



# Knack®

INSECT GROWTH REGULATOR

Active Ingredient	By Wt.
*Pyriproxyfen .....	11.23%
Other Ingredients .....	88.77%
Total .....	100.00%

\*2-[1-methyl-2-(4-phenoxyphenoxy)ethoxy]pyridine

Contains 0.86 pound ai per gallon.

Contains aromatic petroleum distillates.

EPA Reg. No. 59639-95 EPA Est. 39578-TX-01

## KEEP OUT OF REACH OF CHILDREN

### CAUTION

SEE BELOW FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Causes skin and eye irritation. Do not get on skin, in eyes or on clothing. Harmful if inhaled, swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing vapor or spray mist. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

#### 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 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 treatment advice.

**If swallowed:** Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give **any** liquid to the person. Do not give anything by mouth to an unconscious person.

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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 by 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.

#### NOTE TO PHYSICIANS

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

### PERSONAL PROTECTIVE EQUIPMENT (PPE):

#### PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical resistance category selection chart.

**Applicators and other handlers must wear:** coveralls over short-sleeved shirt and short pants or long-sleeved shirt and long pants, chemical-resistant gloves, such as barrier laminate or Viton ≥ 14 mils, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure, chemical-resistant apron when cleaning equipment, mixing, or loading.

**Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.**

Follow 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.

#### 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 fish and aquatic invertebrates. 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

from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by disposing of equipment washwaters or rinsate. Avoid direct application and/or spray drift to bee hives.

## **DIRECTIONS FOR USE**

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

### **READ ENTIRE LABEL. 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, 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 worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: coveralls over short-sleeved shirt and short pants, chemical-resistant gloves, such as barrier laminate or Viton  $\geq$  14 mils, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure.

#### **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.**

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#### **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. 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 TO THE FULLEST EXTENT ALLOWED BY LAW, 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. To the extent consistent with applicable law AND 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**

**To the fullest extent allowed by law, Valent or Seller is not liable for any incidental, consequential,**  
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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. TO THE FULLEST EXTENT ALLOWED BY LAW, 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

To the extent consistent with applicable law allowing such requirements, 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 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.

To the extent consistent with applicable law, 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, to the extent allowed by applicable law.**

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

#### RESISTANCE MANAGEMENT RECOMMENDATIONS

For resistance management purposes, Knack® Insect Growth Regulator is a Group 7C insecticide. Any insect population may contain individuals naturally resistant to *Knack* Insect Growth Regulator and other Group 7C insecticides. The resistant individuals dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by *Knack* Insect Growth Regulator or other Group 7C insecticides, although local experts should be consulted for local resistance recommendations. The classification scheme is based on mode of action. It is recognized that resistance of insects and mites to insecticides and acaricides can also result from enhanced metabolism, reduced penetration or behavioral changes that are not linked to any site of action classification but are specific for individual chemicals or chemical groupings. Despite this, alternation of compounds from different chemical classes remains a viable management technique.

To delay insecticide resistance

- Avoid exclusive repeated use of insecticides from the same chemical subgroup.
- Integrate other control methods (chemical, cultural, biological) into insect control programs.

For further information contact your local distributor.

#### GENERAL INFORMATION

- **Do not apply this product through any type of irrigation system.**

***Knack* Insect Growth Regulator is intended for use in Integrated Pest Management (IPM) or Insect Resistance Management (IRM) programs. *Knack* Insect Growth Regulator will not control insect adults, and it is recommended to be used in combination and/or rotation with other IPM or IRM materials. Contact your local state extension service for details.**

*Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since *Knack* Insect Growth Regulator is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

## COTTON

**GENERAL:** *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since *Knack* Insect Growth Regulator is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

*Knack* Insect Growth Regulator does exhibit translaminar movement which means that *Knack* Insect Growth Regulator applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

CROP	PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Cotton	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz  Do not apply less than 8 fl oz/A	Apply with air or ground equipment in adequate water for uniform coverage: By Air: 3 to 10 gals/A By Ground: 10 to 50 gals/A <b>HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.</b> Make only one application per growing season. Begin application when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures). Under severe pressure, use the higher recommended rates. Only whole fields should be treated.
Do not apply within 28 days of harvest. Do not make more than 1 <i>Knack</i> Insect Growth Regulator application per growing season. Do not exceed 10 fl oz <i>Knack</i> Insect Growth Regulator per acre per season. Regardless of formulation do not apply more than 0.067 lb pyriproxyfen per acre per season. Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after last application.			

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting *Knack* Insect Growth Regulator to one application per growing season. *Knack* Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl oz per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

### BRASSICA LEAFY VEGETABLES (Crop Group 5)

**GENERAL:** *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since *Knack* Insect Growth Regulator is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

*Knack* Insect Growth Regulator does exhibit translaminar movement which means that *Knack* Insect Growth Regulator applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
<b>Brassica Leafy Vegetables:</b> Broccoli Broccoli Raab (rapini) Brussels Sprouts Cabbage Cauliflower Cavalo Broccolo Chinese Broccoli (gai lon) Chinese Cabbage (bok choy and napa) Chinese Mustard (gai choy) Collards Kale Kohlrabi Mizuna Mustard Greens Mustard Spinach Rape Greens Turnip Greens	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz	Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/A). <b>HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.</b> Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures). Under severe pressure, use the higher recommended rates. Only whole fields should be treated.
	Do not apply within 7 days of harvest. Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season. Do not exceed 20 fl oz <i>Knack</i> Insect Growth Regulator per acre per season. Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment. Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season. Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.		

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting *Knack* Insect Growth Regulator to two applications per growing season. *Knack* Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl oz/A for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.



## BERRIES

(Crop Group 13) [not all berries for use in CA]

**GENERAL:** *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since *Knack* Insect Growth Regulator is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

CROPS	PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
<b>Berries:</b> Bingleberry <sup>1</sup> Blackberry including <sup>1</sup> Bingleberry Black Satin Berry Boysenberry Cherokee Blackberry Chesterberry Cheyenne Blackberry Coryberry Darrowberry Dewberry Dirksen Thornless Berry Himalayaberry Hullberry Lavacaberry Lowberry Lucretiaberry Mommoth Blackberry Marionberry Nectorberry Ollalieberry Oregon Evergreen Berry Phenomenalberry Rangeberry Ravenberry Rosberry Shawnee Blackberry Youngberry Blueberry Currant Elderberry Gooseberry Huckleberry Juneberry Lingonberry Loganberry <sup>1</sup> Raspberry, (black and red) <sup>1</sup> Salal	Cherry Fruitworm Cranberry Fruitworm Lecanium Scale	16 fl oz	Apply with ground or air equipment as a full coverage spray (minimum of 5 gals/A by air or 50 gals/A by ground). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.  <b>Fruitworms:</b> Apply when egg laying begins and again at petal fall. Additional applications of another insecticide, at 10 to 14 day intervals, may be needed under high population pressure or sustained moth flight.  <b>Lecanium Scale:</b> Apply at either dormant, delayed dormant or an in-season cover spray. At dormant or delayed dormant use a spray oil at the manufacturer's recommended oil rate. In a cover spray make applications when scale crawlers first emerge. Follow local recommendations regarding in-season use and rates of oil in your area.
	[ <sup>1</sup> not for use in CA]  <i>Knack</i> Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.  Do not apply within 7 days of harvest. Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season. Do not exceed 32 fl oz of <i>Knack</i> Insect Growth Regulator per acre per season. Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment. Regardless of formulation do not apply more than 0.218 lb pyriproxyfen per acre per season.		

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting *Knack* Insect Growth Regulator to two applications per growing season. *Knack* Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal IPM and IRM recommendations. Read and follow all product labels before applying any insecticide.

**CUCURBITS (Crop Group 9)**

**GENERAL:** *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since *Knack* Insect Growth Regulator is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

*Knack* Insect Growth Regulator does exhibit translaminar movement which means that *Knack* Insect Growth Regulator applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
<b>Cucurbits:</b> Balsam Apple Balsam Pear Bitter Melon Cantaloupe Chayote Chinese Cucumber Chinese Waxgourd Citron Melon Cucumber Edible Gourd Gherkin	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz  Do not apply less than 8 fl oz/A	Apply with air or ground equipment in adequate water for uniform coverage: By Air: 3 to 10 gals/A By Ground: 10 to 50 gals/A  <b>HIGHER WATER VOLUMES PROVIDE IMPROVED INSECT CONTROL.</b>  Begin application when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).  Under severe pressure, use the higher recommended rates.  Only whole fields should be treated.
Gherkin <i>Momordica</i> spp. Muskmelon Pumpkin Summer Squash Watermelon Winter Squash			Do not apply within 7 days of harvest. Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season. Do not exceed 20 fl oz <i>Knack</i> Insect Growth Regulator per acre per season. Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment. Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season. Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides or insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting *Knack* Insect Growth Regulator to two applications per growing season. *Knack* Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl oz per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

### FRUITING VEGETABLES (Crop Group 8)

**GENERAL:** *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since *Knack* Insect Growth Regulator is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

*Knack* Insect Growth Regulator does exhibit translaminar movement which means that *Knack* Insect Growth Regulator applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
<b>Fruiting Vegetables:</b> Eggplant Ground Cherry Okra Pepino Pepper Tomatillo Tomato	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz  Do not apply less than 8 fl oz/A of <i>Knack</i> Insect Growth Regulator when used as a stand alone application.	Apply with air or ground equipment in adequate water for uniform coverage: By Air: 3 to 10 gals/A By Ground: 10 to 50 gals/A  <b>HIGHER WATER VOLUMES PROVIDE IMPROVED INSECT CONTROL.</b>  Begin application when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).  Under severe pressure, use the higher recommended rates.  Only whole fields should be treated.
	Banded Wing Whitefly Cabbage Looper Green Peach Aphid Greenhouse Whitefly (immatures & adults) Silverleaf Whitefly Sweetpotato Whitefly Tobacco Hornworm	6 to 8 fl oz + Orthene® 75 S 0.66 to 1.33 lbs/A  or  Orthene 97 0.5 to 1.0 lb/A	Apply as a tank mix with ground equipment for uniform coverage (25 to 150 gals/A by ground). Make application when eggs or insects first appear. If control is needed during this period use an alternate insecticide registered for the target pest.  <i>Knack</i> Insect Growth Regulator may also be mixed or alternated with commonly used insecticides to comply with local IPM programs.  Comply with all applicable directions, restrictions and precautions on the registered labels for Orthene 75 S or Orthene 97.
Do not apply within 1 day of harvest. Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season. Do not exceed 20 fl oz <i>Knack</i> Insect Growth Regulator per acre per season. Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment. Regardless of formulation do not apply more than 0.109 lb pyriproxyfen per acre per season. Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.			

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**FRUITING VEGETABLES (Crop Group 8) (continued)**

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
<b>Fruiting Vegetables:</b> Tomato	Banded Wing Whitefly Beet Armyworm Fruitworm Greenhouse Whitefly (immatures & adults) Potato Aphid Silverleaf Whitefly Sweetpotato Whitefly Thrips Tomato Pinworm Yellowstriped Armyworm	6 to 8 fl oz + Monitor® 4 Spray 24 fl oz + Danitol® 2.4 EC Spray 10-2/3 fl oz	<p><b>EARLY SEASON WHITEFLY CONTROL PROGRAM FOR REDUCTION OF GEMINIVIRUS:</b></p> <p>Apply as a tank mix with ground equipment for uniform coverage (10 to 120 gals/A). Make application when scouting first indicates adult whiteflies are on young plants. <b>NOTE:</b> This may result in treatment immediately following transplanting.</p> <p><b>MID TO LATE SEASON WHITEFLY CONTROL PROGRAM FOR PREVENTION OF IRREGULAR FRUIT RIPENING:</b> Apply as a tank mix with ground equipment for uniform coverage (20 to 120 gals/A by ground). Make application when scouting indicates whiteflies are present.</p> <p><i>Knack</i> Insect Growth Regulator may also be mixed or alternated with commonly used insecticides to comply with local IPM programs.</p> <p>Comply with all applicable directions, restrictions and precautions on the registered labels for Monitor 4 Spray and <i>Danitol</i> 2.4 EC Spray.</p>
Do not apply within 14 days of harvest. Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season. Do not exceed 16 fl oz <i>Knack</i> Insect Growth Regulator per acre per season. Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment. Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season. Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.			

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting *Knack* Insect Growth Regulator to two applications per growing season. *Knack* Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

## GRAPE

**GENERAL:** *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since *Knack* Insect Growth Regulator is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

CROP	PESTS	PRODUCT RATE PER ACRE	SPECIAL INSTRUCTIONS
Grape	Glassy-Winged Sharpshooter Grape Berry Moth Lecanium Scale	16 fl oz	<p>Apply with ground equipment as a full coverage spray (50 to 200 gals/A). Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p><b>Lecanium Scale:</b> Apply at either dormant, delayed dormant or an in-season cover spray. At dormant, delayed dormant you may use a spray oil at the manufacturer's recommended oil rate. Do not use oil in an in-season spray. In a cover spray make applications when scale crawlers first emerge.</p> <p>Follow local recommendations regarding in-season use and rates of oil in your area.</p>
<p>Do not apply within 21 days of harvest.            Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season.            Do not exceed 32 fl oz <i>Knack</i> Insect Growth Regulator per acre per season.            Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment.            Regardless of formulation, do not apply more than 0.218 lb active of pyriproxyfen per acre per season.</p>			

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting *Knack* Insect Growth Regulator to two applications per growing season. *Knack* Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

**LEGUME VEGETABLES (Succulent or Dried) (Crop Group 6)**

**GENERAL:** *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since *Knack* Insect Growth Regulator is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

*Knack* Insect Growth Regulator does exhibit translaminar movement which means that *Knack* Insect Growth Regulator applied to the upper surfaces of the leaves will move to the lower surface of the leaf. This translaminar movement is very important to chemical control of whitefly since one of the major obstacles is getting the product to the underside of the leaves where whitefly are present.

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
<p><b>Legume Vegetables (any cultivar of Bean (<i>Phaseolus</i>), Field Pea (<i>Pisum</i>) and Soybean):</b>                      Beans (<i>Lupinus</i>):                      Grain Lupin                      Sweet Lupin                      White Lupin                      White Sweet Lupin                      Beans (<i>Phaseolus</i>):                      Field Bean                      Kidney Bean                      Lima Bean                      Navy Bean                      Pinto Bean                      Runner Bean                      Snap Bean                      Tepary Bean                      Wax Bean                      Bean (<i>Vigna</i>):                      Adzuki Bean                      Asparagus Bean                      Blackeyed Pea                      Catjang                      Chinese Longbean                      Cowpea                      (continued)</p>	<p>Banded Wing Whitefly                      Greenhouse Whitefly                      Silverleaf Whitefly                      Sweetpotato Whitefly</p>	<p>8 to 10 fl oz</p>	<p><b>EARLY SEASON WHITEFLY PROGRAM:</b> Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/A. Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.</p> <p>Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).</p> <p>Under severe pressure, use the higher recommended rates.</p> <p>Only whole fields should be treated.</p>
<p><i>Knack</i> Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs.</p> <p>[<sup>1</sup> CA only: not for use on soybeans]</p> <p>Do not apply within 7 days of harvest.</p> <p>Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season.</p> <p>Do not exceed 20 fl oz of <i>Knack</i> Insect Growth Regulator per acre per season.</p> <p>Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment.</p> <p>Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season.</p> <p>Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.</p> <p>Do not allow livestock to graze treated areas.</p> <p>Do not use on legume vegetables varieties grown for livestock feed.</p>			

(continued)

**LEGUME VEGETABLES (continued)**  
**(Succulent or Dried) (Crop Group 6)**

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Bean ( <i>Vigna</i> ): (continued) Crowder Pea Moth Bean Mung Bean Rice Bean Southern Pea Urd Bean Yardlong Bean Broad Bean (fava) Chickpea (garbanzo)	Banded Wing Whitefly Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl oz	<b>EARLY SEASON WHITEFLY PROGRAM:</b> Apply with ground equipment in adequate water for uniform coverage (10 to 50 gals/A. Thorough coverage is critical for adequate control. It is essential to use adequate water volume to ensure thorough coverage.  Begin applications when whiteflies reach threshold levels per University/Extension recommendations (e.g. 3 to 5 adults per leaf and/or equivalent levels of immatures).  Under severe pressure, use the higher recommended rates.  Only whole fields should be treated.
Guar Jackbean Lablab Bean Lentil Pea ( <i>Pisum</i> ): Dwarf Pea Edible-podded Pea English Pea Field Pea Garden Pea Green Pea Snowpea Sugar Snap Pea Pigeon Pea Soybean <sup>[1]</sup> Sword Bean	<i>Knack</i> Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local Integrated Pest Management (IPM) and Insect Resistance Management (IRM) programs. [ <sup>1</sup> CA only: not for use on soybeans] Do not apply within 7 days of harvest. Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season. Do not exceed 20 fl oz of <i>Knack</i> Insect Growth Regulator per acre per season. Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment. Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season. Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application. Do not allow livestock to graze treated areas. Do not use on legume vegetables varieties grown for livestock feed.		

**MANAGING WHITEFLY RESISTANCE:** Repeated use of the same class of insecticides or insecticides with similar modes of action can lead to the buildup of resistant whitefly strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting *Knack* Insect Growth Regulator to two applications per growing season. *Knack* Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Valent also does not recommend using rates below 8 fl oz per acre for whitefly control because reduced rates can lead to a greater potential for resistance development. Follow local, state and federal IPM and IRM recommendations. Read and follow all product labels before applying any insecticide.

### DRY BULB ONIONS

**GENERAL:** *Knack* Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. *Knack* Insect Growth Regulator has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since *Knack* Insect Growth Regulator is an Insect Growth Regulator (IGR) and activity depends on the insect's development, evidence of activity will be slower than typical contact insecticides.

CROPS	PESTS	PRODUCT RATES PER ACRE	SPECIAL INSTRUCTIONS
Onion, (Dry Bulb only)	Onion Thrips Western Flower Thrip	8 fl oz	<b>FOR SUPPRESSION OF THRIPS:</b> Apply with ground equipment in adequate water for uniform coverage (20 to 50 gals/A). Begin applications when thrips reach threshold levels per University/Extension. Thorough coverage is critical for adequate water volume to ensure thorough coverage.
	Do not apply within 3 days of harvest. Do not make more than 2 <i>Knack</i> Insect Growth Regulator applications per growing season. Do not exceed 16 fl oz of <i>Knack</i> Insect Growth Regulator per acre per season. Do not apply earlier than 14 days after last <i>Knack</i> Insect Growth Regulator treatment. Regardless of formulation do not apply more than 0.134 lb pyriproxyfen per acre per season. Do not plant any crop other than those with registered pyriproxyfen uses in treated areas sooner than 30 days after the last application.		

**MANAGING INSECT RESISTANCE:** Repeated use of the same class of insecticides with similar modes of action can lead to the buildup of resistant insect strains. To optimize resistance management practices, Valent U.S.A. Corporation is restricting *Knack* Insect Growth Regulator to two applications per growing season. *Knack* Insect Growth Regulator may be used in alternation with other IGR materials possessing dissimilar modes of action and/or with other chemical classes of insecticides. Follow local, state and federal Integrated Pest Management (IPM) and Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.



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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

Store in a cool dry place.

Keep pesticide in original container.

Keep container closed when not in use.

Do not put concentrate or dilute into food or drink containers.

Not for use or storage in or around the home.

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

Nonrefillable container. Do not reuse or refill the container. Clean container 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. 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.

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***Danitol* is a restricted use product.**

Manufactured for:

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

P.O. Box 8025

Walnut Creek CA 94596-8025

Made in U.S.A.

Form 1277-N

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EPA Est. 39578-TX-01

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Always check with your state to verify state registration status or call 800-6-VALENT (682-5368).



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

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***Always read and follow label instructions.***

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