

# AZATIN<sup>®</sup> XL

BIOLOGICAL INSECTICIDE

SPECIMEN LABEL

## FOR INDOOR AND OUTDOOR USE ON ORNAMENTALS, TURF, AND HORTICULTURAL CROPS INSECT GROWTH REGULATOR

### ACTIVE INGREDIENT:

Azadirachtin\* . . . . . 3.0%

OTHER INGREDIENTS: . . . . . 97.0%

TOTAL: . . . . . 100.0%

\*Contains 0.265 pounds (120 grams) of azadirachtin per gallon.

If you have questions or comments regarding the use of this product, please call 1-800-356-4647.

EPA Reg. No.: 70051-27-59807

EPA Est. No.: 44616-MO-1

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### KEEP OUT OF REACH OF CHILDREN

## CAUTION

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CAUTION:** Harmful if swallowed or inhaled. Avoid breathing vapors or spray mist. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

### PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- long-sleeved shirt and long pants
- chemical resistant gloves such as barrier laminate or Viton (≥14 ml)
- shoes plus socks, and
- protective eye wear.

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.

### FIRST AID

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

Have the product container or label with you when calling a poison control center or doctor or going for treatment.  
Hot Line Number: 1-800-356-4647

### User Safety Recommendations:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Net Contents: One Quart or 32 fl. oz. (946mL)



## ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic invertebrates. For Terrestrial Uses: Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

## PHYSICAL OR CHEMICAL HAZARDS

**Combustible:** Do not use or store near heat or open flame.

## DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow workers entry into treated areas during the restricted entry interval (REI) of 4 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.
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or neoprene rubber or polyvinylchloride (PVC) or Viton.
- Shoes plus socks.
- Protective Eyewear

### 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 Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, or greenhouses. For other uses including golf courses, and other non-agricultural uses, do not enter treated areas without protective clothing until sprays have dried.

## Pests controlled by AZATIN® XL

### Aphids, such as:

Apple Aphid	Melon Aphid	Potato Aphid
Cotton Aphid	Pea Aphid	Rose Aphid
Green Peach Aphid		

### Armyworms, such as:

Beet Armyworm	Lawn Armyworm	Yellowstriped Armyworm
Fall Armyworm	Southern Armyworm	

### Bagworms

### Beetles, Grubs and Weevils, such as:

Billbugs	Elm Leaf Beetle	June Beetle
Black Vine Weevil	Flea Beetle	Mexican Bean Beetle
Colorado Potato Beetle	Japanese Beetle	Rose Chafer

### Bugs, such as:

Chinch Bug

### Cankerworms, such as:

Fall Cankerworm Spring Cankerworm

### Caterpillar and Loopers, such as:

Cabbage Looper	Imported Cabbageworm	Tobacco Budworm
Corn Earworm	Navel Orangeworm	Tobacco Hornworm
Diamondback Moth	Soybean Looper	Tomato Fruitworm
Grapeleaf Skeletonizer	Tent Caterpillar	Tomato Pinworm

### Chafers, such as:

European Chafer	Rose Chafer	Southern Masked Chafer
Northern Masked Chafer		

### Cutworms, such as:

Black Cutworm	Climbing Cutworm	Variegated Cutworm
Citrus Cutworm	Western Bean Cutworm	

### Flies, such as:

Caribbean Fruit Fly	Oriental Fruit Fly	Mushroom Fly
Crane Fly	Mediterranean Fruit Fly	Shore Fly
Fungus Gnat	Melon Fly	Walnut Husk Fly
Hessian Fly		

### Leaf Tiers

### Leafhoppers, such as:

Grape Leafhopper	Potato Leafhopper	Variegated Leafhopper
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### Leafminers, such as:

Citrus Leafminer	Serpentine Leafminer	Vegetable Leafminer
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### Leafrollers, such as:

Blueberry Leafroller	Fruitree Leafroller	Oblique Banded Leafroller
Filbert Leafroller	Grape Leafroller	Omnivorous Leafroller

### Leaf perforators

### Marsh Crane Flies

### Mealybugs

### Moths, such as:

European Pine Shoot Moth	Pine Tip Moth	Tussock Moth
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### Psyllids

### Sawflies

### Thrips, such as:

Citrus Thrips	Gladiolus Thrips	Western Flower Thrips
Flower Thrips		

### Webworms, such as:

Fall Webworms	Sod Webworms	
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### Whiteflies, such as:

Greenhouse Whitefly	Silverleaf Whitefly	Sweetpotato Whitefly
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## CROPS ON WHICH AZATIN® XL CAN BE USED

**Azatin® XL** can be used indoors and outdoors. Plants may be potted, grown in the soil or soil-less mixtures or grown hydroponically.

### Bedding Plants, Flowers, Potted Plants and Foliage, such as:

Actinopteris	Calathea	Gaillardia	Photinia
Aglaonema	Calendula	Gardenia	Pittosporum
Allamanda	Carnation	Geranium	Pinks
Algerian Ivy	Chrysanthemum	Gerbera	Poinsettia
Alocasia	Coleus	Gladioli	Pothos
Anthurium	Columbine	Gypsophilla	Portulaca
Aphelandra	Dahlia	Hedera	Rosemary
Artemisia	Daisy	Hibiscus	Rose
Aster	Daylily	Impatiens	Rubberplant
Aucuba Illex	Delphinium	Iris	Salvia
Azalea	Dianthus	Lily	Schefflera
Baby's Breath	Dieffenbachia	Manvilla	Sedum
Begonia	Dusty Miller	Marigold	Sempervivum
Bougainvillea	Easter Lily	Nasturtium	Snapdragon
Boston Fern	English Ivy	Pansy	Spathiphyllum
Boxwood	Euphorbia	Pelargonium	Stock
Brachycome	Fern	Peony	Syngonium
Cacti	Ficus	Peperomia	Verbena
Calabrese	Foxglove	Petunia	Vinca
Caladium	Freesia	Philodendron	Wandering Jew
Calla	Fuchsia	Phlox	Zinnia

### Ornamentals, such as:

Ageratum	Cineraria	Hydrangea	Poinsettia
Arborvitae	Coleus	Iris	Pyracantha
Aster	Cotoneaster	Ivy	Rhododendron
Aucuba Illex	Cyclamen	Lily	Rose
Azalea	Daffodil	Maidenhair Fern	Rubber Plant
Begonia	Dahlia	Marigold	Snapdragon
Boxwood	Delphinium	Narcissus	Stock
Cacti	Dogwood	Orchid	Tulip
Calendula	Ficus	Pansy	Wandering Jew
Calla	Foliage Plants	Pelargonium	White Cedar
Camella	Fuchsia	Peony	White Pine
Camellia	Gardenia	Phlox	Yew
Carnation	Geranium	Photinia	Yucca
Ceanothus	Hyacinth	Pittosporum	Zinnia
Chrysanthemum			

### Trees and Shrubs, such as:

Andromeda	Boxwood	Douglas Fir	Holly
Arborvitae	Butternut	Elm	Honey Locust
Ash	Cedar	Euonymus	Horse Chestnut
Austrian Pine	Chamaecyparis	Firethorn	Juniper
Azalea	Cherry	Forsythia	Larch
Beech	Crabapple	Hackberry	Laurel
Birch	Cotoneaster	Hawthorn	Lilac
Birdsnest Spruce	Cyprus	Hemlock	Linden
Blue Spruce	Dogwood	Hickory	London Plane
Magnolia	Mountain Ash	Peach	Privet
Manvilla	Myrtle	Pine	Quince
Maple	Oak	Planetree	Spruce
Mimosa	Pachysandra	Poplar	Sycamore

### Turfgrass, such as:

Bentgrass	Centipede Grass	Ryegrass	St. Augustine
Bermuda grass	Fescue	Annual Ryegrass	Wheatgrass
Bluegrass		Perennial Ryegrass	Zoysia Grass
Annual Bluegrass			

### Brassica (Cole) Crops, such as:

Broccoli	Bok Choy	Chinese cabbage	Cauliflower
Brussels sprouts	Cabbage		

### Bulb Vegetables, such as:

Garlic	Leek	Onion	Shallot
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### Citrus Fruits, such as:

Calamandin	Kumquat	Mandarin	Orange, sweet
Citrus citron	Lemon	(tangerine)	Pummelo
Grapefruit	Limes	Orange, sour	Satsuma Mandarin

### Cucurbit Vegetables, such as:

Balsam pear	Chinese waxgourd	Gherkin	Mango Melon
(bitter melon)	Citron Melon	Gourds	Pumpkin
Cantaloupe	Crenshaw	Honeyballs	Squash
Casaba	Cucumber	Honeydew	Watermelon

### Fruiting Vegetables, such as:

Eggplant	Pepinos	Tomatillo	Tomato
Ground Cherry	Peppers		

### Herbs and Spices, such as:

Anise	Celery	Horehound	Sage
Balm	Coriander	Hyssop	Savory
Basil	Costmary	Marigold	Sweet Bay
Borage	Cumin	Marjoram	Tansy
Burnet	Curry Leaf	Mint	Tarragon
Chamomile	Dandelion	Nasturtium	Thyme
Caraway	Dill	Pennyroyal	Wintergreen
Catnip	Fennel	Rosemary	Woodruff
Chives	Fenugreek	Rue	Wormwood

### Leafy Vegetables, such as:

Chinese Spinach	Chrysanthemum	Kale	Parsley
Celery	(edible)	Kohlrabi	Rhubarb
Chervil	Cress	Lettuce	Spinach
Collards	Endive	Mustard Greens	Swiss Chard
Corn salad	Fennel	Orach	Turnip tops

### Nuts, such as:

Almond	Cashew	Hickory nuts	Pecan
Beach nut	Chestnut	Lychee	Pistachio
Brazil nut	Chinquapin	Macadamia	Walnuts
Butternut	Filberts (hazelnuts)		

### Pome Fruits, such as:

Apple	Loquat	Pear	Jujube
Crabapple	Mayhaws	Quince	

### Root and Tuber Crops, such as:

Beet, red	Dasheen (taro)	Radish	Tumeric
Beet, sugar	Ginger	Radish, Japanese	Turnip
Carrot	Horseradish	(Daikon)	Yam
Cassava	Jicama	Rutabaga	Yam bean
Celeriac	Parsnip	Salisfy	
Chervil	Potato	Sweet potato	

### Stone Fruits, such as:

Apricot	Cherry, sweet	Peach	Prune
Cherry, sour	Nectarine	Plum	

### Miscellaneous Crops, such as:

Artichoke	Figs	Okra	Sugar Cane
Asparagus	Hops	Palm	Tomarillo
Avocado	Guayule	Papaya	Tea
Birdseed	Kiwi	Pawpaw	Tobacco
Coffee	Mushrooms	Persimmon	Waterchestnut
Cacao	Agaricus	Pineapple	Watercress
Edible flowers	Oyster		
Feijoa	Shitake		

**Important note:** This product has been evaluated for phytotoxicity on a wide range of crops. However, since all combinations or sequences of pesticide sprays including fertilizers, surfactants and adjuvants have not been tested, spray a small area first to make certain that no phytotoxicity occurs.

**PREHARVEST INTERVAL**

There are no restrictions on applying this product up to the time of harvest. Individual state regulations may vary and should be consulted for allowable preharvest interval.

**MODE OF ACTION**

This product controls targeted insect larvae when they ingest or come in contact with it, by interfering with the insect's ability to molt. It is effective on all larval stages and pupae. It also reduces crop damage by repelling and deterring feeding of all stages of insects.

**GENERAL APPLICATION DIRECTIONS**

**READ ALL DIRECTIONS BEFORE USING.**

Dilute **Azatin® XL** in water at a rate up to 21 fluid ounces (20 grams active ingredient) per acre. Apply using any suitable ground or aerial equipment, in a manner to obtain uniform and complete plant coverage.

For agronomic crops apply using conventional application equipment in a minimum of 30 gallons of water per acre and aerial application equipment in a minimum of 3 gallons of water per acre.

Avoid over-spraying to the point of excessive runoff.

The maximum application rate is 20 grams of active ingredient or less per acre according to the tolerance exemption (40 CFR 180.1119).

Refer to tables for detailed dilution rates.

<b>Application Rates for Whitefly and Other Greenhouse (including Lath and Shade), Nursery and Interiorscape Pests</b>		
Apply <b>Azatin® XL</b> at the dilution rate in 100 gallons of water to assure adequate plant coverage (use 1-2 gallons of spray solution/1,000 sq. feet).		
<b>Pests controlled by Azatin® XL</b>	<b>Rate of Azatin® XL per 100 gallons water</b>	<b>Remarks</b>
<b>Aphids</b>	12 to 16 fl. oz.	Suppression and adult feeding deterrence.
<b>Armyworms</b>	10 to 16 fl. oz.	Foliar application to larvae.
<b>Black Vine Weevil</b>	21 fl. oz./acre	Soil and foliar application to larvae.
<b>Fungus Gnats</b>	8 fl. oz./acre	Apply as soil drench for maggot control.
<b>Leafminers</b>	10 to 16 fl. oz.	Foliar application to larvae.
<b>Western Flower Thrips</b>	12 to 16 fl. oz.	Suppression of larvae and adult feeding deterrence.
<b>Sweetpotato Whitefly</b>	10 to 16 fl. oz.	Foliar application to larvae and nymphs.
<b>Silverleaf Whitefly</b>	10 to 16 fl. oz.	Foliar application to larvae and nymphs.
<b>Greenhouse Whitefly</b>	10 to 16 fl. oz.	Foliar application to larvae and nymphs.
<b>Mushroom Fly</b>	21 fl. oz./acre	Apply as soil drench for maggot control.
<b>Others</b> Bagworms Cankerworms Cutworms Leafhoppers Leafrollers Sawflies Tent Caterpillars	10 to 16 fl. oz.	Foliar application to nymphs/larvae.

**Application Rates for Key Insect Pests in Vegetables, Fruits, and Nut Crops**

Apply **Azatin® XL** at the application rates in sufficient water to assure adequate coverage. (Conventional application equipment: apply in a minimum of 30 gallons water per acre) (Aerial application equipment: apply in a minimum of 3 gallons water per acre)

<b>Pests controlled by Azatin® XL</b>	<b>Rate of Azatin® XL per Acre*</b>	<b>Remarks</b>
<b>Aphids, such as:</b> Cotton Aphid Green Peach Aphid Hop Aphid Potato Aphid	10 to 16 fl. oz.	Foliar application, for suppression only
<b>Armyworms, such as:</b> Beet Armyworm Fall Armyworm Southern Armyworm Yellowstriped Armyworm	5 to 16 fl. oz.	Foliar application to larvae
<b>Beetles, such as:</b> Colorado Potato Beetle	5 to 16 fl. oz.	Foliar application to larvae
<b>Caterpillars, such as:</b> Corn Earworm Diamondback Moth Imported Cabbageworm Navel Orangeworm Tobacco Budworm Tobacco Hornworm Tomato Fruitworm Western Grapeleaf Skeletonizer	10 to 21 fl. oz. 10 to 16 fl. oz. 5 to 16 fl. oz. 10 to 21 fl. oz. 5 to 16 fl. oz. 5 to 16 fl. oz. 5 to 16 fl. oz. 5 to 16 fl. oz.	Foliar application to larvae
<b>Cutworms, such as:</b> Citrus Cutworm Black Cutworm	5 to 16 fl. oz. 5 to 10 fl. oz.	Foliar application to larvae
<b>Loopers, such as:</b> Cabbage Looper Soybean Looper	5 to 10 fl. oz.	Foliar application to larvae
<b>Leafminers, such as:</b> Citrus Leafminer Serpentine Leafminer Vegetable Leafminer	10 to 16 fl. oz..	Foliar application to larvae. Use with oil.
<b>Leafhoppers, such as:</b> Grape Leafhopper Variegated Leafhopper	10 to 16 fl. oz.	Foliar application to nymphs. Use equipment to target the underside of leaves.
<b>Whiteflies, such as:</b> Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	10 to 21 fl. oz.	Foliar application to nymphs. Use equipment to target undersides of leaves.

\*When using lower rates (less than 10 fl. oz.), combine **Azatin® XL** with an approved adjuvant such as a non-phytotoxic crop oil, up to 1%. Always ensure good coverage by adjusting spray gallonage. Treat early for best control. Do NOT use less than 10 fl. oz. in California.

Make applications when pests first appear and are in their early larval stages. Repeat applications every 7 days or as needed.

For best results, add a spreader-sticker at the label rates.

Maintain dilute solutions containing **Azatin® XL** at a pH between 3 and 7, and apply soon after preparation. Do not store for later use.

This product may be pre-mixed in a supply tank with water, fertilizer or other appropriate agricultural chemicals. Agitation is necessary (See Mixing Directions). Crop injury or lack of effectiveness can result if uniform distribution is not achieved.

When pest populations are high, use the higher label rates.

**SPRAY:**

High Volume - When plant foliage is dense, use the higher label rates and increase spray gallonage to obtain uniform and complete coverage.

Aerial/Low/ultra low volume - Apply **Azatin® XL** at rates of 5 to 21 fl. oz./acre (10-21 fl. oz. in California) in a minimum of 3 gallons of water per acre. For best results, ensure uniform and complete plant coverage.

**DRENCH / CHEMIGATION:**

This product is effective as a soil drench for controlling soil-borne insect larvae (e.g. Fungus Gnats).

It is also effective as a soil drench for controlling foliar and soil-borne pests, particularly when alternated with **Azatin® XL** foliar sprays.

Apply **Azatin® XL** in sufficient water and for sufficient duration so as to distribute the application evenly to the entire treated area.

Apply to moderately moist soils. Use volumes that thoroughly wet the soil, but do not cause significant surface runoff or excessive drip from pots.

**CHEMIGATION:**

Refer to supplemental labeling entitled "OHP's Chemigation Bulletin" for use directions for chemigation. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed.

**TURFGRASS:**

**Use Directions**

Always apply **Azatin® XL** as a spray in sufficient water to assure thorough coverage of the foliage or soil, depending on the type of application.

Equipment - Use suitable ground or aerial equipment that allows for uniform coverage of the targeted treatment area, such as hand or power-operated spray equipment, or hose-end application.

Application - For surface feeders - For control of armyworms, sod webworms, (Crambus spp) cutworms, and leafhoppers in turfgrass, apply **Azatin® XL** at a rate up to 21 fluid ounces (0.5 fl. oz./1,000 sq. ft.) per acre. Use the higher label rates for moderate to heavy insect infestations.

Subsurface feeders - For control of white grubs, chinch bugs, and billbugs in turfgrass: Apply at a rate up to 21 fl. oz./acre (0.5 fl. oz./1,000 sq. ft.) per application. Sprinkle irrigate with 1 to 2 inches of water following treatment. Repeat application as needed. Irrigate well before applying. Repeat application as needed. Use up to 5 gallons of water per 1,000 square feet (43 to 218 gallons/A) to obtain good coverage. For all applications use sufficient water rate to obtain thorough uniform coverage.

**Alternative Turf Use Directions (a):**

Always apply this product as a spray in sufficient water to assure thorough coverage of the foliage depending on the type of application.

Equipment - Use suitable ground equipment that allows for uniform coverage of the targeted treatment area, such as hand-operated spray equipment, or hose-end applicators.

Application - For surface feeder - For control of armyworms, sod webworms, (*Crambus* spp) cutworms, and leafhoppers in turfgrass, apply at a rate of 10-21 fluid ounces (0.25 - 0.5 fl. oz./1,000 sq. ft.) per acre. Use the higher label rates for moderate to heavy insect infestation.

#### **Alternate Turf Use Directions (b):**

Dilute this product in water at a rate of 10 to 20 fluid ounces/100 gallons. Repeat application every 7 days or as needed.

Always apply product as a spray in sufficient water to assure thorough coverage of the foliage or soil depending on the type of application.

#### **SPRAY EQUIPMENT**

Use suitable equipment that allows for uniform coverage of the targeted treatment area, such as hand or power-operated spray equipment.

APPLICATIONS: Surface feeders: For control of armyworms, cutworms, and sod webworms in turfgrass: Apply at a rate of 10 to 20 fluid ounces (0.25 to 0.5 fluid ounces per 1,000 square feet) per acre. Use the higher label rates for moderate to heavy infestations. Use 1-5 gallons of water per 1,000 square feet (43 to 218 gallons/ A) to obtain good coverage. Irrigate well before applying. For all applications use sufficient water to obtain thorough uniform coverage.

#### **MIXING DIRECTIONS**

##### **Azatin® XL WITH WATER:**

For best results,

1. Use clean equipment.
2. Fill tank 1/2 full to 3/4 full with water and begin agitation.
3. Add pesticide to the tank.
4. Fill the tank completely with water and mix thoroughly before applying.
5. Adjust spray solution to between 3 to 7 pH, if necessary.
6. Apply pesticide mix immediately after mixing.
7. If the mixture is not applied immediately, agitate before application.
8. Thoroughly clean equipment following application.

##### **TANK MIXTURES OR FLUID FERTILIZERS:**

1. Before using this product in a tank mix with fertilizer or registered pesticide, determine compatibility by conducting a compatibility test with a small amount of each product.
2. Observe all cautions and limitations on labels of all products used in combination.
3. Follow all tank mix directions and observe limitations listed in the combination product(s) label.

##### **COMPATIBILITY TEST**

Perform a compatibility test before tank mixing this product with other product(s) or liquid fertilizer(s). Fill three separate 1 quart jars with 1 pint of water and fertilizer. To a first jar add this product and mix well. To a second jar, add the desired other tank mix product(s) and mix well. To a third jar, combine this product with the other tank mix product(s) and mix well. If more than one product is used, add them separately with dry formulations first, flowables next, and emulsifiable concentrates last. After each addition, shake or stir gently to thoroughly mix. For the appropriate amount of product for this test use the following:

DRY PRODUCTS - For each pound to be applied per acre, add 1.5 level teaspoons to each jar.

LIQUID PRODUCTS - For each pint to be applied per acre, add 0.5 teaspoons or 2.5 ml to each jar.

Note any differences between the mixtures in the jars (compounds alone vs mixtures) after 15 minutes. Look for evidence of physical incompatibility such as clumping, precipitation, oily residues on the sides of the glass or other signs of incompatibility. If either mixture separates, but can be readily re-mixed, the mixture can be sprayed as long as good agitation is used. If the mixtures are incompatible, do not use the mixture.

#### **STORAGE AND DISPOSAL**

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

**PESTICIDE STORAGE:** Do not store above 100 degrees F or below -20 degrees F for extended periods of time. Keep containers tightly closed when not in use.

**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:** 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, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### **WARRANTY**

OHP, Inc. warrants that the material contained herein conforms to the description on the label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in the use of this product are beyond the control of the seller. Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herein. NO OTHER EXPRESS OR IMPLIED WARRANTY OF THE FITNESS OR MERCHANTABILITY IS MADE.

#### **OHP'S CHEMIGATION BULLETIN**

##### **GENERAL INFORMATION:**

Apply this product only through drip (trickle); sprinkler (solid set, lateral move, end tow, side-roll, center pivot, or hand move); flood (basin); furrow; or border 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 nonuniform distribution of treated water.

If you have questions about calibration, 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.

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, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, 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 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.

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.

#### **DRIP TRICKLE CHEMIGATION**

1. The system must contain a functional check valve, vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or

other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply to moderately moist soils. Use volumes that thoroughly wet the soil but that do not cause significant runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.

#### **SPRINKLER CHEMIGATION:**

1. The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
2. The pesticide injection pipeline must also contain a functional, automatic, quickclosing check valve to prevent the flow of fluid back toward the injection pump.
3. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
4. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
6. Systems must use a metering pump, such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
7. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply when soils are moderately moist. Use volumes that thoroughly wet the foliage and/or soil but that do not cause significant runoff or excessive drip from pots. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.
8. Do not apply when wind speed favors drift beyond the area intended for treatment.

#### **FLOOD (BASIN), FURROW AND BORDER CHEMIGATION:**

1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential of water source contamination from the backflow if water flow stops.
2. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
  - a. 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.
  - b. The pesticide injection pipeline must contain a functional, automatic, quickclosing check valve to prevent the flow of fluid back toward the injection pump.
  - c. 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.

- d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
  - e. 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.
  - f. Systems must use a metering pump, such as a positive displacement injection pump (i.e., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
3. Dilute the product in water following the label mixing directions. It may be premixed in a supply tank with water, fertilizer, or other appropriate tank-mixed agricultural chemicals. Agitation is necessary. Apply to moderately moist soils. Use volumes that thoroughly wet the soil but that do not cause significant runoff. Application should be continuous in sufficient water to apply the recommended rate evenly to the entire treated area.

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