{Booklet Label}

GROUP

7 INSECTICIDE

## DISTANCE®

Insect Growth Regulator for control of listed insects on listed greenhouse vegetables and greenhouse ornamentals

**COMMERCIAL** 

REGISTRATION NO.: 28414

PEST CONTROL PRODUCTS ACT

CAUTION EYE AND SKIN IRRITANT

KEEP OUT OF REACH OF CHILDREN.

READ THE LABEL BEFORE USING.

**NET CONTENTS: 1L** 

Valent Canada, Inc. 201-230 Hanlon Creek Blvd. Guelph, ON N1C 0A1 519-767-9262 www.valent.ca

DISTANCE® is a registered trademark of Valent U.S.A. LLC.

#### **GENERAL INFORMATION:**

For control of listed insects on greenhouse ornamentals and greenhouse vegetables (tomatoes, peppers, cucumbers, and eggplants). DISTANCE affects all pest insect life stages, including eggs, nymphs/larvae, pupae and adults. DISTANCE does not control adults, but greatly reduces their production of viable eggs due to its strong transovarial activity. In whitefly, transovarial activity begins within one day after adults contact or ingest DISTANCE residues. DISTANCE is also ovicidal and inhibits metamorphosis of nymphs, larvae and pupae into adults. Since DISTANCE is an Insect Growth Regulator (IGR), activity depends on the insect's development. Therefore, evidence of activity may be slower than with typical contact insecticides, especially when large numbers of late instars are present at time of application.

DISTANCE also has strong translaminar activity on a variety of ornamental plants, including poinsettia, hibiscus, gerbera daisy and chrysanthemums. Distance residues applied to the upper leaf surface will rapidly penetrate the leaf cuticle and can subsequently be ingested by immature and adult insects feeding on the lower leaf surface (e.g. whitefly). Therefore, even in cases where it is difficult to achieve thorough underleaf spray coverage, DISTANCE can still provide highly effective control.

#### PLANT TOLERANCE:

**IMPORTANT:** The large number of existing ornamental varieties and cultivars coupled with the constant introduction of new varieties makes it impossible to field test DISTANCE in every locale where sold or in all the combinations created by these differences. These differences include the soil or media type, pH, moisture or fertility, environmental conditions such as temperature, lighting or degree- days and horticultural practice and the manner of use and application of this product.

To ensure that DISTANCE is compatible with the variety or cultivar under your specific conditions, test the product on a limited scale and observe for phytotoxicity for two weeks before making large scale applications. Phytotoxicity has been observed on the following plants: Salvia (*Salvia* spp.), Ghost Plant (*Graptopetalum paraguayense*), Boston Fern (*Nephrolepis exaltata*), Schefflera (*Schefflera* spp.), Gardenia (*Gardenia* spp.) and Coral Bells (*Heuchera sanguinea*). It is therefore recommended that DISTANCE not be used on these plants. Do not apply to Poinsettia after bract formation.

#### **DIRECTIONS FOR USE:**

#### MIXING INSTRUCTIONS

Prepare no more spray mixture than is necessary for the immediate operation. Thoroughly clean spray equipment before using this product. Agitate thoroughly before and during application. Flush spray tank thoroughly with clean water daily after use and dispose of pesticide rinsate by application to a previously treated area. Add  $\frac{1}{2}$  to  $\frac{2}{3}$  of the required amount of water to the spray or mix tank. With the agitator running, add the required amount of DISTANCE. Continue agitation while adding the remainder of the

water. Begin application of the spray solution after DISTANCE has been added and completely dispersed into the mix water. Maintain agitation until all the mixture has been applied.

As this product is not registered for the control of pests in aquatic systems, DO NOT use to control aquatic pests.

DO NOT contaminate irrigation or drinking water supplies or aquatic habitats by cleaning of equipment or disposal of wastes.

This product may be tank mixed with a supplement or with registered pest control products, whose labels also allow tank mixing, provided the entirety of both labels, including Directions For Use, Precautions, Restrictions, Environmental Precautions, and Spray Buffer Zones are followed for each product. In cases where these requirements differ between the tank mix partner labels, the most restrictive label must be followed. Do not tank mix products containing the same active ingredient unless specifically listed on this label.

In some cases, tank mixing pest control products can result in reduced pesticide efficacy or increased host crop injury. The user should contact Valent Canada, Inc. at 519-767-9262 for information before applying any tank mix that is not specifically recommended on this label.

Table 1. Directions for Use on Greenhouse vegetables (tomatoes, peppers, and cucumbers) and Greenhouse Ornamentals:

PESTS	DOSAGE	REMARKS
Silverleaf Whitefly	45 ml	Apply as a foliar spray. Apply the spray
Sweetpotato Whitefly	product per	mixture uniformly to all plant surfaces and to
Greenhouse Whitefly	100 L	the point of runoff.
		Do not apply within 3 days of harvest of
		tomatoes, peppers, and cucumbers.
		Make first application when adult insects begin
		to appear. If necessary, make a second
		application from 14 to 28 days after the first
		application. Use longer interval when plants
		are not rapidly flushing new growth. Apply a
		maximum of two applications per cropping
		cycle. If the cropping cycle is less than 6
		months, do not apply more than two
		applications per 6 months. If rapid control of
		adult insects is required, apply a registered
		adulticide.

DO NOT apply greenhouse processing water containing this product to field crops (food and feed).

**NOTE:** Since ornamental varieties are numerous, constantly changing, and may react differently to DISTANCE and tank mixtures including Distance, test the product(s) on a small scale before making large-scale applications. Phytotoxicity has been observed on the following plants: Salvia (*Salvia* spp.), Ghost Plant (*Graptopetalum paraguayense*), Boston Fern (*Nephrolepis exaltata*), Schefflera (*Schefflera* spp.), Gardenia (*Gardenia* spp.) and Coral Bells (*Heuchera sanguinea*). It is therefore recommended that DISTANCE not be used on these plants. DO NOT APPLY TO POINSETTIA AFTER BRACT FORMATION.

# NOTE TO BUYER/USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR SPECIAL USE APPLICATIONS:

The DIRECTIONS FOR USE for the uses described in this section of the label were developed by persons other than Valent Canada, Inc. under the User Requested Minor Use Label Expansion program. For these uses, Valent Canada, Inc. has not fully assessed performance (efficacy) and/or crop tolerance (phytotoxicity) under all environmental conditions or for all crop varieties when used in accordance with the label. The user should test the product on a small area first, under local conditions and using standard practices, to confirm the product is suitable for widespread application.

**Directions for Use on Greenhouse Eggplant:** 

PEST	DOSAGE	REMARKS
Whitefly (including	45 ml	Apply as a foliar spray. Apply the spray
Silverleaf Whitefly	product per	mixture uniformly to all plant surfaces and to
Sweetpotato	100 L	the point of runoff.
Whitefly		Do not apply within 3 days of harvest of
Greenhouse		eggplant.
Whitefly)		Make first application when adult insects
		begin to appear. If necessary, make a second
		application from 14 to 28 days after the first
		application. Use longer interval when plants
		are not rapidly flushing new growth. Apply a
		maximum of two applications per cropping
		cycle. If the cropping cycle is less than 6
		months, do not apply more than two
		applications per 6 months. If rapid control of
		adult insects is required, apply a registered
		adulticide.
		For foliar application to greenhouse eggplant,
		do not exceed a maximum finished spray of
		2000 L/ha per application.

DO NOT apply greenhouse processing water containing this product to field crops (food and feed).

Directions for Use on Greenhouse vegetables (tomatoes, peppers, eggplants, and cucumbers) and Greenhouse Ornamentals:

PEST	DOSAGE	REMARKS
Fungus gnats	15.6 mL per 100 L	Apply as a drench directly to soil/growing media. Saturate only the top 2.5 to 4 cm (1" to 1.5") of soil or potting medium.
		For the control of fungus gnats apply to potting media as a drench application through conventional equipment.
		Drench Application to Soil Surface of Individual Containers: Mix 15.6 mL in 100 L of water and evenly apply to the surface of potting media to ensure uniform treatment. Apply 90 mL (3 fl oz) of finished solution per 15 cm (6") pot. Adjust the volume accordingly for smaller or larger pots (0.5 mL/cm² of potting medium surface area to be treated). Do not saturate potting media with drench solution, only the top 2.5 to 4 cm (1" to 1.5") of soil needs to be drenched in order to achieve effective control.  Do not drench plants more than one time per crop cycle.
		Drench Application to Individual Pots of Poinsettia: In a few instances, malformation of roots and newly expanded leaves (i.e. cupping) has been observed on certain Poinsettia varieties (i.e. Freedom Bright, Freedom Bright Red, Winter Rose, and Jingle Bells) following drench application of DISTANCE. Leaf malformation was more commonly observed on plants exposed to high air temperatures and on plants whose soil media was allowed to dry out following application, such as those along walkways or near doorways. Malformation of affected leaves was permanent, but new growth was unaffected after plants were hydrated. Malformed leaves were generally not evident at time of shipment. To minimize the risk of leaf malformation when drenching Poinsettia with DISTANCE:
		Do not saturate the potting media with DISTANCE drench solution. Apply

- only enough to saturate the top 2.5 to 4 cm (1" to 1.5") of media (ex. No more than 90 mL per 15 cm pot). Do not mix more than 15.6 mL of DISTANCE per 100 L of water.
- Ensure that soil media remains uniformly moist and avoid exposing plants to high temperatures during and following drench applications of DISTANCE. If leaf malformation is noted, thoroughly water affected plants and, if necessary, move these plants to an area of the greenhouse with higher humidity.
- Do not drench individual Poinsettia with DISTANCE more than one time per crop cycle.
- DO NOT APPLY TO POINSETTIA AFTER BRACT FORMATION.

#### **NOTE For Use on Greenhouse Vegetables:**

Since vegetable varieties are numerous, constantly changing and may react differently to DISTANCE, test the product on a small scale before making large scale applications.

- Do not apply to tomato varieties less than 2.5 cm (1") in diameter.
- Do not apply to non-bell peppers.
- Do not apply within 3 days of harvest.
- Do not make more than 2 DISTANCE applications per crop cycle.
- For drench application to greenhouse tomato and greenhouse pepper, do not exceed a maximum finished spray volume of 2520 L/ha.
- For drench application to greenhouse cucumber, do not exceed a maximum finished spray volume of 2640 L/ha.
- For drench application to greenhouse eggplant, do not exceed a maximum finished spray volume of 1890 L/ha.

DO NOT apply greenhouse processing water containing this product to field crops (food and feed).

#### RESISTANCE MANAGEMENT RECOMMENDATIONS:

For resistance management, please note that DISTANCE contains a Group 7 insecticide. Any insect population may contain individuals naturally resistant to DISTANCE and other Group 7 insecticides. The resistant individuals may dominate the insect population if this group of insecticides is used repeatedly in the same fields. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

#### To delay insecticide resistance:

- Where possible, rotate the use of DISTANCE or other Group 7 insecticides with different groups that control the same pests.
- Insecticide use should be based on an IPM program that includes scouting and record keeping, and considers cultural, biological and other chemical control practices.
- Before applying DISTANCE, correctly identify the pest and ensure economic and agronomic thresholds are met as recommended by local provincial or IPM specialists.
- Monitor treated pest populations for resistance development.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact a Valent representative at 1-800-682-5368 or at www.valent.ca.

## **PRECAUTIONS:**

- KEEP OUT OF REACH OF CHILDREN.
- Wash thoroughly after handling and before eating, drinking or smoking.
- Wear a long-sleeved shirt, long pants, chemical-resistant gloves (rubber, PVC, neoprene or nitrile), socks and shoes during mixing, loading, application, clean-up and repair.
- DO NOT enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.
- DO NOT apply using handheld mistblower/airblast or handheld fogging equipment in greenhouses.
- If clothing becomes contaminated, remove and wash separately from household laundry before reuse. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate.
- Clean spray equipment thoroughly after use.
- If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., contact Valent Canada, Inc.

#### FIRST AID:

Contains petroleum distillate.

IN CASE OF EYE CONTACT: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for further treatment advice.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for further treatment advice.

IF SWALLOWED: Call a poison control centre or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

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 centre or doctor for further treatment advice.

Take the container label or product name and Pest Control Product Registration Number with you when seeking medical attention.

## TOXICOLOGICAL INFORMATION:

If ingested, probable mucosal damage may contraindicate the use of gastric lavage. This product contains a Petroleum distillate: ingestion or subsequent vomiting can result in aspiration of this product, which can cause pneumonitis.

#### **ENVIRONMENTAL PRECAUTIONS:**

This product contains an active ingredient and aromatic petroleum distillates which are toxic to aquatic organisms.

Greenhouse use: Toxic to certain beneficial arthropods (which may include predatory and parasitic insects, spiders, and mites). May harm certain beneficial arthropods, including those used in greenhouse production. Avoid application when beneficial arthropods are in the treatment area.

DO NOT allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

#### STORAGE:

- 1. Store in original tightly closed container.
- 2. Do not ship or store near food, feed, seed and fertilizers.
- 3. Store in cool, dry, locked, well-ventilated area without floor drain.

#### **DISPOSAL**:

- 1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2. Follow provincial instruction for any required additional cleaning of the container prior to its disposal.
- 3. Make the empty container unsuitable for further use.
- 4. Dispose of the container in accordance with provincial requirements.
- 5. For information on disposal of unused, unwanted product, contact the

manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

# NOTICE TO USER:

This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *PEST CONTROL PRODUCTS ACT* to use this product in a way that is inconsistent with the directions on the label.

# {Base Container Label}

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