determine physical compatibility. To determine physical compatibility, add the recommended proportions of each chemical with the same proportion of water as will be present in the chemical supply tank, into a suitable container, mix thoroughly and allow to stand for five minutes. If the combination remains mixed, or can be readily re-mixed, the mixture is considered physically compatible.

- FORBID 4F ORNAMENTAL INSECTICIDE/MITICIDE may be used with other recommended pesticides, fertilizers and micronutrients. The proper mixing procedure for FORBID 4F alone or in tank mix combinations with other pesticides is: Fill the spray tank 1/4 to 1/3 full with clean water;

- While recirculating and with the agitator running, add any products in PVA bags (See Note). Allow time for thorough mixing;
- Continue to fill spray tank with water until 1/2 full;
- Add any other wettable powder (WP) or wettable granules (WG) products;
- Add the required amount of FORBID 4F ORNAMENTAL INSECTICIDE/MITICIDE, and any other “flowable” (FL or SC) type products;
- Allow enough time for thorough mixing of each product added to tank;
- If applicable, add any remaining tank mix components: emulsifiable concentrates (EC), fertilizers and micronutrients.
- Fill spray tank to desired level and maintain constant agitation to ensure uniformity of spray mixture.

Mix pesticides in areas not prone to runoff such as concrete mixing/loading pads, disked soil in flat terrain or graveled mix pads, or use a suitable method to contain spills and/or rinsate. Properly empty and triple-rinse pesticide containers at time of use.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of liability before using this product.

If terms are not acceptable, return the unopened product container at once. By using this product, user or buyer accepts the following conditions, disclaimer of warranties and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, because of manner of use and other factors beyond Environmental Science U.S., LLC’s control it is impossible for Environmental Science U.S., LLC to eliminate all risks associated with the use of this product. As a result, crop injury or ineffectiveness is always possible. All such risks shall be assumed by the user or buyer.

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11/26/2019AV1 12/16/2022AV1