

KNACK[®]

INSECT GROWTH REGULATOR

Active Ingredient	By Wt.
*Pyriproxyfen (2-[1-methyl-2-(4-phenoxyphenoxy) ethoxy]pyridine)	11.23%
Other Ingredients	88.77%
Contains 0.86 pound ai per gallon.	
Contains aromatic petroleum distillates.	

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE BELOW FOR ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS 1 GALLON

AUG Under the Federal Insecticide Funcicide, and Rodonticide Act, es amended, for the pesticide registered under BPA Reg. No. 576

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.

STATEMENT OF PRACTICAL TREATMENT:

If on skin:

Wash with plenty of soap and water. Get medical attention immediately.

If in eyes:

Flush eyes with plenty of water, call a physician if irritation persists.

If swallowed:

Call a doctor or get medical attention. Do not induce vomiting. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not -

available, drink large quantities of water. Avoid alcohol.

If inhaled:

Remove victim to fresh air. If not breathing, give artificial respiration,

preferably mouth-to-mouth. Get medical attention.

Note to Physicians:

Probable mucosal damage may contraindicate the use of gastric lavage.

Emergency Information - call 1-800-892-0099.

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 longsleeved 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, chemicalresistant 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 cleaning 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 ≥ 14 mils, chemical-resistant footwear plus socks, chemical-resistant headgear for overhead exposure,

DISCLAIMER, CONDITIONS OF SALE, LIMITED WARRANTY AND LIMITATION OF LIABILITY

IMPORTANT: Read the entire Label including this Disclaimer, Limited Warranty, and Limitation of Liability before using this product. If the terms are not acceptable, return the unopened product within 15 days of purchase.

RISKS OF USING THIS PRODUCT

It is impossible to eliminate all risks associated with the use of this product. Such 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, injury caused by drift, and injury to rotational crops caused by carryover in the soil. Such risks of crop injury, non-performance or other unintended consequences are unavoidable and may result because of such factors as weather, soil conditions, moisture conditions, irrigation practices, presence of other materials, cultural practices or the manner of use or application, all of which are factors beyond the control of Valent. All such risks shall be assumed by the Buyer.

Valent shall not be responsible for losses or damages resulting from use of this product in any manner not set forth on the label. User 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 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 described above.

DISCLAIMER OF ALL OTHER WARRANTIES

VALENT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY. 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 Selier be liable for any incidental, consequential, indirect or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR 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 THIS PRODUCT.

NO AMENDMENTS

Valent and Seller offer this product, and Buyer and User accept it, subject to the foregoing Disclaimer, Conditions of Sale, Limited Warranty and Limitation of Liability, which may not be modified by any oral or written agreement.

PROMPT NOTICE OF CLAIM

Valent must have prompt notice as soon as Buyer or User has reason to believe they may have a claim (not to exceed twenty-one days from date of application) so that an immediate inspection of the affected property and growing crops can be made. Unless Buyer and Users shall promptly notify Valent of any claims, they shall be barred from obtaining any remedy.

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

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

KNACK is intended for use in Integrated Pest Management (IPM) or Integrated Resistance Management (IRM) programs. KNACK 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 acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insects' 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 has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK is an Insect Growth Regulator (IGR) and activity depends on the insects development, evidence of activity will be slower than typical contact insecticides.

KNACK does exhibit translaminar movement in cotton leaves which means that KNACK 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	DOSAGE PER ACRE	SPECIAL INSTRUCTIONS
Cotton	Silverleaf Whitefly Sweetpotato Whitefly	8 to 10 fl. oz. (25 to 30 gms. ai)	Apply with air or ground equipment in adequate water for uniform coverage:
		Do not apply less than 8 fl. oz./A	By Air: 3 to 10 gals./A By Ground: 10 to 50 gals./A
			HIGHER WATER VOLUMES MAY PROVIDE IMPROVED INSECT CONTROL.
			Make only one application per growing season.
			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 28 days of harvest. Do not apply more than 10 fl. oz. (30 gms. ai) KNACK Insect Growth Regulator per acre per season. Do not make more than 1 application of KNACK Insect Growth Regulator per growing season. 		

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 applications to a single 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 IPM and Integrated Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

APPLE

GENERAL

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK 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	DOSAGE PER ACRE	SPECIAL INSTRUCTIONS
CROP Apple	Codling Moth Suppression of: Leafroller Pandemis Oblique Banded	13 to 16 fl. oz. (40 to 49 gms. ai)	Apply in 100 to 400 gals./A. 1st Generation Codling Moth: Apply at Biofix plus 100 degree days (this is usually close to petal fall). Make a second application 14 to 21 days later. For additional generations apply other insecticides registered for Codling Moth control. The addition of oil at 1 to 2% has been shown to increase codling moth activity of KNACK. Follow local recommendations regarding in season use and rates of oil in your area. Oblique Banded Leafroller: Apply as the overwintering larvae become active (timing will depend upon location but is usually between tight cluster and petal fall tree growth stage). KNACK does not directly
	San Jose Scale	13 to 16 fl. oz. (40 to 49 gms. ai)	control the larvae but inhibits normal pupation and adult emergence. Apply in 100 to 400 gals./A. Apply at delayed dormant through pink. For delayed dormant use a superior spray oil at the manufacturer's recommended rate of oil. Under heavy scale pressure, use the higher rate of KNACK. Scale: For control in season make application in cover sprays when scale crawlers first emerge. The use of oil at the crawler emergence stage has been shown to improve control. Follow local recommendations regarding in season use and rates of oil in your area.

CROP	PESTS	DOSAGE PER ACRE	SPECIAL INSTRUCTIONS
	Leafminer Spotted Tentiform Western Tentiform Aphid Rosy Apple Spirea Green Apple	10 to 16 fl. oz. (30 to 49 gms. ai)	Apply in 100 to 400 gals./A. Leafminers: Apply at peak moth flight for control of 1 st or 2 nd generation. This usually occurs at Pre-pink to Pink apple stage for 1 st generation and 2 nd cover for 2 nd generation. Rosy Apple Aphid: Apply at delayed dormant. Spirea & Green Apple Aphid: Apply when aphids first appear, but before aphids are colonized. TIMING IS CRITICAL FOR ACCEPTABLE APHID CONTROL.
	 KNACK Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and resistance management programs. Do not apply within 45 days of harvest. Do not exceed two KNACK applications per growing season. Do not exceed 32 fl. oz. (98 gms. ai) of KNACK 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 USA Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK 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 Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

PEAR

GENERAL

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK 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	DOSAGE PER ACRE	SPECIAL INSTRUCTIONS
Pear	Pear Psylla	13 to 16 fl. oz. (40 to 49 gms. ai)	Apply in 75 to 400 gals./A with a superior spray oil at manufacturers recommended rates for the stage of growth.
	*		Apply a single application during the delayed dormant to "pink stage" of growth at 16 fl. oz./A or make two applications from delayed dormant through "petal fall" stage of growth at 13 to 16 fl. oz./A. Make application just before sustained egg lay is anticipated.
			It is essential to use adequate water volume to ensure thorough coverage.
			DO NOT USE SKIP ROWS DURING APPLICATION.
			For in-season control of pear psylla, use an insecticide recommended for this use.
	San Jose Scale	13 to 16 fl. oz. (40 to 49 gms. ai)	Apply in 100 to 400 gals./A at delayed dormant with a superior spray oil at the manufacturer's recommended rates. Under heavy scale pressure, use the higher rate.
			For control of scale in season make application in cover sprays when scale crawlers first emerge.
			The use of oil at the crawler emergence stage has been shown to improve performance. Follow local recommendations regarding in season use and rates of oil in your area.

CROP	PESTS	DOSAGE PER ACRE	SPECIAL INSTRUCTIONS
	Codling Moth Suppression of: Leafroller Pandemis Oblique Banded	13 to 16 fl. oz. (40 to 49 gms. ai)	Apply in 100 to 400 gals./A. 1st Generation Codling Moth: Apply at Biofix plus 100 degree days. Make a second application 14 to 21 days later. For additional generations apply other insecticides registered for Codling Moth control. The addition of oil at 1 to 2% has been shown to increase codling moth activity of KNACK. Follow local recommendations regarding in season use and rates of oil in your area. For additional generations apply other insecticides registered for Codling Moth Control.
	 KNACK Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and resistance management programs. Do not apply within 45 days of harvest. Do not exceed two KNACK applications per growing season. Do not exceed 32 fl. oz. (98 gms. ai) of KNACK Insect Growth Regulator 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 USA Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK 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 Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

WALNUT

GENERAL

KNACK Insect Growth Regulator acts by suppressing embryogenesis within the insect egg and by inhibiting metamorphosis and adult emergence of target insects. KNACK has no activity on adult insects, but hatching of eggs laid by treated adults will be suppressed. Since KNACK 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	DOSAGE PER ACRE	SPECIAL INSTRUCTIONS
Walnut	Codling Moth Suppression of: Navel Orangeworm	13 to 16 fl. oz. (40 to 49 gms. ai)	Apply in 100 to 400 gals./A. 1st Generation Codling Moth: Apply at Biofix plus 100 degree days. Make a second application 14 to 21 days later. For additional generations apply other insecticides registered for Codling Moth control. The addition of oil at 1 to 2% has been shown to increase codling moth activity of KNACK. Follow local recommendations regarding in season use and rates of oil in your area.
			Late Season Codling Moth and Navel Orangeworm: Apply at egg deposition. Make a second application if needed 14 to 21 days later. Navel Orangeworm application should be made at hull split.
	San Jose Scale Soft Scale	13 to 16 fl. oz. (40 to 49 gms. ai)	For control of scale in season, make application in cover sprays when scale crawlers first emerge. Under heavy scale pressure, use the high rate. The use of oil at the crawler emergence stage, has been shown to improve performance. Follow local recommendations regarding in-season use and rates of oil in your area.
	 KNACK Insect Growth Regulator may be mixed and/or alternated with commonly used insecticides to comply with local IPM programs and resistance management programs. Do not apply within 21 days of harvest. Do not exceed two KNACK applications per growing season. Do not exceed 32 fl. oz. (98 gms. ai) of KNACK Insect Growth Regulator 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 USA Corporation is restricting KNACK Insect Growth Regulator to two applications per growing season. KNACK 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 Insect Resistance Management (IRM) recommendations. Read and follow all product labels before applying any insecticide.

STORAGE AND DISPOSAL

PROHIBITIONS

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

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

Waste 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 EUP R18000A0.0990719-KNACK4.WPD EPA Reg. No. 59639-95 EPA Est.