59639-163 (12/13/2012 (1/24

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

Dr Robert Hamilton
Registration & Regulatory Affairs
Valent U S A Corporation
1600 Riviera Avenue Suite 200
Walnut Creek CA 94596 8025

DEC 13 2012

Dear Dr Hamilton

Subject New Uses – (R200) add additional food uses bundled six or more
Knack Insect Growth Regulator
EPA Reg No 59639 95
Distance Insect Growth Regulator
EPA Reg No 59639 96
Esteem Ant Bait
EPA Reg No 59639 114
Esteem 35WP
EPA Reg No 59639 115
Pyriproxyfen 0 86 EC Ag
EPA Reg No 59639 160
Pyriproxyfen 0 86 EC VPP
EPA Reg No 59639 163
Submissions dated November 28 2011

Following review of the residue data submitted in support of the IR 4 petition [(PP# 1E7950) (77 FR 73951 73956) (FRL 9365 6)] EPA established pyriproxyfen tolerances for Bulb Vegetable Group 3 07 Fruiting Vegetable Group 8 10 Citrus Fruit Group 10 10 Pome Fruit Group 11 10 Caneberry Subgroup 13 07A Bushberry Subgroup 13 07B Low Growing Berry except Strawberry Subgroup 13 07H and Herb Subgroup 19A Therefore the labeling referred to above submitted in connection with registration under the Federal Insecticide Fungicide and Rodenticide Act is acceptable

Submit two (2) copies of your final printed labeling for each product before releasing the product for shipment If these conditions are not complied with the registration(s) will be subject to cancellation in accordance with FIFRA section 6(e) Your release for shipment of the product bearing amended labeling constitutes acceptance of these conditions

A stamped copy of each label is enclosed for your records If you any questions or require more information please contact Kevin Sweeney at (703) 305 5063 Thank you for your cooperation in this matter

Sincerely

Richard Gebken
Product Manager 10
Insecticide Branch
Registration Division (7505P)

Enclosure

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GROUP 7C INSECTICIDE

PYRIPROXYFEN 0 86 EC VPP

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

Pyriproxyfen 0 86 EC VPP Insect Growth Regulator contains 0 86 pound ai per gallon

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE NEXT PAGE FOR ADDITIONAL PRECAUTIONARY STATEMENTS

NET CONTENTS _____

ACCEPTED
DEC 13 2012
Under the Federal Insecticide, Fungicide and Rodenticide Act as amended for the pesticide Registered under EPA Reg. No 59639-163

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PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

CAUTION

Harmful if absorbed through skin Harmful if swallowed Avoid contact with skin eyes or clothing Causes moderate eye irritation Wash thoroughly with soap and water after handling and before eating drinking chewing gum or using tobacco

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 treatment advice
If swallowed	Call poison control center or doctor immediately for treatment advice Have person sip a glass of water if able to swallow Do not induce vomiting unless told to do so by the poison control center or doctor 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 treatment advice
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 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 **800 892 0099** for emergency medical treatment information

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 D on an EPA chemical resistance category selection chart

Applicators and other handlers must wear long sleeved shirt and long pants socks shoes and chemical resistant gloves such as barrier laminate or butyl rubber ≥ 14 mils

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

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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
- Remove and wash contaminated clothing before reuse

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 (WPS) 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 (REI) The requirements in this box only apply to uses of this product that are covered by the WPS

Do not enter or allow worker entry into treated areas during the REI of 12 hours

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated such as plants soil or water is coveralls chemical resistant gloves such as Barrier Laminate or Butyl Rubber ≥ 14 mils shoes plus socks

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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 (WPS) 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

Keep unprotected persons out of treated areas until sprays have dried

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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 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 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 consistent with 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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator is a Group 7C insecticide Any insect population may contain individuals naturally resistant to Pyriproxyfen 0 86 EC VPP 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 Pyriproxyfen 0 86 EC VPP 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 or Pest Control Advisor (PCA)

CHEMIGATION

Refer to supplemental labeling entitled Application of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator by Chemigation for chemigation use directions Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed **California** Do not apply this product through any type of irrigation system

PRODUCT INFORMATION

For control of insects including whiteflies scales shore flies and fungus gnats in indoor (greenhouse lath and shadehouse and interiorscapes) and outdoor ornamentals including flowering and foliage crops ground covers shrubs and ornamental trees non bearing fruit and nut trees and indoor grown fruiting vegetables

Pyriproxyfen 0 86 EC VPP Insect Growth Regulator affects all pest insect life stages including eggs nymphs/larvae pupae and adults Pyriproxyfen 0 86 EC VPP Insect Growth Regulator 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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator residues Pyriproxyfen 0 86 EC VPP Insect Growth Regulator is also ovicidal and inhibits metamorphosis of nymphs larvae and pupae into adults Since Pyriproxyfen 0 86 EC VPP 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

Pyriproxyfen 0 86 EC VPP Insect Growth Regulator also has strong translaminar activity on a variety of ornamental plants including poinsettia hibiscus gerbera daisy and chrysanthemums Pyriproxyfen 0 86 EC VPP Insect Growth Regulator 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 (eg whitefly) Therefore even in cases where it is difficult to achieve thorough under leaf spray coverage Pyriproxyfen 0 86 EC VPP Insect Growth Regulator can still provide highly effective control

Pyriproxyfen 0 86 EC VPP Insect Growth Regulator is intended for use in Integrated Pest Management (IPM) or Insect Resistance Management (IRM) programs Pyriproxyfen 0 86 EC VPP Insect Growth Regulator will not control adult insects 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

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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator in every locale where sold or in all of 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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator 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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator not be used on these plants Do not apply to Poinsettia after bract formation

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 1/2 to 2/3 of the required amount of water to the spray or mix tank With the agitator running add the required amount of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator Continue agitation while adding the remainder of the water Begin application of the spray solution after Pyriproxyfen 0 86 EC VPP Insect Growth Regulator has been added and completely dispersed into the mix water Maintain agitation until all of the mixture has been applied

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CONVERSION CHART

Gallons of Mixture*									
Rate/100 Gals		Rate/50 Gals		Rate/25 Gals		Rate/10 Gals		Rate/5 Gals	
oz	ml	oz	ml	oz	ml	oz	ml	oz	ml
2	59	1	30	0 5	15	0 2	5 9	0 1	3 0
3	89	1 5	44	0 75	22	0 3	8 9	0 15	4 4
4	118	2	59	1 0	30	0 4	11 8	0 2	5 9
5	148	2 5	74	1 25	37	0 5	14 8	0 25	7 4
6	177	3	89	1 5	44	0 6	17 7	0 3	8 9
8	237	4	118	2 0	59	0 8	23 7	0 4	11 8
10	296	5	148	2 5	74	1 0	30 0	0 5	14 8
12	355	6	177	3 0	89	1 2	35 5	0 6	17 7

*Determine the rate per 100 gallons from Table 1 Follow the proper rate across the row to determine how much to add for mixtures less than 100 gals

COMPATIBILITY

Pyriproxyfen 0 86 EC VPP Insect Growth Regulator is compatible with most commonly used insecticides fungicides and spray adjuvants used in the production of ornamental plants When using Pyriproxyfen 0 86 EC VPP Insect Growth Regulator in tank mixes with other pesticides observe all directions for use and precautions on the respective tank mix label When making an application of a tank mix for the first time it is recommended that a few plants be treated and observed for phytotoxicity for two to four weeks before making large scale applications

LOW VOLUME SYSTEMS

Pyriproxyfen 0 86 EC VPP Insect Growth Regulator has been evaluated and shown to be effective for foliar applications when applied through Electrostatic Spraying Systems PulsFOG® Systems or other low volume systems To calculate the amount of product to be applied use the appropriate amount of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator for the square footage to be treated with spray as listed The amount of carrier (water) is dependent on the amount needed for adequate coverage Do not use low volume systems to control soil inhabiting insects such as fungus gnats and shore flies

APPLICATION INSTRUCTIONS FOR USE IN IRRIGATION SYSTEMS

Important First time users of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator through irrigation systems should make an application to a small area with only a few plants present to ensure that the irrigation system is delivering a uniform even application across the application area

Chemigation Do not apply Pyriproxyfen 0 86 EC VPP Insect Growth Regulator through any type of irrigation system when applying for control of foliar insects Pyriproxyfen 0 86 EC VPP Insect Growth Regulator may be applied through overhead irrigation at rates recommended in this label to provide proper coverage of all surfaces when treating for fungus gnats and shore flies Overhead irrigation systems include overhead sprinklers such as impact or micro sprinklers mist type irrigation such as fog systems and hand held calibrated irrigation equipment such as a hand held wand with injector Do not apply this product through any other type of irrigation system Plant injury or lack of effectiveness or illegal pesticide residues in a crop can result from non uniform distribution of treated water If you have questions about calibration contact either State Extension Specialists equipment manufacturers or other experts Do not connect an irrigation system (including greenhouse systems) used for pesticide applications to a public water system unless

the pesticide label prescribed safety devices for public water systems are in place A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person shall shut the system down to make necessary adjustments should the need arise

Operation Instructions

1 The system must contain a functional check valve vacuum relief valve and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow
2 The pesticide injection pipeline must contain a functional automatic quick closing check valve to prevent the flow of fluid back toward the injection pump
3 The pesticide injection pipeline must also contain a functional normally closed solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down
4 The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops
5 The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected
6 Systems must use a metering pump such as a positive displacement injection pump (e g diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock
7 Do not apply when wind speed favors drift beyond the area intended for treatment Avoid spray overlap as injury may result
8 Prepare a minimum mixture of 1 gal of water with the desired rate of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator and inject this mixture into the system Injecting a larger volume of a more dilute mixture will usually provide more accurate calibration of metering equipment Maintain sufficient agitation to keep Pyriproxyfen 0 86 EC VPP Insect Growth Regulator in suspension
9 Meter into irrigation water during the beginning of the irrigation cycle It is important to continue running the system after the Pyriproxyfen 0 86 EC VPP Insect Growth Regulator application is finished to remove all the product from the foliage and get it into the areas where the immature insect stages are located

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Systems Connected to Public Water Systems

1 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 of the year

2 Chemigation systems connected to public water systems must contain a functional reduced pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction As an option to the RPZ the water from the public water systems should be discharged into a reservoir tank prior to pesticide introduction There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe

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 or in cases where there is no water pump when the water pressure decreases to the point where the pesticide distribution is adversely affected

6 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

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Table 1 Directions for Use on Shrubs Ornamentals, Flowering Plants, Foliage Plants, Ground Covers, Ornamental Trees, Non Bearing Fruit, Nut Trees and Vines

PESTS	RATES	APPLICATION METHOD	SPECIAL INSTRUCTIONS
Aphids (suppression) Western Flower Thrips (suppression) Whiteflies including Ficus Whitefly Giant Whitefly Greenhouse Whitefly Rugose Spiraling Whitefly Silverleaf Whitefly Sweetpotato Whitefly	6 to 8 fl oz 100 gals	**Foliar Spray** 100 gals of spray mix will treat 20 000 sq ft of area	Apply the spray mixture uniformly to all plant surfaces and to the point of runoff Make first application when adult insects begin to appear If necessary make a second application from 14 to 28 days after the first application If an additional application is needed less than 14 days after the first treatment use an IGR (Insect Growth Regulator) with another mode of action or another chemical class of insecticide Use lower rate and longer interval for newly established infestations and when plants are not rapidly flushing new growth Use higher rates and shorter interval for established infestations and/or when plants are rapidly flushing new growth Apply no more than two times per cropping cycle or no more than two times per six months If rapid control of adult insects is required apply a labeled adulticide
Mealybugs (suppression) Scale including Black Scale California Red Scale Euonymus Scale False Oleander Scale Florida Wax Scale Pine Needle Scale San Jose Scale Snow Scale Spotted Tentiform Leafminer	8 to 12 fl oz/ 100 gals	**Foliar Spray** 100 gals of spray mix will treat 20 000 sq ft of area	Apply the spray mixture uniformly to all plant surfaces and to the point of runoff Target crawler stage when treating infestations of scale

continued

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NOTE Since ornamental varieties are numerous constantly changing and may react differently to Pyriproxyfen 0 86 EC VPP Insect Growth Regulator and tank mixtures including Pyriproxyfen 0 86 EC VPP Insect Growth Regulator 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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator not be used on these plants DO NOT APPLY TO POINSETTIA AFTER BRACT FORMATION

Table 2 Directions for Use on Shrubs, Ornamentals, Flowering Plants, Foliage Plants, Ground Covers Ornamental Trees Non Bearing Fruit, Nut Trees and Vines

PESTS	RATES	APPLICATION METHOD	SPECIAL INSTRUCTIONS
Fungus Gnats Shore Flies	3 to 6 fl oz/ 100 gals	**Sprench** 100 gals of spray mix will treat 5 000 sq ft of area	For the control of fungus gnats and shore flies apply to potting media as a heavy coarse spray (sprench) through conventional equipment to all insect infested surfaces or where insects may breed Complete coverage of infested areas is essential for control For optimal control treat breeding areas under benches at the same time that the crop is treated For best results apply when the soil is moist **Broadcast Application to Soil Surface** For bed bench and container grown plants apply Pyriproxyfen 0 86 EC VPP Insect Growth Regulator as a coarse spray or sprench to the soil surface Mix 3 to 6 fl oz of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator in 100 gals of water and apply to the soil surface at a volume of 2 to 3 gals of final spray solution per 100 sq ft of area If a second application of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator is needed allow a minimum of 21 days between applications

continued

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Table 2 Directions for Use on Shrubs, Ornamentals, Flowering Plants Foliage Plants Ground Covers, Ornamental Trees, Non Bearing Fruit, Nut Trees and Vines continued

<table>
<tr><th>PESTS</th><th>RATES</th><th>APPLICATION METHOD</th><th>SPECIAL INSTRUCTIONS</th></tr>
<tr><td>Fungus Gnats
Shore Flies</td><td>2 fl oz/ 100 gals</td><td><u>Drench</u>
Saturate only the top 1 to 1 5 of soil</td><td>Important For drench applications to Poinsettia see special use instructions below

For the control of fungus gnats and shore flies apply to potting media as a drench application through conventional equipment For optimal control apply additional amounts of spray solution to breeding areas under benches at the same time that the crop is treated For best results apply when the soil is moist
<u>Drench Application to Soil Surface of Individual Containers</u>
Mix 2 fl oz of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator in 100 gals of water and evenly apply to surface of potting media to ensure uniform treatment Apply 3 fl oz of finished solution per 6 inch pot Adjust volume accordingly for smaller or larger pots (see drench mixing chart below) Do not saturate potting media with drench solution, only the top 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
<table>
<tr><th>Pot Diameter (inches)</th><th>Drench Volume (fl oz/pot)</th><th>Rate/100 Gals (fl oz)</th></tr>
<tr><td>4</td><td>1</td><td>2</td></tr>
<tr><td>5</td><td>2</td><td>2</td></tr>
<tr><td>6</td><td>3</td><td>2</td></tr>
<tr><td>8</td><td>5</td><td>2</td></tr>
<tr><td>10</td><td>7</td><td>2</td></tr>
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continued

Table 2 Directions for Use on Shrubs, Ornamentals, Flowering Plants, Foliage Plants, Ground Covers, Ornamental Trees Non Bearing Fruit, Nut Trees and Vines continued

Note Since ornamental varieties are numerous constantly changing and may react differently to Pyriproxyfen 0 86 EC VPP Insect Growth Regulator and tank mixtures including Pyriproxyfen 0 86 EC VPP Insect Growth Regulator 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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator not be used on these plants

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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator 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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator

Do not saturate the potting media with Pyriproxyfen 0 86 EC VPP Insect Growth Regulator drench solution Apply only enough solution to saturate the top 1 to 1 5 inches of media (ex No more than 3 oz solution per 6 pot) Do not mix more than 2 oz of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator per 100 gal of water

Ensure that soil media remains uniformly moist and avoid exposing plants to high temperatures during and following drench application of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator 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 Pyriproxyfen 0 86 EC VPP Insect Growth Regulator more than one time per crop cycle

DO NOT APPLY TO POINSETTIA AFTER BRACT FORMATION

Table 3 Directions for Use on Indoor Grown Fruiting Vegetables

PESTS	RATES	APPLICATION METHOD	SPECIAL INSTRUCTIONS
Aphids (suppression) Western Flower Thrips (suppression) Whiteflies including Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	6 fl oz/ 100 gals	**Foliar Spray** 100 gals of spray mix will treat 20 000 sq ft of area	Apply the spray mixture uniformly to all plant surfaces and to the point of runoff Make first application when adult insects begin to appear If necessary make a second application from 14 to 28 days after the first application If an additional application is needed less than 14 days after the first treatment use an IGR with another mode of action or another chemical class of insecticide Use lower rate and longer interval for newly established infestations and when plants are not rapidly flushing new growth Use higher rates and shorter interval for established infestations and/or when plants are rapidly flushing new growth Apply no more than two times per cropping cycle or no more than two times per six months If rapid control of adult insects is required apply a labeled adulticide
Fungus Gnats Shore Flies	3 to 6 fl oz/ 100 gals	**Sprench** 100 gals of spray mix will treat 5 000 sq ft of area	For the control of fungus gnats and shore flies apply to potting media as a heavy coarse spray (sprench) through conventional equipment to all insect infested surfaces or where insects may breed Complete coverage of infested areas is essential for control For optimal control treat breeding areas under benches at the same time that the crop is treated The soil surface should be moist at the time of application **Broadcast Application to Soil Surface** For bed bench and container grown plants apply Pyriproxyfen 0 86 EC VPP Insect Growth Regulator as a coarse spray or sprench to the soil surface Mix 3 to 6 fl oz of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator in 100 gals of water and apply to the soil surface at a volume of 2 to 3 gals of final spray solution per 100 sq ft of area If a second application of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator is needed allow a minimum of 21 days between applications Apply no more than two times per cropping cycle or no more than two times per six months

continued

Table 3 Directions for Use on Indoor Grown Fruiting Vegetables continued

PESTS	RATES	APPLICATION METHOD	SPECIAL INSTRUCTIONS
Fungus Gnats Shore Flies	2 fl oz/ 100 gals	**Drench** Saturate only the top 1 to 1 5 of soil	For the control of fungus gnats and shore flies apply to potting media as a drench application through conventional equipment For optimal control apply additional amounts of spray solution to breeding areas under benches at the same time that the crop is treated The soil surface should be moist at the time of application **Drench Application to Soil Surface of Individual Containers** Mix 2 fl oz of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator in 100 gals of water and evenly apply to surface of potting media to ensure uniform treatment Apply 3 fl oz of finished solution per 6 inch pot Adjust volume accordingly for smaller or larger pots (see drench mixing chart below) **Do not saturate potting media with drench solution,** only the top 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

Pot Diameter (inches)	Drench Volume (fl oz/pot)	Rate/100 Gals (fl oz)
4	1	2
5	2	2
6	3	2
8	5	2
10	7	2
12	10	2

NOTE Since fruiting vegetable varieties are numerous constantly changing and may react differently to Pyriproxyfen 0 86 EC VPP Insect Growth Regulator and tank mixtures including Pyriproxyfen 0 86 EC VPP Insect Growth Regulator test the product(s) on a small scale before making large scale applications

- Do not apply to tomato varieties less than 1 inch in diameter
- Do not apply to non bell peppers
- Do not apply within one (1) day of harvest
- Do not make more than two (2) Pyriproxyfen 0 86 EC VPP Insect Growth Regulator applications per season
- Do not exceed 13 fl oz Pyriproxyfen 0 86 EC VPP Insect Growth Regulator per acre per application
- Regardless of formulation do not apply more than 0 176 lb ai of pyriproxyfen per acre per season

Table 4 Directions for Use on Indoor Grown Herbs (Crop Group 19A)

PESTS	RATES	APPLICATION METHOD	SPECIAL INSTRUCTIONS
Aphids (suppression) Western Flower Thrips (suppression) Whiteflies including Greenhouse Whitefly Silverleaf Whitefly Sweetpotato Whitefly	6 fl oz/ 100 gals	**Foliar Spray** 100 gals of spray mix will treat 20 000 sq ft of area	Apply the spray mixture uniformly to all plant surfaces and to the point of runoff Make first application when adult insects begin to appear If necessary make a second application from 14 to 28 days after the first application If an additional application is needed less than 14 days after the first treatment use an IGR with another mode of action or another chemical class of insecticide Use lower rate and longer interval for newly established infestations and when plants are not rapidly flushing new growth Use higher rates and shorter interval for established infestations and/or when plants are rapidly flushing new growth Apply no more than two times per cropping cycle or no more than two times per six months If rapid control of adult insects is required apply a labeled adulticide
Fungus Gnats Shore Flies	3 to 6 fl oz/ 100 gals	**Sprench** 100 gals of spray mix will treat 5 000 sq ft of area	For the control of fungus gnats and shore flies apply to potting media as a heavy coarse spray (sprench) through conventional equipment to all insect infested surfaces or where insects may breed Complete coverage of infested areas is essential for control For optimal control treat breeding areas under benches at the same time that the crop is treated For best results apply when the soil is moist **Broadcast Application to Soil Surface** For bed bench and container grown plants apply Pyriproxyfen 0 86 EC VPP Insect Growth Regulator as a coarse spray or sprench to the soil surface Mix 3 to 6 fl oz of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator in 100 gals of water and apply to the soil surface at a volume of 2 to 3 gals of final spray solution per 100 sq ft of area If a second application of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator is needed allow a minimum of 21 days between applications Apply no more than two times per cropping cycle or no more than two times per six months

continued

Table 4 Directions for Use on Indoor Grown Herbs (Crop Group 19A) continued

<table>
<tr><th>PESTS</th><th>RATES</th><th>APPLICATION METHOD</th><th>SPECIAL INSTRUCTIONS</th></tr>
<tr><td>Fungus Gnats
Shore Flies</td><td>2 fl oz/
100 gals</td><td><u>Drench</u>
Saturate only the top 1 to 1 5 of soil</td><td>For the control of fungus gnats and shore flies apply to potting media as a drench application through conventional equipment For optimal control apply additional amounts of spray solution to breeding areas under benches at the same time that the crop is treated For best results apply when the soil is moist

<u>Drench Application to Soil Surface of Individual Containers</u>
Mix 2 fl oz of Pyriproxyfen 0 86 EC VPP Insect Growth Regulator in 100 gals of water and evenly apply to surface of potting media to ensure uniform treatment Apply 3 fl oz of finished solution per 6 inch pot Adjust volume accordingly for smaller or larger pots (see drench mixing chart below) Do not saturate potting media with drench solution only the top 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
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<tr><td>8</td><td>5</td><td>2</td></tr>
<tr><td>10</td><td>7</td><td>2</td></tr>
<tr><td>12</td><td>10</td><td>2</td></tr>
</table>
</td></tr>
<tr><td colspan="4">NOTE Since herb varieties are numerous constantly changing and may react differently to Pyriproxyfen 0 86 EC VPP Insect Growth Regulator and tank mixtures including Pyriproxyfen 0 86 EC VPP Insect Growth Regulator test the product(s) on a small scale before making large scale applications

• Do not apply within one (1) day of harvest
• Do not make more than two (2) Pyriproxyfen 0 86 EC VPP Insect Growth Regulator applications per season
• Do not exceed 13 fl oz Pyriproxyfen 0 86 EC VPP Insect Growth Regulator per acre per application
• Regardless of formulation do not apply more than 0 176 lb ai of pyriproxyfen per acre per season</td></tr>
</table>

STORAGE AND DISPOSAL

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 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 HANDLING
Non refillable container Do not reuse or refill this container Offer for recycling if available

Triple rinse container (or equivalent) promptly after emptying Triple rinse as follows Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip Fill the container 1/4 full with water and recap Shake for 10 seconds Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal Drain for 10 seconds after the flow begins to drip Repeat this procedure two more times

PulsFOG is a registered trademark of Dramm Corporation

Manufactured for
Valent U S A Corporation
P O Box 8025
Walnut Creek CA 94596 8025
www valent com

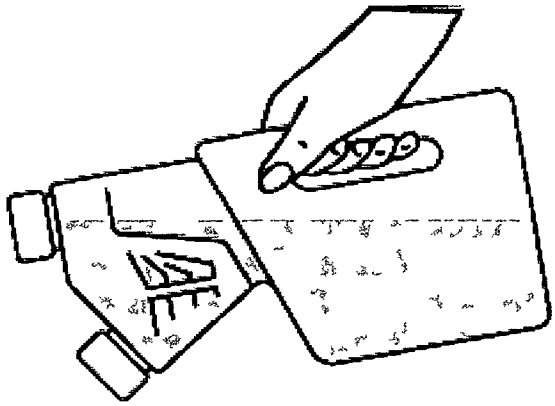
Made in U S A

EPA Reg No 59639 163
EPA Est _____

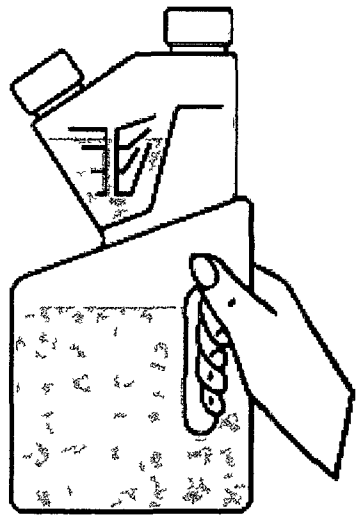
059639 00163 20120926 PYRI 0 86 EC VPP AMEND
20081027/20111109

Pyriproxyfen 0 86 EC VPP INSECT GROWTH REGULATOR
EPA REG NO 59639-XXX

GRAPHIC DIAGRAMS
FOR USE WITH TIP AND POUR PACKAGING ONLY



Measure
(First Position)



Check
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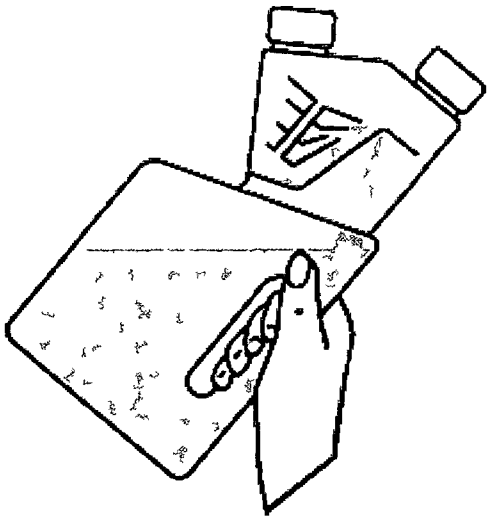
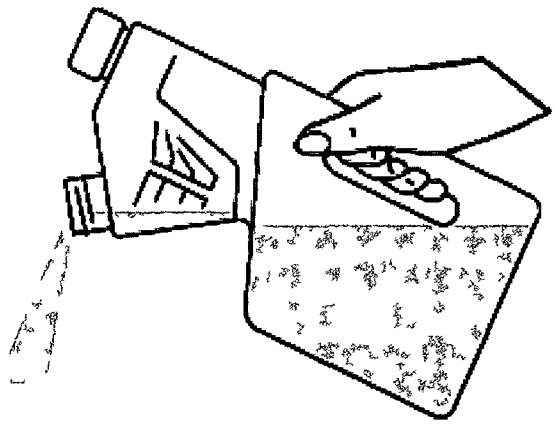


Adjust
(Third Position)



Pour
(Fourth Position)