



# ACTUATE™ SC



Contains bifentazate, the active ingredient used in Floramite® SC.

<b>ACTIVE INGREDIENT:</b>	(% by weight)
bifentazate: hydrazine carboxylic acid, 2-(4-methoxy-[1,1'-biphenyl]-3-yl) 1-methylethyl ester .....	22.6%
<b>OTHER INGREDIENTS:</b> .....	77.4%
<b>TOTAL:</b> .....	100.0%

Contains 2 pounds active ingredient bifentazate per gallon.

EPA Reg. No. 91234-17

## KEEP OUT OF REACH OF CHILDREN CAUTION

SEE BELOW FOR PRECAUTIONARY STATEMENTS

<b>FIRST AID</b>	
<b>IF SWALLOWED</b>	<ul style="list-style-type: none"> <li>• Call poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>• Do not give anything to an unconscious person.</li> </ul>
<b>HOT LINE NUMBER</b>	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For emergency medical assistance, call SafetyCall: 1-844-685-9173. For chemical emergency: spill, leak, fire, exposure or accident, call CHEMTREC: 1-800-424-9300.	

**For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night  
Within USA and Canada: 1-800-424-9300 or +1 703-527-3887 (collect calls accepted)**

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**  
**CAUTION**

Harmful if swallowed. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Applicators and Other Handlers Must Wear:** Long-sleeved shirt and long pants; shoes plus socks. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, 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/PPE immediately if pesticide gets inside. Then, wash thoroughly and change into clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change clothing.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to birds, estuarine/marine invertebrates and fish. 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 disposing of equipment wash waters or rinsate. This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are foraging the treatment area.

**PHYSICAL OR CHEMICAL HAZARDS**

Do not use or store near heat or open flame. Do not mix or allow to come into contact with oxidizing agents. Hazardous chemical reaction may occur.

**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 through any type of irrigation system.

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 (WPS), 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), notification to workers, 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 12 hours**. PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls
- shoes plus socks
- chemical-resistant gloves made of any waterproof material.

## 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 and greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.

## USE INFORMATION

This product may be applied to foliage for knockdown and residual control of mites on ornamental plants (including ornamental bulb crops, bedding plants, foliage and flowering plants, perennials, shrubs and trees), tomatoes grown in greenhouses and all fruit trees that will not bear fruit for at least 12 months. The plants may be grown in the ground or in pots.

This product may be applied to the above listed plants around residences, public, commercial and industrial areas; interior and exterior landscaping; shadehouses, greenhouses and nurseries; conifer / Christmas tree plantations; recreational sites including golf courses, parks, athletic fields, and campgrounds; and rights-of-way and other easement uses. NOTE: *This product may only be applied to tomatoes that are grown in greenhouses and may NOT be used on tomatoes grown outdoors.*

This product works most effectively on mites that are motile, but also has ovicidal activity against the *Tetranychus* spp. mites (i.e., Spider Mites) and is especially effective against grass mites, red mites and spider mites. Common mite species controlled by Actuate SC include:

**Bamboo Spider Mite** *Schizotetranychus celarius* (Banks)

**Citrus Red Mite** *Panonychus citri* (McGregor)

**Clover Mite** *Bryobia praetiosa* (Koch)

**European Red Mite** *Panonychus ulmi* (Koch)

**Lewis Mite** *Eotetranychus lewisi*

**Pacific Mite** *Tetranychus pacificus* (McGregor)

**Southern Red Mite** *Oligonychus ilcisi* (McGregor)

**Spruce Spider Mite** *Oligonychus ununguis* (Jacobi)

**Strawberry Mite** *Tetranychus turkestanii*

**Two-Spotted Spider Mite** *Tetranychus urticae* (Koch)

NOTE: This product is not effective in controlling rust mites, broad mites and flat mites.

Because this product is not a systemic insecticide, thorough coverage of both the upper and lower surfaces of the leaves, as well as any fruit present, is required. When used as directed, this product is useful in resistance management and IPM programs due to its selective nature that minimizes impacts to beneficial insects.

## MIXING INSTRUCTIONS

To prepare this product for application:

- 1) Fill the tank with 1/2 the required amount of water;
- 2) Add the specified amount of Actuate SC;
- 3) Begin agitation to completely disperse the product; and,
- 4) Add the remaining water required for the tank mix and, if possible, maintain agitation while applying.

Because the stability of this product can be negatively impacted in a high-temperature / high-pH situation, maintain the spray mixture between pH 5.5 – 6.5.

### Tank-Mixtures with Actuate SC

This product may be tank-mixed with other insecticides if broad-spectrum control is necessary. When tank-mixing with other products, a limited trial to determine the compatibility of the tank-mix partners should be made prior to extensive use. Tank mixtures are only permitted in States where all of the pesticide products used as tank-mix partners are registered. It is the pesticide user's responsibility to ensure that all products used in the tank mix are registered for the intended use. Users must follow the most restrictive of all of the labeled use directions, precautionary language, and use limitations for the tank-mix partners.

### USE RATES AND APPLICATION INFORMATION

Apply as soon as mites appear. Actuate SC provides residual control for up to 28 days. Within the range of rates specified in the next paragraph, use the lower rates when mite pressure is low or for preventative applications; and use the higher rates when mite pressure is severe or for extended residual control.

Mix 4 - 8 fluid ounces of Actuate SC per 100 gallons of water (1/4 – 1/2 teaspoon per gallon of water). Apply 1-4 quarts of the mixture per 100 square feet (100-400 gallons per acre) to the foliage using ground spray equipment (including air blast, compressed air, ground boom, hose-end and hydraulic sprayers). The spray volume used is dependent on the size of the plants being treated, with larger plants requiring greater spray volumes.

Coverage of ornamentals with hard-to-wet foliage may be improved by using an adjuvant to the spray mixture. Silwet 77® or Sylgard 309® at a rate of 4 ounces per 100 gallons of water has been found to be effective. As with any tank mixture, the compatibility and safety of any adjuvants should be tested in a small-scale trial prior to widespread use.

NOTE: Do NOT use adjuvants in tank mixtures that will be applied to greenhouse tomatoes.

### USE RESTRICTIONS:

- Do NOT apply Actuate SC more than two times in a single crop year.
- Do NOT apply more than 32 fluid ounces of Actuate SC per acre in a single year.
- Do NOT apply to greenhouse tomatoes within 3 days of harvest (3-day PHI).
- Do NOT use adjuvants in tank mixtures that will be applied to greenhouse tomatoes.
- Do NOT apply Actuate SC by aerial application.



## STRATEGIES FOR RESISTANCE MANAGEMENT

When used as directed, this product is highly effective against mites while also being selectively non-injurious to beneficial and/or predaceous mites and insects. In addition, due to the active ingredient used in this product, mites that have developed resistance to commonly used products can be controlled through application of Actuate SC. Because of this, fewer miticide and/or insecticide applications may be needed for control and fewer resistance issues may arise.

Actuate SC is a Group 20D acaricide and is suitable for use in rotation with other miticides. This product has not been found to cause cross-resistance with other commercial miticides.

Actuate SC should be used in moderation in order to minimize the chances of pest resistance developing. The following strategies may be used to aid in preventing the development of resistance:

- Be sure that the application thoroughly covers ALL the foliage.
- Do NOT wait to apply until after a large pest population has been established. Scout regularly and apply Actuate SC when the first signs of pests are noticed.
- Always apply this product as instructed by the label and using the specified application rates.
- Make only one consecutive application of this product. Any application prior to and/or after application of Actuate SC should be made using an active ingredient that is not a Group 20D acaricide.
- At least two non-Group 20D product applications should be made between Actuate SC treatments.
- Use Integrated Pest Management (IPM) techniques in your insect control program.
- Use biological control organisms appropriate for mite control in conjunction with this product. When used as directed, Actuate SC will not adversely affect populations of the beneficial/predacious mites and insects listed below. The following organisms may be used either in alternation or in conjunction with this product in order to potentially reduce the number of chemical applications:

### **Predatory Mites**

*Amblyseius* spp.

*Iphiseius degenerans*

*Neoseiulus* spp.

*Phytoseiulus persimilis*

*Typhlodromus* spp.

*Zetzellia* spp.

### **Beneficial Insects**

*Aphidius colemani*

*Aphidoletes aphidomyza*

*Chrysoperla carnea* (Common Green Lacewing)

*Coccinella septempunctata*

*Cotesia marginiventris*

*Diglyphus isaea*

*Eretmocerus eremicus*

*Hippodamia convergens*

*Orius insidiosus* (Insidious Pirate Bug)

*Stethorus punctum*

## PLANT TOLERANCE

It is not possible for the manufacturer or seller to determine safety for all varieties of ornamental plants, tank-mix combinations and/or sequential pesticide treatments. *It is strongly recommended that the applicator determine safe use by testing the exact tank mix desired on the ornamental varieties present by conducting a small-scale test prior to widespread use. The end user assumes responsibility for any and all risks or damage caused by application of this product in a manner inconsistent with its labeling.*

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a dry location.

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

### CONTAINER HANDLING:

**Nonrefillable Container (five gallons or less):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. 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  $\frac{1}{4}$  full with water and recap. Shake container 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 reconditioning, if appropriate, or puncture and dispose of container in a sanitary landfill or by incineration.

**Nonrefillable Container (greater than five gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of container in a sanitary landfill or by incineration.

## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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, resistant strains or other influencing factors in the use of the product, which are beyond the control of Atticus, LLC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Atticus, LLC and Seller harmless for any claims relating to such factors.

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