



BIFENAZATE	GROUP	20D	ACARICIDE
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Bizate™ 4SC

Agricultural Miticide
For Agricultural Use Only

ACTIVE INGREDIENT:	(% by weight)
bifenazate: hydrazine carboxylic acid, 2-(4-methoxy-[1,1'-biphenyl]-3-yl) 1-methylethyl ester.....	43.2%
OTHER INGREDIENTS:	56.8%
TOTAL:	100.0%

Contains 4 pounds active ingredient bifenazate per gallon.

KEEP OUT OF REACH OF CHILDREN

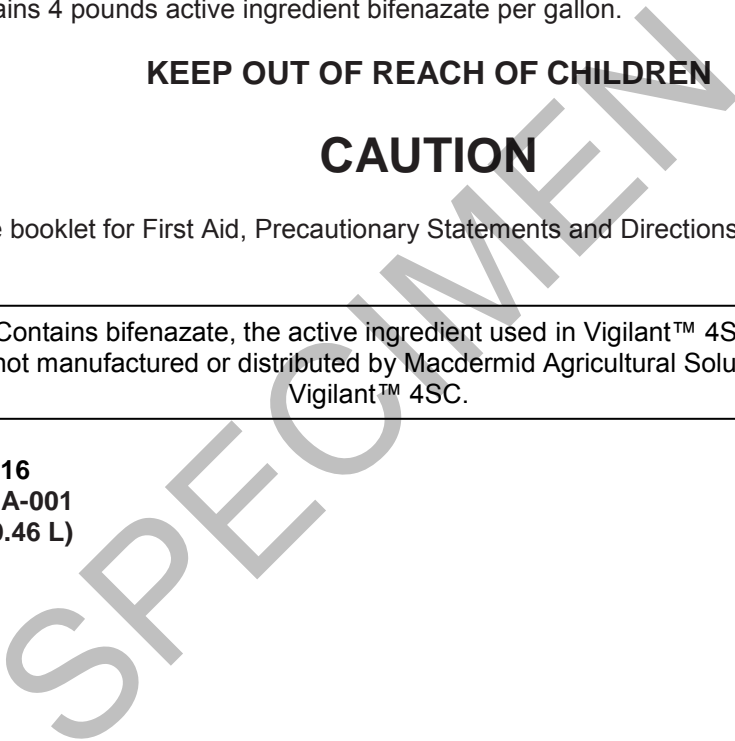
CAUTION

See inside booklet for First Aid, Precautionary Statements and Directions for Use.

Contains bifenazate, the active ingredient used in Vigilant™ 4SC.
Bizate™ 4SC is not manufactured or distributed by Macdermid Agricultural Solutions, Inc., seller of Vigilant™ 4SC.

EPA REG. NO.: 34704-1116
EPA EST. NO.: 070815-GA-001
Net Contents: 2.5 GAL (9.46 L)

Manufactured For:
Loveland Products, Inc.
P.O. Box 1286
Greeley, CO 80632-1286



BIZATE™ 4SC**34704-1116**

FIRST AID	
IF SWALLOWED:	<ul style="list-style-type: none"> • Call 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 by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF INHALED:	<ul style="list-style-type: none"> • Move the person to fresh air. • If the 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.
HOT LINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this pesticide product, including health concerns, medical emergencies, or pesticide incidents, you may call 1-866-944-8565, 24 hours per day, 7 days per week.</p>	

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed. Harmful if inhaled. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and Other Handlers Must Wear:

- Long-sleeved shirt and long pants,
- Shoes plus socks, and
- For mixing and loading activities when not using a closed system, wear an apron and chemical-resistant gloves made of: barrier laminate, polyethylene, butyl rubber (≥ 14 mils), nitrile rubber (≥ 14 mils), neoprene rubber (≥ 14 mils), natural rubber (≥ 14 mils), polyvinyl chloride (≥ 14 mils), or Viton (≥ 14 mils).

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. Wash the outside of gloves before removing them. 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 moderately toxic to bees and other pollinating insects exposed to direct treatment or to residues in/on blooming crops or weeds. Protect pollinating insects by following label directions intended to minimize drift and to reduce pesticide risk to these organisms. 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 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. Exceptions are listed under the **USE INSTRUCTIONS** for each crop.

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 barrier laminate, polyethylene, butyl rubber (≥14 mils), nitrile rubber (≥14 mils), neoprene rubber (≥14 mils), natural rubber (≥14 mils), polyvinyl chloride (≥14 mils), or Viton (≥14 mils).

USE INFORMATION

Bizate 4SC provides both knockdown action as well as extended residual control of the following mites when applied directly to foliage as directed by this label:

Avocado red spider	Clover	Pecan leaf scorch	Spruce spider mite
Banks grass	European red*	Persea	Strawberry spider
Brown almond	McDaniel	Sixspotted	Two-spotted spider
Citrus red	Pacific spider	Southern red mite	Willamette

* using maximum rate specified for the crop or crop group.

This product is appropriate for use in IPM and resistance management programs. Because this product is not systemic, effective control requires complete coverage of both upper and lower leaf surfaces.

MIXING INSTRUCTIONS

This product is a flowable suspension concentrate, **users must be sure to stir or shake this product well prior to use.**

- 1) Fill spray tank with 1/2 the specified amount of water.
- 2) Begin agitation and add the required amount of Bizate 4SC.
- 3) Fill the tank with the remaining amount of required water and continue agitation until product is fully dispersed.

IMPORTANT: The stability of this product can be affected by high pH and high temperature. Keep/maintain spray mixtures containing Bizate 4SC within pH 5.5 - 6.5.

Tank Mixes: To increase the number of insect and/or mite species controlled, this product may be tank-mixed with other insecticides. *It is strongly recommended that compatibility with other tank-mix partners be confirmed prior to broad-scale applications.* 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 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.

USE RATES AND DIRECTIONS

LPI Bifenazate 4 SC controls the mite species listed above and is effective against grass, red and spider mites, primarily in the motile stage of development but does provide ovicidal control of spider mites (*Tetranychus* spp.) as well. It is important that this product does NOT control broad, flat or rust mites. If mite pressure is not heavy use the lowest specified rates listed. If mite pressure is significant or to provide extended residual control use the highest specified rates listed. In order to maximize residual control apply product as soon as mites are detected. For specific application rates, application numbers, and Pre-Harvest Intervals (PHI), refer to the appropriate USE INSTRUCTIONS tables below.

For ground applications, apply this product using the following types of equipment: air-blast sprayers, compressed air, or hydraulic ground booms. The USE INSTRUCTIONS tables below indicate the minimum numbers of gallons of spray solution to apply per acre for ground applications.

For aerial applications, apply this product on certain crops using either a fixed-wing aircraft or a helicopter. A minimum spray volume that ensures complete canopy coverage must be used. Refer to the USE INSTRUCTIONS tables for the minimum numbers of gallons of spray solution to apply per acre (or apply the minimum gallons/acre allowed by your State, which may not be less than the minimum gallons/acre shown on this label).

Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

For Chemigation Applications (Cranberry, Mint, Potato, and Timothy, only): Only one chemigation application may be made per calendar year, and the system must be operated at 80% to 100% during the application to apply the minimum amount of water possible. Refer to the USE INSTRUCTIONS - BEARING CROPS tables for the ranges in application rates permitted and to the CHEMIGATION USE PRECAUTIONS AND INSTRUCTIONS FOR CRANBERRY, MINT, POTATO, AND TIMOTHY.

USE RESTRICTIONS

- Do NOT plant another crop within 30 days after last application of this product. Planting within 30 days of last application increases the likelihood of bifentazate residues appearing in rotational crops.
- Do NOT exceed the maximum amount of bifentazate allowed per crop per calendar year. This applies to *all* product(s) containing bifentazate that are applied to the crop in a calendar year.
- When applying to Golden Delicious apples, do NOT tank-mix oil with this product.
- Do NOT use adjuvants in tank mixtures that will be applied to greenhouse tomatoes.
- Do NOT apply to greenhouse tomatoes within 3 days of harvest (3-day PHI).
- Do NOT use this product in greenhouses on any food crop except tomatoes.

SPRAY DRIFT

Aerial Applications:

- Do not release spray at a height greater than 10 ft above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators are required to use Fine or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

Ground Boom Applications:

- Apply with the nozzle height recommended by the manufacturer, but no more than 4 feet above the ground or crop canopy.
- Applicators are required to use Fine or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.
BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

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.

Controlling Droplet Size – Ground Boom

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aurally to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

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.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

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. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

CHEMIGATION USE PRECAUTIONS AND INSTRUCTIONS FOR CRANBERRY, MINT, POTATOES AND TIMOTHY

- Apply this product only through sprinkler systems, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move 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, contact the 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 the necessary adjustments should the need arise.
- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- 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.
- Maintain constant agitation in the supply tank for the duration of the application.
- To insure complete mixing of the spray solution, use a positive displacement pump to inject the solution before a right angle turn in the main line.
- Applying more than the specified amount of irrigation water per acre may result in decreased performance due to the chemical being flushed from leaf surfaces.
- Do NOT apply this product if there are leaks in any of the fittings or connections, if nozzles do not provide uniform distribution, or if lines containing this product will be drained and dismantled.
- Apply this product for the entire duration of the irrigation process. Calibration accuracy and product distribution will be improved if a larger volume of a more dilute mixture is injected per hour.
- Poor control of mites may result if sprinkler application patterns do not sufficiently overlap. Excessive overlap may result in crop injury.
- Only one chemigation application may be made per calendar year, and the system must be operated at 80% to 100% during the application to apply the minimum amount of water possible.
- Contact State lead agencies for pesticide regulation for State-specific requirements pertaining to chemigation.

USE INSTRUCTIONS - BEARING CROPS (crops that will bear fruit within one year of application)

If mite pressure is not heavy use the lowest specified rates listed. If mite pressure is significant or to provide residual control use the highest specified rates listed.

AVOCADO

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	50	-	-	2	21 *	7

* Use a miticide with a different mode of action between 2 applications of Bizate 4SC.

CANEBERRY SUBGROUP 13-07A: Blackberry; loganberry; red and black raspberry and cultivars and/or hybrids of these; Wild Raspberry

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	50	-	-	2	30 *	1

* Use miticide with a different mode of action between 2 applications of Bizate 4SC.

CHRISTMAS TREES / CONIFER PLANTATIONS AND NURSERIES

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	100	10 *	-	1	-	-

* Minimum gallons per acre OR the minimum permitted by your state, *but not less than shown.*

COTTON

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
16 – 24	20	5 *	-	1	-	60

* Minimum gallons per acre OR the minimum permitted by your state, *but not less than shown.*

CUCURBIT VEGETABLES: Cucumbers; Edible Gourds¹; Muskmelon²; Pumpkin; Squash (summer³ and winter⁴), Watermelon; Chayote (fruit) (*Sechium edule*), Chinese waxgourd (Chinese preserving melon) (*Benincasa hispida*), Citrus melon (*Citrullus lanatus* var. *citroides*), Gherkin (*Cucumis anguria*), *Momordica* spp. (includes balsam apple, bitter melon, Chinese cucumber)

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	50	10 *	-	1	-	3

* Minimum gallons per acre OR the minimum permitted by your state, *but not less than shown.*

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- ¹ Edible Gourd (*Lagenaria* spp.) (includes *hyotan* and *cucuzza*), and (*Luffa acutangula* and *L. cylindrical*) which includes hechima and Chinese okra.
- ² Muskmelon (hybrids and/or cultivars of *Cucumis melo*) includes true cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon.
- ³ Squash, summer (*Cucurbita pepo* var. *melopepo*) includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini.
- ⁴ Squash, winter (*Cucurbita maxima*: *C. moschata*) includes butternut squash, calabaza, hubbard squash; (*C. mixta*; *C. pepo*) includes acorn squash, spaghetti squash.

DRIED SHELLLED BEAN (EXCEPT SOYBEAN) SUBGROUP: Cultivars of *Lupinus* spp. include grain lupin, sweet lupin, white lupin, and white sweet lupin; *Phaseolus* spp. include field bean, kidney bean, lima beans (dry), navy bean, and pinto bean; tepary bean; *Vigna* spp., including adzuki bean, blackeyed pea, catjang, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, and urd bean; broad bean (dry); chickpea; guar; lablab bean; and lentil.

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
16 – 24	20	7 *	-	2	14 **	7

* Minimum gallons per acre OR the minimum permitted by your state, *but not less than shown*.

** Use a miticide with a different mode of action between 2 applications of Bizate 4SC.

FRUITING VEGETABLES, GROUP 8-10: Eggplant; Okra; Peppers (including all varieties of *Capsicum* spp.¹); Tomatoes (field grown); African eggplant; bush tomato; cocona; currant tomato; garden huckleberry; goji berry; ground cherry (*Physalis* spp.); martynia; naranjilla; pea eggplant; pepino; pepper (includes bell pepper, nonbell pepper, chili pepper, hot cooking pepper, pimento, sweet pepper), roselle; scarlet eggplant; sunberry; tomatillo; tree tomato; cultivars, varieties and/or hybrids of these.

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	50	10 *	-	1	-	3

* Minimum gallons per acre OR the minimum permitted by your state, *but not less than shown*.

¹ Pepper (*Capsicum* spp.) includes bell peppers, chili peppers, cooking peppers, pimento, and sweet peppers.

Grape¹; Amur River Grape; Gooseberry; Kiwifruit, hardy; Maypop; Schisandra Berry; Cultivars, varieties and/or hybrids of these.

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	50	-	-	1	-	14

¹ Grapes: The REI is 5 days for cane turning, tying and girdling of table grapes. Exception: In addition to the early entry exceptions allowed by WPS, you may enter or allow workers to enter treated areas to perform all tasks other than tying, turning and girdling after 12 hours following applications, as long as at least long pants, long-sleeved shirts shoes and socks are worn. Notify workers of the exception (including when entry is permitted for each of the tasks named in the exception).

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HOPS

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 24	50	-	-	1	-	14

LEGUME VEGETABLES SUBGROUP 6A (succulent) SUCCULENT PEAS and BEANS SUBGROUP 6B; SUCCULENT SHELLED SOYBEAN: Bean (*Lupinus* spp.) (includes grain lupin, sweet lupin, white lupin, and white sweet lupin); bean (*Phaseolus* spp.) (includes field bean, kidney bean, lima beans, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean); bean (*Vigna* spp.) (includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, southern pea, urd bean, yardlong bean); broadbean (fava); chickpea (garbanzo); guar; jackbean; lablab bean; lentil; pea (*Pisum* spp.) (includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea); pigeon pea; soybean (immature seed); sword bean; sugar pea; Chinese pea; pois mange tout; snap pea; ming pea; podded pea; snow pea; China pea; chicharo; shi hia wandou; saya-endo; sugar snap pea; Congo pea; no-eye pea; red gram; arher; gandule; dhal; toor; gunds pea; Porto Rico pea; urher gandul; guandu; pois-d'angole; gungo pea.

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
16 – 24	20	10 *	-	2	14 **	3

* Minimum gallons per acre OR the minimum permitted by your state, *but not less than shown.*

** Use miticide with a different mode of action between 2 applications of Bizate 4SC.

MINT

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 24	50	10 *	0.1 – 0.2 **	1	-	7

* Minimum gallons per acre OR the minimum permitted by your state, *but not less than shown.*

** Refer to USE RATES AND DIRECTIONS and CHEMIGATION USE PRECAUTIONS AND INSTRUCTIONS sections.

POME FRUIT, GROUP 11-10: Apples; Crabapples; Pears; Quince; azarole; medlar; pear, Asian; quince, Chinese; quince, Japanese; tejocote; cultivars, varieties and/or hybrids of these.

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	50	-	-	1	-	7

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POTATOES Tuberous and corm vegetables: arracacha; arrowroot; artichoke, Chinese; artichoke, Jerusalem; canna, edible; cassava, bitter and sweet; chayote (root); chufa; dasheen (taro); ginger; leren; potato; sweet potato; tanier; turmeric; yam bean; yam, true.

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
16 – 24	20	10 *	0.1 – 0.2 **	2	14 ***	14

* Minimum gallons per acre OR the minimum permitted by your state, *but not less than shown*.

** Refer to USE RATES AND DIRECTIONS and CHEMIGATION USE PRECAUTIONS AND INSTRUCTIONS sections.

*** Use miticide with a different mode of action between 2 applications of Bizate 4SC.

Strawberry; Bearberry; Bilberry; Blueberry, lowbush; Cloudberry; Cranberry; Lingonberry; Muntries; Partridgeberry; Cultivars, varieties, and/or hybrids of these.

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	100	-	0.1 – 0.2 * (Cranberry ONLY)	2	21 **	1

* Refer to USE RATES AND DIRECTIONS and CHEMIGATION USE PRECAUTIONS AND INSTRUCTIONS sections.

** Use miticide with a different mode of action between 2 applications of Bizate 4SC.

STONE FRUIT: Apricots; Cherries (sweet & tart); **Nectarines; Peaches; Plums/Prunes** (*Prunus domestica*, *Prunus* spp.), **Chickasaw Plum** (*Prunus augustifolia*), **Damson Plum** (*Prunus domestica* spp. *insititia*), **Japanese Plum** (*Prunus salicina*), and **Plumcot** (*Prunus armeniaca* X *P. domestica*)

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	50	-	-	1	-	3

TIMOTHY forage and hay fed to horses ONLY.

(Applications are only permitted in Eureka and Humboldt Counties in Nevada)

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
16 – 24	20	10	0.1 – 0.2 *	1	-	Forage: 0 Hay: 7

* Refer to USE RATES AND DIRECTIONS and CHEMIGATION USE PRECAUTIONS AND INSTRUCTIONS sections.

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TOMATOES: Grown in Greenhouses ONLY

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
2-4	100*	-	-	2	-	3

*Apply 1-4 quarts of 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. Refer to **Use Restrictions** section for restrictions.

TREE NUTS: Almonds

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 24	50	-	-	1	-	7

TREE NUTS: Beech nut; Brazil nut; Butternut; Cashew; Chestnut; Chinquapin; Filbert (Hazelnut); Hickory nut; Macadamia nut (bush nut); Pecans; Pistachios; Walnuts (black & English)

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 24	50	-	-	1	-	14

TROPICAL FRUIT: Papaya; Star Apple; Black Sapote; Mango; Sapodilla; Canistel; Mamey Sapote; Lychee; Longan; Spanish Lime; Rambutan; Pulasan; Guava; Feijoa; Jaboticaba; Wax Jambu; Starfruit (Carambola); Passionfruit; Acerola; Sugar Apple; Cherimoya; Atemoya; Custard Apple; Ilima; Soursop; Biriba

Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre		Inches of Water for Chemigation per Acre	Maximum Number of Applications per Calendar Year	Minimum Number of Days Between Applications	Pre-Harvest Interval (PHI) in Days
	Ground	Air				
12 – 16	50	-	-	2	21 *	1

* Use miticide with a different mode of action between 2 applications of Bizate 4SC.

USE INSTRUCTIONS - NON-BEARING CROPS

This product may be used on non-bearing crops (defined as crops that will not bear fruit within one year of application), including all crops listed for the USE INSTRUCTIONS - BEARING CROPS tables as well as the Additional Crops listed below. This use includes application to non-bearing fruit trees and berries in commercial nurseries and tree plantations.

Non-bearing crop applications may be used to control the following mites:

Banks grass	European red*	Southern red mite	Willamette
Brown almond	McDaniel	Spruce spider mite	
Citrus red	Pacific spider	Strawberry spider	
Clover	Pecan leaf scorch	Two-spotted spider	

* using the maximum rate specified for the crop or crop group.

USE RESTRICTIONS FOR NON-BEARING CROPS

- Use ground application equipment ONLY.
- The non-bearing crops listed below have a 12-hour restricted entry interval (REI).

Additional Crops: **Berries** (blueberry, highbush; elderberry; huckleberry); **Citrus** (grapefruit, lemons, limes, oranges, tangerines, etc.); **Currants; Dates; Figs; Persimmons**

Additional Crops	Mites Controlled	Application Rate (fl. oz. / Acre)	Minimum Gallons of Water per Acre	Maximum Number of Applications per Calendar Year
Berries (blueberry, highbush; elderberry; huckleberry); Citrus (grapefruit, lemons, limes, oranges, tangerines, etc.); Currants; Dates; Figs; Persimmons	Banks grass Brown almond Citrus red Clover European red (use maximum rate) McDaniel Pacific spider Pecan leaf scorch Strawberry spider Southern red mite Spruce spider mite Two-spotted spider Willamette	12 – 16 (0.375-0.50 lbs ai/A)	50	1 (maximum 0.5 lbs ai/A)

USE INSTRUCTIONS – ORNAMENTALS GROWN IN GREENHOUSES AND SHADEHOUSES

This product may be applied to ornamental foliage for knockdown and residual control of mites on ornamental plants (including ornamental bulb crops, bedding plants, ornamental foliage and flowering plants, perennials, shrubs and trees). The plants may be grown in the ground or in pots.

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 Bizate 4SC include:

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Bamboo Spider Mite <i>Schizotetranychus celarius</i> (Banks)	Pacific Mite <i>Tetranychus pacificus</i> (McGregor)
Citrus Red Mite <i>Panonychus citri</i> (McGregor)	Southern Red Mite <i>Oligonychus ilcisi</i> (McGregor)
Clover Mite <i>Bryobia praetiosa</i> (Koch)	Spruce Spider Mite <i>Oligonychus ununguis</i> (Jacobi)
European Red Mite <i>Panonychus ulmi</i> (Koch)	Strawberry Mite <i>Tetranychus turkestanii</i>
Lewis Mite <i>Eotetranychus lewisi</i>	Two-Spotted Spider Mite <i>Tetranychus urticae</i> (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.

Use Rates and Application Information

Apply as soon as mites appear. Bizate 4SC provides residual control for up to 28 days. Within the range of rates specified in the next paragraph, use the listed lower rates when mite pressure is low or for preventative applications; and use the higher rates when mite pressure is severe or for residual control.

Mix 2-4 fluid ounces of Bizate 4SC per 100 gallons of water (1/8 – 1/4 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, test the compatibility and safety of any adjuvants in a small-scale trial prior to widespread use.

USE RESTRICTIONS:

- Do NOT apply Bizate 4SC more than two times per calendar year.
- Do NOT apply more than 16 fluid ounces of Bizate 4SC per acre per calendar year.
- Do NOT apply Bizate 4SC by aerial application.

STRATEGIES FOR RESISTANCE MANAGEMENT

For resistance management, LPI Bifenazate 4 SC contains a Group 20D acaricide. Any mite population may contain individuals naturally resistant to Bizate 4SC and other Group 20D insecticides/acaricides. The resistant individuals may dominate the mite population if this group of insecticides/acaricides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of Bizate 4SC or other Group 20D 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):
 - 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.

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- The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- 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.
- Because of its selectivity, Bizate 4SC can be used in conjunction with most biological control organisms available for mite control. Bizate 4SC, when used as directed, does not adversely affect populations of beneficial/predaceous mites and insects including:

Common lacewing (<i>Chrysopa carnea</i>)	Seven-spotted lady beetle (<i>Coccinella septempunctata</i>)
Insidious flower bug (<i>Orius insidiosus</i>)	Six-spotted thrips (<i>Scolothrips sexmaculatus</i>)
Predatory mite (<i>Amblyseius fallacis</i>)	Spider mite destroyer (<i>Stethorus punctum</i>)
Predatory mite (<i>Typhlodromus pyri</i>)	Western flower thrips (<i>Frankliniella occidentalis</i>)
Predatory mite (<i>Zetzellia mali</i>)	Western predatory mite (<i>Typhlodromus occidentalis</i>)
Predatory mite (<i>Phytoseiulus persimilis</i>)	

The use of these organisms in conjunction with Bizate 4SC is encouraged as a means of reducing the number of chemical applications.

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 must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING:

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 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 container for recycling, if available, 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 Loveland Products, Inc. or Seller. To the extent allowed by applicable law all such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Loveland Products, Inc. and Seller harmless for any claims relating to such factors.

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