

GROUP

4A

INSECTICIDE



# Safari®

20 SG INSECTICIDE



**FOR FOLIAR AND SYSTEMIC INSECT CONTROL IN ORNAMENTAL PLANTS AND VEGETABLE TRANSPLANTS.**

**For Greenhouse, Nursery, Interior Plantscape and Outdoor Landscape Use Only**

Active Ingredient:

Dinotefuran, N-methyl-N'-nitro-N''-(tetrahydro-3-furanyl)methyl]guanidine.....	20%
Other Ingredients.....	80%
Total.....	100%

EPA Reg. No. 33657-16-59639

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**SEE BELOW FOR ADDITIONAL PRECAUTIONARY STATEMENTS.**

**FIRST AID**

**If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

**If swallowed:** Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by the poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.

**If in eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

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**FIRST AID (continued)**

**If inhaled:** 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. Call a poison control center or doctor for further treatment advice.

**HOT LINE NUMBER**

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact **1-800-892-0099** for emergency medical treatment information.

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION**

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

**PERSONAL PROTECTIVE EQUIPMENT**

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as polyethylene or polyvinyl chloride
- Shoes plus socks

**USER SAFETY REQUIREMENTS**

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

**USER SAFETY RECOMMENDATIONS**

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

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to shrimp. 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 apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not dispose equipment washwaters or rinsate into a natural drain or water body.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

Dinotefuran and its degradate, MNG, have the properties and characteristics associated with chemicals detected in ground water. The high water solubility of dinotefuran and its degradate MNG, coupled with its very high mobility and resistance to biodegradation indicates that this compound has a strong potential to leach to the subsurface under certain conditions as a result of label use. Use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground-water contamination. Periodic monitoring of shallow groundwater in the use area is recommended.

#### **PHYSICAL OR CHEMICAL HAZARDS**

Do not use, pour, spill or store near heat or open flame.

#### **SPRAY DRIFT ADVISORY**

Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crop, thereof, rendered unfit for sale, use or consumption.

### **DIRECTIONS FOR USE**

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

**READ ENTIRE LABEL AND PAMPHLET. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

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, greenhouses and handlers of agricultural insecticides. 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 worker entry into treated areas during the restricted entry interval (REI) of 12 hours.**

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**EXCEPTION:** If product is drenched or soil-injected, workers may enter the area at any time if there will be no contact with anything that has been treated.

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
- Chemical-resistant gloves made of any waterproof material, such as polyethylene or polyvinyl chloride
- Shoes plus socks

#### **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, or greenhouses.

**Do not allow others to enter treated areas until sprays have dried.**

#### **DISCLAIMER, RISKS OF USING THIS PRODUCT, LIMITED WARRANTY AND LIMITATION OF LIABILITY**

**IMPORTANT:** Read the entire Label including this Disclaimer, Risks of Using this Product, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable THEN DO NOT USE THE PRODUCT; rather, return the unopened product within 15 days of purchase for a refund of the purchase price.

#### **RISKS OF USING THIS PRODUCT**

The Buyer and User (referred to collectively herein as "Buyer") of this product should be aware that there are inherent unintended risks associated with the use of this product which are impossible to eliminate. These risks include, but are not limited to, injury to plants and crops to which this product is applied, lack of control of the target pests or weeds, resistance of the target pest or weeds to this product, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance, resistance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, disease, moisture conditions, irrigation practices, condition of the crop at the time of application, presence of other materials either applied in the tank mix with this product or prior to application of this product, cultural practices or the manner of use or application, (or a combination of such factors) all of which are factors beyond the control of Valent.

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The Buyer should be aware that these inherent unintended risks may reduce the harvested yield of the crop in all or a portion of the treated acreage, or otherwise affect the crop such that additional care, treatment and expense are required to take the crop to harvest. If the Buyer chooses not to accept these risks, THEN THIS PRODUCT SHOULD NOT BE APPLIED. By applying this product Buyer acknowledges and accepts these inherent unintended risks AND AGREES THAT ALL SUCH RISKS ASSOCIATED WITH THE APPLICATION AND USE ARE ASSUMED BY THE BUYER.

Valent shall not be responsible for losses or damages (including, but not limited to, loss of yield, increased expenses of farming the crop or such incidental, consequential or special damages that may be claimed) resulting from use of this product in any manner not set forth on the label. Buyer assumes all risks associated with the use of this product in any manner or under conditions not specifically directed or approved on the label.

#### **LIMITED WARRANTY**

Valent warrants only that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the label, under average use conditions, when used strictly in accordance with the label **and subject to the Risks of Using This Product as described above. EXCEPT AS SET FORTH ABOVE, VALENT MAKES NO OTHER WARRANTIES, EITHER EXPRESSED OR IMPLIED.** No agent or representative of Valent or Seller is authorized to make or create any other express or implied warranty.

#### **LIMITATION OF LIABILITY**

**In no event shall Valent or Seller be liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. The limitation includes, but is not limited to, loss of yield on all or any portion of the treated acreage, increased care, treatment or other expenses required to take the crop to harvest, increased finance charges or altered finance ratings, emotional or mental distress and/or exemplary damages. THE EXCLUSIVE REMEDY OF THE BUYER, AND THE EXCLUSIVE MAXIMUM LIABILITY OF VALENT OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT SHALL BE THE RETURN OF THE PURCHASE PRICE OF THIS PRODUCT OR, AT THE ELECTION OF VALENT OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

#### **PROMPT NOTICE OF CLAIM**

Valent must be provided notice as soon as Buyer has reason to believe it may have a claim, but in no event later than twenty-one days from date of

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planting, or twenty-one days from the date of application, whichever is latter, so that an immediate inspection of the affected property and growing crops can be made.

If Buyer does not notify Valent of any claims, in such period, it shall be barred from obtaining any remedy.

#### **NO AMENDMENTS**

Valent and Seller offer this product, and Buyer accepts it, subject to the foregoing **Disclaimer, Risks of Using This Product, Limited Warranty and Limitation of Liability**, which may not be modified by any oral or written agreement.

### **TANK MIXES**

**NOTICE: Tank mixing or use of this product with any other product which is not specifically and expressly authorized by the label shall be the exclusive risk of user, applicator and/or application advisor.**

Read and follow the entire label of each product to be used in the tank mix with this product.

### **GENERAL INFORMATION**

#### **Application to Ornamental plants:**

- Safari® 20 SG Insecticide can be applied as a foliar spray, a broadcast spray, a soil drench, soil injection and via chemigation for insect control in ornamental plants in greenhouses, nurseries, outdoor landscapes and interior plantscapes.
- *Safari* 20 SG Insecticide is a systemic product and will be taken up by the root system and translocated upward throughout the plant. When applied as a foliar spray, the product offers translaminar and locally systemic control of foliar pests.
- When applied to the soil, *Safari* 20 SG Insecticide will be translocated more quickly in herbaceous plants than in woody shrubs and trees. Speed of insect control will range from as little as one day for small herbaceous plants in containers, to several weeks in large trees in growing in the landscape.
- For outdoor and landscape ornamentals, broadcast applications cannot exceed a total of 2.7 lbs. of product (0.54 lb. active ingredient) per acre per year.

#### **MIXING INSTRUCTIONS:**

*Safari* 20 SG Insecticide Alone: Add 1/2 of the required amount of water to the mix tank. With the agitator running, add the desired amount of *Safari* 20 SG Insecticide to the tank. Continue agitation while adding the remainder of the water. Begin application of the solution after *Safari* 20 SG Insecticide has completely dispersed into the mix water. Maintain agitation until all of the mixture has been applied.

*Safari* 20 SG Insecticide + Tank Mixtures: Add 1/2 of the required amount of water to the mix tank. Start

the agitator running before adding any tank mix partners. In general, tank mix partners should be added in this order: products packaged in water-soluble packaging, wettable powders, wettable granules (dry flowables), liquid flowables, liquids, emulsifiable concentrates, and surfactants/adjuvants. Always allow each tank mix partner to become fully dispersed before adding the next product. Provide sufficient agitation while adding the remainder of the water. Maintain agitation until all the mixture has been applied.

**NOTE:** When using *Safari 20 SG Insecticide* in tank mixtures, all products in water-soluble packaging should be added to the tank before any other tank mix partner, including *Safari 20 SG Insecticide*. Allow the water-soluble packaging to completely dissolve and the product(s) to completely disperse before adding any other tank mix partner to the tank.

If using *Safari 20 SG Insecticide* in a tank mixture, observe all directions for use, crop/sites, use rates, dilution ratios, precautions, and limitations which appear on the tank mix product label. No label dosage rate should be exceeded, and the most restrictive label precautions and limitations should be followed. This product should not be mixed with any product which prohibits such mixing. Tank mixtures or other applications of products referenced on this label are permitted only in those states in which the referenced products are labeled.

#### **Compatibility**

**IMPORTANT - The crop safety of all potential tank mixes on all crops has not been tested. Before applying any tank mixture not specifically recommended on this label, the safety to the target crop should be confirmed.**

*Safari 20 SG Insecticide* is compatible with most commonly used pesticides, crop oils, adjuvants, and nutritional sprays. However, since it is not possible to test all possible mixtures, the user should pre-test to assure the physical compatibility and lack of phytotoxic effect of any proposed mixtures with *Safari 20 SG Insecticide*. To determine the physical compatibility of *Safari 20 SG Insecticide* with other products, use a jar test, as described below:

Using a quart jar, add the proportionate amounts of the products to 1 quart of water. Add wettable powders and water-dispersible granular products first, then liquid flowables, and emulsifiable concentrates last. After thoroughly mixing, let stand for at least 5 minutes. If the combination remains mixed or can be remixed readily, it is physically compatible. Once compatibility has been proven, use the same procedure for additional required ingredients to the spray tank.

#### **RESISTANCE MANAGEMENT RECOMMENDATIONS**

*Safari 20 SG Insecticide* contains a Group 4A insecticide. Insect biotypes with acquired resistance to Group 4A may eventually dominate the population if Group 4A insecticides are used repeatedly in the same crop or in successive years as the primary method of control for a targeted species. This may result in partial or total loss of control of those species by *Safari 20 SG Insecticide* or other Group 4A insecticides.

To delay the development of insecticide resistance in greenhouse, nursery and interiorscape use sites, strongly consider the following recommendations:

- Do not apply *Safari 20 SG Insecticide* or other Group 4A insecticides to consecutive generations of the same insect pest species.
- Do not drench soil media with *Safari 20 SG Insecticide* or other Group 4A insecticides more than one time per crop cycle or three months, whichever is shorter.
- Do not make more than two foliar or broadcast sprays of *Safari 20 SG Insecticide* or other Group 4A insecticides to a single crop during a two-month period.
- Do not make more than one soil drench and one foliar or broadcast spray with *Safari 20 SG Insecticide* or other Group 4A insecticides during a two-month period.
- Base insecticide use on a comprehensive IPM program.
- Monitor treated insect populations for loss of field efficacy.
- Contact your local extension specialist, certified crop advisors, and/or manufacturers for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact Valent U.S.A. Corporation at toll free number 1-800-682-5368.

#### **APPLICATION PROCEDURES AND SPRAY EQUIPMENT**

**Ground Application:** Spray nozzles should be selected which will provide accurate and uniform spray deposition. Use spray nozzles which provide medium-sized droplets and reduce drift. To help insure accuracy, calibrate sprayer before each use. For information on spray equipment and calibration, consult nozzle manufacturers and/or State Extension Service specialists.

Apply *Safari 20 SG Insecticide* using sufficient water volume to provide thorough and uniform coverage. In situations where a dense canopy exists and/or pest pressure is high, use greater water volumes. The use of a spray adjuvant may improve spray coverage. Avoid making applications under condi-

tions where uniform coverage cannot be obtained or where excessive spray drift may occur.

**Applications to ornamental plants:** *Safari* 20 SG Insecticide can be applied using many different types of application equipment. Apply in sufficient water to ensure good coverage of ornamental plants. When making applications to plants with hard to wet foliage such as holly or pine, the addition of a spreader/sticker is recommended. If concentrate or mist type spray equipment is used, an equivalent amount of product should be used on the spray area as would be used in a dilute solution. To assure optimum effectiveness, the product must be placed where the growing portion of the target plant can absorb the active ingredient. Applications can be made to foliage or as a soil drench.

#### **RESTRICTIONS**

- Do not graze treated areas or use clippings from treated areas for feed or forage.
- Avoid runoff or puddling of irrigation water following application.
- Keep children and pets off treated areas until spray has dried.
- Avoid application to areas that are water logged or saturated or frozen, which will not allow penetration into the root zone of the plant.
- Avoid soil application when plants are dormant or not actively taking up water from the soil.

#### **APPLICATION THROUGH IRRIGATION SYSTEMS (CHEMIGATION):**

*Safari* 20 SG Insecticide may be applied by injection into an irrigation system, either alone or in combination with other pesticides or chemicals that are registered for application through irrigation systems. Dilution ratios are normally 1:100 to 1:200, depending on the system. Apply this product only through microirrigation (individual spaghetti tube), drip irrigation, overhead irrigation, or motorized calibrated irrigation equipment (ornamentals). Do not apply through any other type of irrigation system. Lack of effectiveness can result from non-uniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts. 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.

#### **Using Water from Public Water Systems:**

**DO NOT APPLY SAFARI 20 SG INSECTICIDE THROUGH ANY IRRIGATION SYSTEM PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM.**

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 per year. *Safari*

20 SG Insecticide may be applied through irrigation systems which may be supplied by a public water system only if the water from the public water system is 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 to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank.

Any irrigation system using water supplied from a public water system must also meet the following requirements:

#### **Operating Instructions for All Recommended Types of Irrigation Systems:**

1. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
2. 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.
3. The pesticide injection pipeline must contain a functional, automatic, quick-closing, check valve to prevent the flow of fluid back toward the injection pump.
4. 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.
5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
6. 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.
7. 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.
8. Do not apply when wind speed favors drift beyond the area intended.

#### **Calibration and Application Instructions:**

*Safari* 20 SG Insecticide should be applied under the schedule specified in the specific use recommendations, not according to the irrigation schedule unless the events coincide. In general, set the equipment to

apply the minimum amount of water per acre. Run the system at 86 - 90% of the manufacturer's maximum rated travel speed.

The following calibration and application techniques are provided for user reference, but do not constitute a warranty of fitness for application through sprinkler irrigation equipment. Users should check with state and local regulatory agencies for potential use restrictions before applying any agricultural chemical through sprinkler irrigation equipment.

#### **RECOMMENDATIONS TO AVOID SPRAY DRIFT**

As with all crop protection products, it is important to avoid off-target movement. Do not allow spray to drift onto adjacent land, crops, or aquatic areas. Follow these recommendations to avoid spray drift:

1. Make applications when wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 10 mph. Avoid applications when wind gusts approach 10 mph.
2. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.
3. Do not cultivate or plant crops within 25 feet of the aquatic area as to allow growth of a vegetative filter strip.
4. Do not make applications during temperature inversions. Inversions are characterized by stable air and increasing temperatures with increased height above the ground. Mist or fog may indicate the presence of an inversion in humid areas. The applicator may detect the presence of an inversion by producing smoke and observing a smoke layer near the ground surface.

5. Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
6. Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage. Applications more than 10 feet above the crop canopy should be avoided.
7. For aerial applications, the spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used and must not exceed 75% of wing span or rotor diameter.

#### **Air Assisted (Air Blast) Tree and Vine Sprayers (Ornamentals Only):**

Air assisted tree and vine sprayers carry droplets into the canopy of trees and vines via a radially or laterally directed air stream. In addition to the general drift management principles already described, the following specific practices will further reduce the potential for drift:

- Adjust deflectors and aiming devices so that spray is only directed into the canopy.
- Block off upward pointed nozzles when there is no overhanging canopy.
- Use only enough air volume to penetrate the canopy and provide good coverage. Use a minimum of 50 gallons finished spray per acre.
- Do not allow spray to go beyond the edge of the cultivated area. Spray the outside row only from outside the planting.

## ORNAMENTAL PLANTS

### Recommendations for foliar or broadcast spray application

For foliar insect control on ornamental plants in nurseries, greenhouses, interior plantscapes, lath and shadehouses, and outdoor landscapes (commercial, industrial, recreational and residential).

Crop	Pest	Product Rate	Remarks
Ornamental plants including: Bedding Plants Evergreens Flowering Plants Foliage Plants Ground Covers Non-Bearing Fruit Trees Non-Bearing Nut Trees Non-Bearing Vines Ornamental Trees Shrubs  Not for use on house plants grown inside private residences.	Adelgids including: Hemlock Woolly Aphids (Suppression) Glassy-Winged Sharpshooter Japanese Beetles (adults) Lacebugs including: Azalea Leaf Beetles Leafhoppers Leafminers including: Serpentine Mealybugs including: Citrus Long-Tailed Madeira Obscure Pink Hibiscus Psyllids including: Asian Citrus Scales (Armored and Soft) including: Cryptomeria Cycad Aulacaspis Elongate Hemlock Euonymus Florida Red Florida Wax Tea Thrips (suppression) Chilli Whiteflies including: Giant Greenhouse Silverleaf/Sweet potato (B and Q Biotypes)	<p style="text-align: center;"><b>Foliar Spray</b></p> 1/4 to 1/2 lb per 100 gallons (4 to 8 oz per 100 gallons) (0.05 to 0.1 lbs ai per 100 gallons) 8 - 16 oz per Acre (0.1 to 0.2 lbs ai/A) 0.2 - 0.4 oz per 1,000 sq ft  For treatment of small areas: 1/2 - 1.0 tsp per gallon	For optimal control, make first application just before pest populations reach an economic threshold. If necessary, make a second application after 14-21 days.  Tank mixing with a surfactant may improve control of pests such as whitefly, mealybug and scale. Confirm plant safety of tank mix in small area before using on a commercial scale.  100 gals. of spray mix will treat 20,000 sq ft of area.

1 level teaspoon contains 2.4 grams and 1 cup (8 fl oz) contains 4.0 oz of *Safari 20 SG* Insecticide.

Do not apply more than 2.7 lbs (0.54 lbs ai) per acre of nursery or landscape per year.

To delay the development of resistance: Do not apply *Safari 20 SG* Insecticide or other Group 4A insecticides to consecutive generations of the same insect species without switching to a different mode of action. Do not make more than two sprays of *Safari 20 SG* Insecticide or other Group 4A insecticides to a single crop during a two-month period. Refer to "Resistance Management Recommendations" section of label for further guidelines.

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**ORNAMENTAL PLANTS (continued)**

**Recommendations for application to soil media of containerized plants**

For systemic insect control on containerized ornamental plants in nurseries, greenhouses, interior plantscapes, lath and shadehouses, and outdoor landscapes (commercial, industrial, recreational and residential) by application as a soil drench, micro-irrigation (spaghetti tube or emitter), drip irrigation, overhead irrigation, ebb and flood irrigation equipment or motorized irrigation equipment.

Crop	Pest	Product Rate		Remarks
Ornamental plants including: Bedding Plants Evergreens Flowering Plants Foliage Plants Ground Covers Non-Bearing Fruit Trees Non-Bearing Nut Trees Non-Bearing Vines Ornamental Trees Shrubs	Adelgids including: Hemlock Woolly Aphids Flatheaded Borers including: Flatheaded Appletree Fungus Gnats (larvae) Glassy-Winged Sharpshooter Lacebugs including: Azalea Leaf Beetles Leafhoppers Leafminers including: Boxwood Serpentine Mealybugs including: Citrus Long-Tailed Madeira Obscure Pink Hibiscus Root Psyllids including: Asian Citrus Root Weevils (larvae and adults) including: Black Vine Roundheaded Borers including: Asian Longhorned (continued)	<p align="center"><b>Soil Media Drench</b></p> 3/4 to 1-1/2 pounds per 100 gallons 12 to 24 ounces per 100 gallons 1.5 - 3.0 teaspoons per gallon		Only apply to moist soil media. Do not apply to dry or saturated media. For optimal performance, do not apply media drench until roots from transplanted plugs or liners have extended at least 1/2" to the edge of pots. Do not leach treated soil media for at least 7 days after application or performance may be reduced. Heavy rainfall or excessive irrigation following application may decrease performance. In general, higher rates will be needed to control insects on woody plants than on herbaceous plants.
	<p align="center"><b>Media Drench Volume for Individual Pots</b></p>		Poinsettia: For optimal control of whiteflies, treat plants 1-3 weeks after pinch. Late season drenches will take longer to give control.	
	<p align="center"><b>Pot diameter (inches)</b></p>	<p align="center"><b>Fl oz of dilute solution per pot</b></p>		
	4	2		
	5	3		
	6	4		
	7	5		
	8	6		
	<p align="center"><b>Media Drench Volume for Plants in Raised Beds, Benches, Bedding Flats, Plug and Liner Trays:</b></p> For larger pot volumes, apply 3 – 4 oz of dilute solution (0.11 to 0.22 grams product/4 oz) per gallon of potting media. Drench volume should be sufficient to wet soil media without resulting in overflow or runoff through drain holes in pot.			
	<p align="center"><b>Media Drench Volume for Plants in Raised Beds, Benches, Bedding Flats, Plug and Liner Trays:</b></p> Apply sufficient dilute solution to wet soil media without loss of liquid from bottom of bed or liner.			

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**ORNAMENTAL PLANTS (continued)**

<b>Recommendations for application to soil media of containerized plants (continued)</b>				
<b>Crop</b>	<b>Pest</b>	<b>Product Rate</b>		<b>Remarks</b>
Ornamental plants including: Bedding Plants Evergreens Flowering Plants Foliage Plants Ground Covers Non-Bearing Fruit Trees Non-Bearing Nut Trees Non-Bearing Vines Ornamental Trees Shrubs	Scales (Armored and Soft) including: Cottony Cushion Cryptomeria Cycad Aulacaspis Duplacionaspis Elongate Hemlock Euonymus False Oleander Fletcher Florida Red Florida Wax Oystershell Pine needle Tea Tulip Tree Thrips (Suppression) Chilli Whiteflies including: Giant Greenhouse Silverleaf/Sweetpotato White Grubs including: Oriental Beetle	<b>Ebb and Flood Irrigation</b>		Bring several pots to field capacity, let soil dry and then measure amount of water required to bring pots back to field capacity. Multiply the average volume of water required to rehydrate one pot by the number of pots to be treated. Add this volume of water to the minimum amount of water needed to flood the area to be treated. Re-use any returned volume in subsequent irrigation of same plants.  For pot diameter greater than 8", use 3.7-7.5 ounces of <i>Safari 20 SG</i> Insecticide per 1,000 gallons of potting soil media.  A 1:100 injection ratio (1 part injector tank solution: 100 parts irrigation water) is recommended. Do not mix more than 24 oz of <i>Safari 20 SG</i> Insecticide per gallon of injector tank water, or some product may settle out of solution. Irrigation system should be calibrated to deliver 3-4 fl oz of dilute solution per gallon of potting media.
		<b>Pot diameter (inches)</b>	<b>Ounces per 1,000 pots</b>	
		4	1.9 - 3.7	
		5	2.8 - 5.6	
		6	3.7 - 7.5	
		7	4.7 - 9.3	
		8	5.6 - 11.2	
		<b>Chemigation of individual containers using a micro-irrigation system (spaghetti tube)</b>		
		<b>Injection ratio</b>	<b>Ounces per gallon of injector tank water</b>	
		1:100	12 - 24	
<p>1 level teaspoon contains 2.4 grams, and 1 cup (8 fl oz) contains 4.0 oz of <i>Safari 20 SG</i> Insecticide.</p> <p>Do not apply more than 2.7 lbs (0.54 lbs ai) per acre of nursery or landscape per year. To delay the development of resistance, do not make more than one soil application per crop cycle or three-months, whichever is shorter. Refer to "Resistance Management Recommendations" section of the label for additional guidelines.</p>				

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**ORNAMENTAL PLANTS (continued)**

<b>Recommendations for soil application to in-ground plants</b>			
For systemic insect control on ornamental plants in field nurseries (in-ground) and outdoor landscapes (commercial, industrial, recreational and residential) by application as a soil drench, micro-irrigation, drip irrigation or as a banded soil spray.			
<b>Crop</b>	<b>Pest</b>	<b>Product Rate</b>	<b>Remarks</b>
Ornamental plants including: Bedding Plants Evergreens Flowering Plants Foliage Plants Ground Covers Non-Bearing Fruit Trees Non-Bearing Nut Trees Non-Bearing Vines Ornamental Trees Shrubs	Adelgids including: Hemlock Woolly Aphids Flatheaded Borers including: Flatheaded Appletree Fungus Gnats (larvae) Glassy Winged Sharpshooter Lacebugs including: Azalea Leaf Beetles Leafhoppers Leafminers including: Boxwood Serpentine Mealybugs including: Citrus Long-Tailed Madeira Obscure Pink Hibiscus Root Psyllids including: Asian Citrus Root Weevils (larvae and adults) including: Black Vine Roundheaded Borers including: Asian Longhorned (continued)	<p align="center"><b>Shrubs</b></p> <p align="center">3 - 6 grams (1.25 - 2.5 level teaspoons) per foot of height</p> <p align="center">1.0 - 2.1 ounces per 10 feet of height</p>	<p>For optimal control, apply early in plant's annual growing cycle and keep soil moist for at least 7 days after application.</p> <p>Only apply to moist soil. Do not apply to dry, saturated, or frozen soil, or when plants are not actively taking up water from soil.</p> <p>Heavy rainfall or inadequate irrigation immediately following application may decrease performance.</p> <p>Use higher labeled rates for broadleaf evergreens with dense foliage (example hollies).</p> <p><b>Soil Drench:</b> Mix required dose in water and uniformly apply to soil around base of shrub or tree. Pull back mulch before drenching. For optimal performance, apply at least 1 quart of dilute solution per foot of height or inch of trunk diameter. If lower drench volume is used, apply 1/2 inch of irrigation immediately after application to move product into root zone. Keep soil moist for at least 7 days after application.</p>
		<p align="center"><b>Trees</b></p> <p align="center">3 - 12 grams (1.25 - 5.0 level teaspoons) per inch of trunk diameter at breast height (DBH)</p> <p align="center">1.05 - 4.2 ounces per 10 inches of trunk diameter at breast height (DBH)</p> <p align="center">For multi-stem trees, base rate on cumulative inches of diameter of all stems at breast height.</p>	<p><b>Soil Injection:</b> Mix required dose in water and make at least four injections per shrub or tree with a low-pressure applicator. Use same amount of solution per hole. Injections can be made using the following methods:</p> <p><i>Grid System</i> – Space injections on a 2.5 ft center extending to drip line.</p> <p><i>Circle System</i> – Make injections in concentric circles extending inward from drip line.</p> <p><i>Basal System</i> – Space injections evenly around trunk no more than 12" out from the base.</p> <p>For optimal performance, inject at least 1 quart of dilute solution per foot of height or inch of trunk diameter.</p>

(continued)

**ORNAMENTAL PLANTS (continued)**

<b>Recommendations for soil application to in-ground plants (continued)</b>				
<b>Crop</b>	<b>Pest</b>	<b>Product Rate</b>		<b>Remarks</b>
Ornamental plants including: Bedding Plants Evergreens Flowering Plants Foliage Plants Ground Covers Non-Bearing Fruit Trees Non-Bearing Nut Trees Non-Bearing Vines Ornamental Trees Shrubs	Scales (Armored and Soft) including: Cottony Cushion Cryptomeria Cycad Aulacaspis Duplacionapis Elongate Hemlock Euonymus False Oleander Fletcher Florida Red Florida Wax Oystershell Pine needle Tea Tulip Tree Thrips (Suppression) Chilli Whiteflies including: Giant Greenhouse Silverleaf/ Sweetpotato White Grubs including: Oriental Beetle	<b>Banded spray application to soil surface (2.7 lbs per acre)</b>		Apply as a uniform band in row over root zone. Apply from peak adult flight to peak egg hatch.  Apply in at least two gallons of water per 1,000 linear feet. Irrigate after application to move product into soil profile.  Control any weeds in treated area prior to application, or performance may be reduced.  Adjust rates accordingly for other row spacing.
		<b>Row spacing</b>	<b>Ounces per 1,000 linear feet of row</b>	
		3	3	
		4	4	
		5	5	
		6	6	
		7	7	
		8	8	
		1 level teaspoon contains 2.4 grams, and 1 cup (8 fl oz) contains 4.0 oz of <i>Safari 20 SG</i> Insecticide.		
		Do not apply more than 2.7 lbs (0.54 lbs ai) per acre of nursery or landscape per year. To delay the development of resistance, do not make more than one soil application per crop cycle or three-months, whichever is shorter. Refer to "Resistance Management Recommendations" section of the label for additional guidelines.		

## VEGETABLE TRANSPLANTS

<b>Recommendations for foliar or broadcast spray application</b>			
For foliar insect control on vegetable transplants grown in enclosed structures.			
Crop	Pest	Product Rate	Remarks
Cucurbits: Cantaloupe Cucumber Melons Squash Fruiting Vegetables: Eggplant Peppers Tomato Head and Stem Brassica: Broccoli Brussels Sprouts Cabbage Cauliflower Kohlrabi	Aphids Leafminers Mealybugs Thrips (suppression) Whiteflies including: Silverleaf/Sweetpotato (B and Q Biotypes)	3.5 - 7.0 oz/ 100 gal 7-14 oz per Acre 0.16 - 0.32 oz per 1,000 sq ft (0.09 to 0.18 lbs ai per Acre)	Do not make more than one application per crop. Do not apply to greenhouse grown vegetables. 100 gals. of spray mix will treat 20,000 sq ft of area. Do not apply within one (1) day of harvest.
Leafy Vegetables (excluding Brassica spp.)	Aphids Leafminers Mealybugs Thrips (suppression) Whiteflies including: Silverleaf/Sweetpotato (B and Q Biotypes)	3.5 - 5.5 oz/ 100 gal 7-11 oz per Acre 0.16 - 0.25 oz per 1,000 sq ft (0.09 to 0.134 lbs ai per Acre)	Do not make more than one application per crop. Do not apply to greenhouse grown vegetables. 100 gals. of spray mix will treat 20,000 sq ft of area. Do not apply within seven (7) days of harvest.
1 level teaspoon contains 2.4 grams and 1 cup (8 fl oz) contains 4.0 oz of <i>Safari</i> 20 SG Insecticide. Do not apply more than 1.34 lbs (0.268 lbs ai) per acre of nursery per year. To delay the development of resistance: Do not apply <i>Safari</i> 20 SG Insecticide or other Group 4A insecticides to consecutive generations of the same insect species without switching to a different mode of action. Do not make more than two sprays of <i>Safari</i> 20 SG Insecticide or other Group 4A insecticides to a single crop during a two-month period. Refer to "Resistance Management Recommendations" section of label for further guidelines.			

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## STORAGE AND DISPOSAL

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

### PESTICIDE STORAGE

Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Store in a cool dry place. Do not store diluted spray. For help with any spill, leak, fire or exposure involving this material, call day or night **1-800-892-0099**.

### PESTICIDE DISPOSAL

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

### CONTAINER DISPOSAL

Triple rinse (or equivalent). Do not reuse container. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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Manufactured for

**Valent U.S.A. Corporation**

P.O. Box 8025

Walnut Creek CA 94596-8025

Made in U.S.A.

Form 1521-B

EPA Reg. No. 33657-16-59639

Information contained in this booklet is accurate at the time of printing. Since product testing is a continuous process, please read and follow the directions on the product label for the most current directions and precautionary statements.

Always check with your state to verify state registration status or call 800-89-VALENT (898-2536).



For state registration and/or supplemental labels, please call or visit us online.

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***Read and follow the label instructions before using.***

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