



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

OCT 31 2008

Mr. David L. Anderson
Director, Manufacturing & Reg. Affairs
Rainbow Treecare Scientific Advancements
2239 Edgewood Ave S
St. Louis Park, MN 55426

RE: Notification of Alternate Brand Name: "Bolt™ Systemic Tree & Ornamental Insecticide"
EPA Reg. No.: 74779-6
Date of Submission: October 1, 2008

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated October 1, 2008, for the product Acephate Systemic Tree & Ornamental Insecticide. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions, please call me directly at 703-305-6249 or Joyce Edwards of my staff at 703-308-5479.

Sincerely,

A handwritten signature in black ink, appearing to read "Linda Arrington".

Linda Arrington
Notifications & Minor Formulations Team Leader
Registration Division (7505P)
Office of Pesticide Programs



EPA

United States
Environmental Protection Agency
 Washington, DC 20460

- Registration
 Amendment
 Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number 74779 - 6	2. EPA Product Manager Venus Eagle	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) Acephate Systemic Tree & Ornamental Insecticide	PM# 1	
5. Name and Address of Applicant (Include ZIP Code) Rainbow Treecare Scientific Advancements 2239 Edgewood Ave S St. Louis Park, MN 55426	6. Expedited Review. In accordance with FIFRA Section 3(c)(3) (b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. _____ Product Name _____	

Check if this is a new address

Section - II

Amendment - Explain below. Final printed labels in response to Agency letter dated _____
 Resubmission in response to Agency letter dated _____ "Me Too" Application
 Notification - Explain below. Other - Explain below

Explanation: Use additional page(s) if necessary. (For section I and Section II.)
 Notification of alternate brand name "Bolt™ Systemic Tree & Ornamental Insecticide".

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no further changes have been made to the labeling or the confidential statement of formula of the product. I understand that it is a violation of 18U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.45, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under section 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	2. Type of Container <input type="checkbox"/> Metal <input type="checkbox"/> Plastic <input type="checkbox"/> Glass <input type="checkbox"/> Paper <input checked="" type="checkbox"/> Other - foil laminate film
*Certification must be submitted		If "Yes" Unit Packaging wgt. No. per container	If "Yes" Package wgt. No. per container

3. Location of Net Contents Information
 Label Container

4. Size(s) Retail Container
10 ounces

5. Location of Label Directions
 On Label On labeling accompanying product

6. Manner in Which Label is Affixed to Product
 Lithograph Other _____
 Paper glued
 Stenciled

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)

Name: David Anderson	Title Director, Manufacturing & Reg. Affairs	Telephone No. (Include Area Code) 652-252-0541
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Certification
 I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature <i>David L. Anderson</i>	3. Title Director, Manufacturing & Reg. Affairs	6. Date Application Received (Stamped)
4. Typed Name David L. Anderson	5. Date October 1, 2008	

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October 1, 2008

Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
2777 South Crystal Dr.
Arlington, VA 22202

RE: Acephate Systemic Tree & Ornamental Insecticide (EPA Reg. No. 74779-6)

Enclosed is a notification under EPA PR Notice 98-10 to make the following revision to our product label:

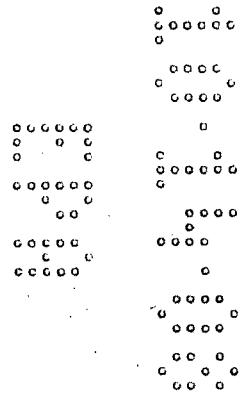
- 1. Notification of brand name: "Bolt™ Systemic Tree & Ornamental Insecticide"

A clean copy of the revised label along with an 8570-1 form are enclosed.

Please call if you have any questions.

Sincerely,

David Anderson
Director, Manufacturing & Regulatory Affairs
Rainbow Treecare Scientific Advancements
2239 Edgewood Ave. S.
St. Louis Park, MN 55426
Office: (952) 252-0541
Fax: (952) 252-0504
Cell: (612) 240-9345
Email: Danderson@treecarescience.com



www.rainbowscience.com

2239 Edgewood Ave S. Minneapolis, MN 55426 office 952.922-3810 fax 952.252-0504

Scientifically Proven Products with Predictable Results

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Bolt™

Systemic Tree & Ornamental Insecticide

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See Side/Back Panel for Additional Precautionary Statements, First Aid and Directions for Use

Bolt™ Systemic Tree & Ornamental Insecticide is absorbed through the plant root system and then moves throughout the plant, protecting it from the damage caused by sucking insects (aphids, lace bugs, leafhoppers, and thrips) and certain chewing insects (leafminers, leaf beetles, leaf tiers, and caterpillars) as listed.

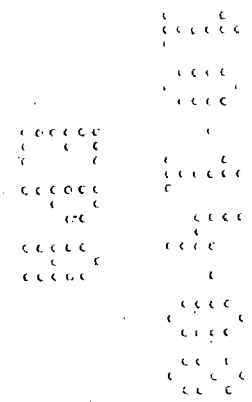
Active Ingredient	
Acephate (O,S-Dimethyl acetylphosphoramidothioate).....	97.4%
Other Ingredients.....	2.6%
Total	100%

EPA Reg. No. 74779- 6

EPA Est. No.

Net Contents: 283.5 g (10 oz)

Rainbow Treecare Scientific Advancements
 2239 Edgewood Ave. South
 Minneapolis, MN 55426
 1-877-ARBORIST
 1-877-272-6747
www.rainbowscivance.com



FIRST AID: Acephate is an organophosphate, cholinesterase inhibitor	
IF SWALLOWED	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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 poison control center or doctor immediately for treatment advice.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call poison control center or doctor immediately for treatment advice.
IF INHALED	<ul style="list-style-type: none"> • Move person to fresh air • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call poison control center or doctor immediately for treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
HOT LINE NUMBER	
For 24 hour medical emergency assistance (human or animal), or chemical emergency assistance (spill, leak or accident). Call CHEMTREC at 1-800-424-9300.	
NOTES TO PHYSICIAN	
This material contains a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure but decisions regarding treatment will usually need to be made before test results are available. If signs of cholinesterase inhibition appear, atropine sulfate is antidotal. 2-PAM (PROTOPAM) is also antidotal and may be used in conjunction with atropine but should not be used alone.	

**PRECAUTIONARY STATEMENT
 HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

CAUTION: Harmful if swallowed.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Some materials that are chemical-resistant to this product are those made of any waterproof material. If you want more options, follow the instruction for category A on an EPA chemical-resistant category selection sheet.

Mixers, loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves
- Shoes plus socks

In addition, all mixers and loaders and all applicators using low pressure hand wand application

equipment must wear:

- A NIOSH-approved dust mist filtering respirator with MSHA/NIOSH approval number prefix TC-21C or a NIOSH-approved respirator with any N, R, P, or HE filter

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this products 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/PPE 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 birds. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean water high mark. Do not contaminate water when cleaning equipment or disposing of wastes. Cover or soil-incorporate spills.

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

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

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

For use on turf, use limited to sod farms and golf courses, except when applying to mound or spot treatment for fire ant and harvester ant control.

Do not apply using low pressure hand wand except for control of fire ants as a mound treatment and when used on ornamental trees, shrubs, and floral plants grown for non-agricultural or non-commercial use.

Not for indoor residential use. For greenhouse use, use is limited to commercial greenhouses for use on ornamental, floral and foliage plants.

Do not apply by air.

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 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 24 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, waterproof gloves, shoes plus socks.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

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

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.

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions, (e.g., wind direction, wind speed, temperature, relative humidity) and method of application can influence pesticide drift. The applicator and grower must evaluate all factors and make appropriate adjustments when applying this product.

- All application equipment must be properly maintained and calibrated using water as carrier. Do not apply this product as an ultralow (ULV) spray, or in any carrier other than water.
- Use the largest droplet size consistent with good pest control. Small droplets are more prone to spray drift and can be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible, and by avoiding excessive spray boom pressure.
- Do not apply at wind speeds greater than 10 mph at the application site.
- Apply as close to target plants as practical to obtain a good spray pattern for adequate coverage.
- For airblast applications, direct spray above foliage and turn off outward pointing nozzles at row ends and outer rows.
- Do not apply at heights greater than 4 feet.

MIXING INSTRUCTIONS

Thoroughly clean all application components prior to mixing. Add approximately 1/2 of the required amount of water to the application tank and begin agitation. Add the required amount of Bolt™ Systemic Tree & Ornamental Insecticide and mix thoroughly. Then add other additives and the remaining water. Maintain agitation during filling and application to ensure uniform mixture.

For application equipment that has minimal agitation, proper attention to mixing this product should be given. With such equipment, this product should be premixed with water to form a slurry prior to putting the product into the applicator. If premixing is not done, then adequate time should be allowed for the product to dissolve in the water prior to beginning applications.

SMALL VOLUME DILUTION CHART

Amount of product per 100 gallons of water	Amount of product per 25 gallons of water	Amount of product per 1 gallon of water
¼ lb (113.4 g)	1 oz (28.3 g)	1/3 tsp (1.1 g)
½ lb (226.8 g)	2 oz (56.7 g)	2/3 tsp (2.3 g)
¾ lb (340.2 g)	3 oz (85.0 g)	1 tsp (3.4 g)
1 lb (453.6 g)	4 oz (113.4 g)	1 1/3 tsp (4.5 g)

NON-BEARING CITRUS

DO NOT ALLOW LIVESTOCK TO GRAZE TREATED AREAS.

PLANTS	INSECTS	AMOUNT OF PRODUCT PER ACRE	APPLICATION TIMING	APPLICATION DIRECTIONS
Non-Bearing Citrus (including citrus nursery seedlings)	Aphids Grasshoppers Katydid Mealybugs Orangedogs Plant Bugs (Lygus) Thrips Whiteflies	½ pound (8 oz) (226.8 g)	Apply for control of existing populations. The minimum spray interval for repeat applications is 3 days.	Apply this product in 100 to 200 gallons of water per acre. Spray individual juvenile or non-bearing trees for coverage with total application not to exceed specified rate in pounds per acre. Length of residual activity will depend upon spray coverage and the amount of moisture following application.
	Citrus Blackfly*	½ to ¾ pound (8- 12 oz) (226.8 to 340.2 g)	The high rate should be used when a heavy infestation of Citrus Blackfly is present. Begin applications when eggs or adults first appear. The minimum spray interval for repeat applications is 7 days.	Do not allow livestock to graze treated areas. DO NOT HARVEST citrus for one year after treatment.
	Ants (excluding Fire, Carpenter, Harvester, and Pharaoh*)	Foliar Spray ¾ lb (12 oz) (340.2 g)	Apply for control of existing populations	Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within
	Ants (excluding Carpenter and Pharaoh*)	Mound Treatment – Drench Method: Mix ¾ ounce in 5 gallons of water. Apply 1 gallon of		

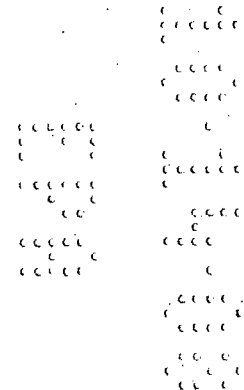
		mix to each mound area by sprinkling mound until it is wet and treat a four (4) foot diameter circle around the mound.		the nest.
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*Not registered in CA for control of Citrus Blackfly and Harvester Ants.

NURSERY STOCK (NON-BEARING DECIDUOUS FRUIT TREES, NUT TREES AND VINES IN NURSERY FIELDS OR NON-BEARING ORCHARDS.)

PLANTS	INSECTS	AMOUNT OF PRODUCT PER ACRE	APPLICATION TIMING	APPLICATION DIRECTIONS
Nuresery Stock (Non-bearing Deciduous Fruit Trees, Nut Trees, Vines) Almond Apricot Apple Cherry Kiwi Pear Pistachio Plum Prune Walnut	Aphids Plant Bugs (Lygus) Thrips	½ to 1 lb (8 – 16 oz) (226.8 to 453.6 g)	Apply as needed for control of existing populations. The minimum spray interval for repeat applications is 7 days.	Dilute in 50 to 200 gallons of water per acre and spray using ground equipment.

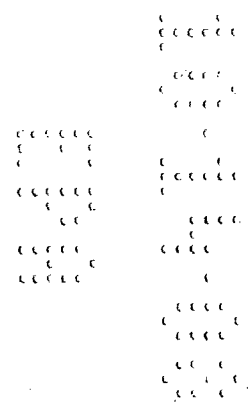
USE PRECAUTIONS: For application only to non-bearing trees and vines in nursery fields or in non-bearing orchards. Do not apply to interplants or single trees in a bearing orchard. Do not harvest any fruit from sprayed trees for one-year after application. Do not allow livestock to graze treated areas.



SPECIALTY USES – NON CROP AREAS

PLANTS	INSECTS	AMOUNT OF PRODUCT PER ACRE	APPLICATION DIRECTIONS
Non Crop Areas (Field borders, fencerows, roadsides, ditchbanks, and borrow pits)	Grasshoppers	¼ lb (4 oz) (113.4 g)	For early to mid-season application to grasshoppers in field borders, fencerows, roadsides, ditchbanks and borrow pits Apply in 10 to 20 gallons of water per acre and spray using ground equipment. Use the higher volumes when spraying heavier foliage. Do not graze or feed vegetation cut from treated areas.
	Fire Ants and Harvester Ants*	Use mound treatment-Drench Method: Mix ¾ ounce in 5 gallons of water. Apply 1 gallon of mix to each mound area by sprinkling mound until it is wet and treat a four (4) foot diameter circle around the mound.	For best results, apply in the early morning or late afternoon when the ants are most active. Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest. Grass in treated area may be injured. Do not treat mound more than once per season.

*Not registered in CA for control of Harvester Ants.



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ORNAMENTAL TREE AND SHRUBS - SOIL INJECTION

PLANTS	INSECTS	AMOUNT OF PRODUCT	APPLICATION TIMING	APPLICATION DIRECTIONS
Ornamental Trees and Shrubs	Aphids Bagworm Budworm Cankerworm Carpenterworm Cuban Laurel Thrips Gall Forming Insects Gypsy Moth (larvae) Japanese Beetle Lacebugs Leaf Beetles Leafhoppers Leafminers Leafrollers Leaftier (larvae) Lepidoptera (larvae) Loopers Maple Shoot Moth Oakworm Pine Coneworm Pine Tip Moth (larvae) Sawflies Spider Mites Tent Caterpillar Tiger moth (larvae) Tussock Moth (larvae) Webworm Winter moth (larvae) Zimmerman Pine Moth (larvae)	1/5 oz (5.7 g) per inch of trunk diameter (D.B.H.) Use one packet (10 oz) to treat 50 inches of trunk diameter (D.B.H)	Begin applications when insects first appear	NOTE: For optimal uptake, irrigate the treated area after treatment to promote absorption into the root system. Do not apply more than once per month. Applications to dry soil may decrease performance. Do not apply to areas where food crops are grown (i.e., vegetable gardens, fruit trees, berry vines, etc.), children's play areas, or animal runs. Do not apply more than 5 lb. of product per acre per application. Do not apply more than 6 lbs of product per acre per year. Rainbow Treecare does not recommend applications be made to Huckleberry, Balm of Gilead, Cottonwood, Lombardy Poplar, and Viburnum suspensum. Caution: Phytotoxicity has occurred on the following crabapple varieties: Hopa, Ichonoski, Malasfloribunda, Pink Perfection, Red Wine, and Snow Cloud.

APPLICATION METHOD

Basal System: Dilute (10 oz) (283.5 g) of product in 25 gallons of water to treat 50 inches of cumulative trunk diameter. A minimum of two (2) injection sites per inch of trunk diameter (D.B.H.) is required. For multi-stemmed trees and shrubs, use diameter of individual canes at soil line instead of DBH. Apply one (1) quart of diluted solution per injection site. Space injection sites evenly around the base of the tree no more than 6 to 12 inches out from the base. Maintain a low pressure and inject to a depth of six (6) inches.

Grid System: Use 1/5 oz (5.7g) per 100 sq. ft. of area under the dripline of the trees or shrubs. Dilute ¼ lb (4 oz) (113.4 g) of product in 8 gallons of water to treat 2000 sq. ft. of area under the dripline of the tree or shrub. Make a minimum of four (4) injections per 25 sq ft. of area under the tree of shrub, using a grid pattern. Apply at least six (6) oz of dilute solution per injection site. Maintain a low pressure and inject to a depth of six (6) inches.

ORNAMENTAL TREES AND SHRUBS – FOLIAR SPRAY – Maximum single application rate is 1.0 lb active ingredient per acre.

PLANTS	INSECTS	AMOUNT OF PRODUCT PER 100 GALLONS	APPLICATION TIMING	APPLICATION DIRECTIONS
Ornamental Trees and Shrubs (Except Flowering Crabapple)	Aphids Bagworms Birch Leafminer Lace Bugs Leafrollers Tent Caterpillars	¼ lb (4 oz) (113.4 g)	Begin treatments when insects first appear. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	Apply as a full coverage spray using a hydraulic sprayer. Rainbow Treecare does not recommend applications be made to Huckleberry, Balm of Gilead, Cottonwood, Lombardy Poplar, and Viburnum suspensum. For nursery crops, spray only a few plants and observe for 2 weeks and evaluate for phytotoxicity before treating the entire crop.
	Douglas Fir Tussock Moth Larvae Gypsy Moth Larvae* Webworms	½ lb (8 oz) (226.8 g)		
	Scale (Crawlers)	½ lb (8oz) (226.8g)	Begin treatments when crawlers first appear. Repeat applications every 2 weeks as needed to achieve control. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	The use of a sticker improves control of gypsy moth larvae. *Mist blower application: Adjust rates to 1 lb per 100 gallons of water for Gypsy Moth control. Adjust rate to 3/4lb per 100 gallons of water for tent caterpillar control.
	Ponderosa Pine Needle Miner	½ lb (8oz) (226.8g)	Time of application is important. Consult your County Extension Agent for proper timing. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	Apply as a full coverage spray using a hydraulic sprayer.
	California Oakworm Cankerworms	¼ lb to ½ lb (4 to 8 oz) (113.4 to 226.8g)	Begin treatments when insects first appear. Use the higher rate when	

	(Spring and Fall)		larger larvae are present. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	
	Nantucket Pine Tip Moth Larvae	¾ lb (12 oz) (340.2 g)	Time of application is important. Consult your County Extension Agent for proper timing. Repeat applications will be necessary for subsequent generations. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	Apply as a full coverage spray using a hydraulic sprayer.
	Root Weevil Adults	¾ lb (12 oz) (340.2 g)	Begin treatments when feeding damage first appears. Repeat applications every four weeks until the first heavy frost may be necessary for complete foliage protection. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	Apply as a full coverage spray using a hydraulic sprayer.
	Box Elder Bugs Budworms Leafhoppers Sawflies	¾ lb (12 oz) (340.2 g)	Begin treatments when insects first appear. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	Apply as a full coverage spray using a hydraulic sprayer.

	Japanese Beetles Elm Leaf Beetles	1 lb (16 oz) (453.6 g)	Begin treatments when insects first appear. Repeat applications every 2 weeks as needed. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	
Douglas Fir (Christmas Trees)	Douglas Fir Needle Midge	½ lb (8 oz) (226.8 g)	Application should be made no more than 2 weeks prior to bud burst. For additional pest management information, consult your County Extension Agent. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	Apply by ground as a full coverage spray in 100 gallons of water using a hydraulic sprayer.
Flowering Crabapples	Aphids Leafrollers Tent Caterpillars	¼ lb (4 oz) (113.4 g)	Begin treatments as the insects begin to appear. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	Apply as a full coverage spray using a hydraulic sprayer. Do not apply more often than 3 times in a growing season at a four (4) week interval Caution: Phytotoxicity has occurred on the following crabapple varieties: Hopa, Ichonoski, Malus floribunda, Pink Perfection, Red Wine, and Snow Cloud.
Crape Myrtle	Aphids	2 – 3 level tablespoons (0.6 to 0.9 oz) (17 to 25.5 g) per 1 tablespoon of water	As aphids begin to appear. The minimum spray intervals for repeat applications is 3 days for rates up to and including 0.5 lb	Make a paint-on slurry by mixing. Remove the loose bark from the trunk areas to be treated. Completely paint a band around each trunk to a width twice its diameter.

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			ai/acre and 7 days for rates exceeding 0.5 lb.ai/acre.	Application should be made to trunks 6 to 8 inches above the ground and below the point where branching begins. For multi-trunk plants, treatments should be made as low as possible within the 6 to 12 inches of the ground.
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GOLF COURSES AND SOD FARM TURFGRASS

- Do not allow livestock to graze treated areas
- Do not feed treated grass to livestock.
- Do not apply by air
- Do not apply more than 4 1/8 lbs product/acre (4.0 lbs ai/acre) to golf courses in a single application.
- Do not apply more than 3.1 lbs product/acre (3.0 lbs ai/acre) to sod farm turfgrass in a single application.
- The minimum spray intervals for repeat applications is 3 days for application rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb ai/acre.
- A 3-day pre-harvest (PHI) for harvesting sod.

PLANTS	INSECTS	AMOUNT OF PRODUCT PER 1000 Sq. Ft.	APPLICATION TIMING	APPLICATION RECOMMENDATIONS
Turf (Golf Course and Sod Farm Turfgrass)	Fall Armyworm Yellow Striped Armyworm Southern Armyworm	0.4 to 0.9 oz (17 to 25.5 g)	Begin treatments when insects first appear. Repeat applications every 2 weeks as needed.	Dilute in 5 gallons of water to treat 1000 sq. ft.
	Cutworm	0.9 to 1.8 oz (25.5 to 51 g)		
	Chinch Bugs	0.9 to 1.8 oz (25.5 to 51 g)	Apply every 10 to 14 days as needed for knockdown of adult populations.	Dilute recommended amount of product in 1 to 15 gallons of water to treat 1000 sq. ft.
	Sod Webworm (Crambus spp.)	0.4 to 0.8 oz (17 to 34 g)	Begin applications when larvae first appear. Use the higher rate when quick knockdown is needed or with heavy populations. Reapply every 7 days as needed. Do not repeat at more than 1 week intervals.	

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	Leafhopper	¾ oz (21.3 g)		
	Mole Crickets* Spittlebug*	0.8 to 1.4 oz (22.7 to 39.7 g)	Begin applications when insects first appear. More than one application may be needed throughout the growing season to obtain knockdown of existing populations. Use the higher rate when for heavy populations.	Dilute recommended amount of product in 1 to 15 gallons of water to treat 1000 sq. ft. Apply during late afternoon or early evening hours and following irrigation. Do not irrigate after application. The use of a lemon fragrance in the spray mix may enhance control by acting as a flushing agent and thus provide increased mole cricket contact. The following products have been shown to be effective flushing agents: Lemon Joy and Lemon Palmolive. The use rate for these lemon-scented products is 2 teaspoons per gallon of water for small total mix volumes or 6 fl. oz. per 50 gallons of water for large total mix volumes.
	Greenbug (Schizaphis graminun) Grasshoppers	0.4 oz (17 g)	Begin applications when insects first appear. Reapply every 7 days as needed.	Dilute product in 4 gallons of water to treat 1000 sq. ft. Do not mow turfgrass for at least 24 hours after application.
	Black Turfgrass Ataenius*	0.9 to 1.4 oz (25.5 to 39.7 g)	Begin applications when insects or their damage first appear.	Dilute product in 5 gallons of water to treat 1000 sq. ft. Irrigate lightly after application (not more than ½ inch). Use the higher rate for severe infestations.
Dichondra (Plant site for Golf Course and Sod Farm Turfgrass)	Cutworm Flea Beetle Southern Armyworm Yellow Striped Armyworm	0.8 to 1.4 oz (22.7 to 39.7 g)	Begin applications when insects first appear. Reapply every 2 weeks as needed.	Dilute product in 15 gallons of water to treat 1000 sq. ft.

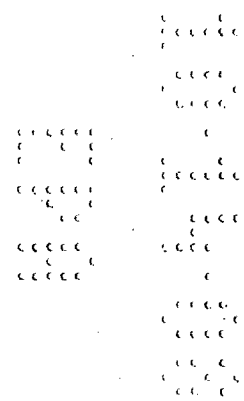
*Not registered in CA for control of Mole Crickets, Spittlebug, or Black Turfgrass Ataenius.

MOUND TREATMENT OF FIRE ANTS AND HARVESTER ANTS IN TURFGRASS

DO NOT ALLOW LIVESTOCK TO GRAZE TREATED AREAS. DO NOT FEED TREATED GRASS TO LIVESTOCK.

PLANTS	INSECTS	AMOUNT OF PRODUCT	APPLICATION TIMING	APPLICATION RECOMMENDATIONS
Turfgrass Residential, Recreational, and Commercial Turf	Imported Fire Ants and Harvester Ants*	Mound Treatment – Drench Method: Use ¾ oz (21.3 g) of product in 5 gallons of water. Apply 1 gallon of mix to each mound area by sprinkling the mound until it is wet and treat a four (4) foot diameter circle around the mound.	For best results, apply the material in the early morning or late afternoon when the ants are most active. Applications made under prolonged hot and dry conditions may be ineffective due to the location of the ants deep within the nest.	Grass in treated areas may be injured. Do not treat mound more than one per season.

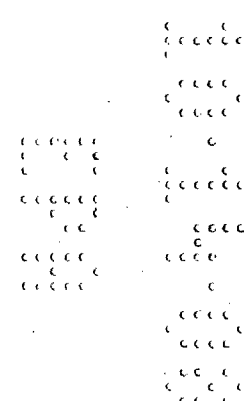
*Not registered in CA for control of Harvester Ants



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OUTDOOR AND PERIMETER SPRAY

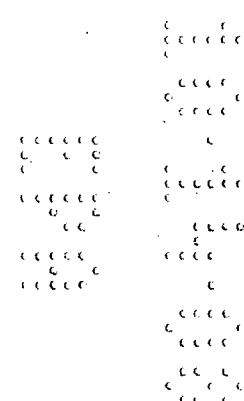
Location	INSECTS	AMOUNT OF PRODUCT PER 1 (one) GALLON	APPLICATION TIMING	APPLICATION RECOMMENDATIONS
Outdoor and Perimeter Area	Wasp	1.2 oz (34 g)	Make treatments early in the morning or late in the evening, as wasps are less active at these times.	Apply as a spot treatment to the nest, nest entrance, and surrounding areas where the wasps may land.
	Ants (excluding Imported Fire, Carpenter, Pharaoh, and Harvester Ants*) Crickets Cockroaches Earwigs Pillbugs	1.2 oz (34 g)	Begin applications when insects or their damage first appear.	Use specified amount of product in one (1) gallon of water. Apply to a band of soil 6 to 10 feet adjacent to the structure and to a height of 2 to 3 feet on the foundation where pests may be active or may find entrance. Also apply as a residual spray or with a paint brush to surfaces of buildings, window frames, shutters, entryways, screens, eaves, patios, garages, carports, around garage areas and other areas where these pests congregate.
Note: Not for use on residential turfgrass				



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OUTDOOR FLORAL CROPS AND GROUND COVERS

PLANTS	INSECTS	AMOUNT OF PRODUCT PER 100 GALLONS	APPLICATION TIMING	APPLICATION RECOMMENDATIONS
Chrysanthemums Dahlias Daisies Easter Lily Gladioli Gypsophila Pachysandra Pansy Peony Roses Sedum Statice Strawflower Yarrow Zinnia	Aphids Thrips Lygus	½ lb (8oz) (226.8g) The maximum amount of product to be applied on a per acre basis is not to exceed 0.75 lb ai/acre for plants grown for cut flower production and 1.0 lb ai/acre for all other plants.	Begin treatments when insects first appear. Repeat applications as needed to achieve control. The minimum spray interval is 3 days for application rates up to and including 0.5 lb ai/acre and 7 days for rates exceeding 0.5 lb ai/acre.	Apply the specified amount of product in 100 gallons of water using a hydraulic sprayer. Multiple applications may cause slight tip burn or marginal leaf necrosis on some varieties. Test on a few plants to determine varietal susceptibility.
Boston Ivy Roses	Japanese Beetles	1 lb (16 oz) (453.6 g) The maximum amount of product to be applied on a per acre basis is not to exceed 0.75 lb ai/acre for plants grown for cut flower production and 1.0 lb ai/acre for all other plants.	Begin treatments when insects first appear. Repeat applications every 2 weeks as needed.	



COMMERCIAL GREENHOUSE FLORAL AND FOLIAGE PLANT CROPS

Not for use in residential greenhouses

PLANTS	INSECTS	AMOUNT OF PRODUCT PER 100 GALLONS	APPLICATION TIMING	APPLICATION RECOMMENDATIONS
Roses	Leafrollers	<p>½ to ¾ lb (8 to 12 oz) (226.8 to 340.2 g)</p> <p>The maximum amount of product to be applied on a per acre basis is not to exceed 0.75 lb ai/acre for plants grown for cut flower production and 1.0 lb ai/acre for all other plants.</p>	Begin treatments when insects first appear. Use the higher rate when large larvae are present.	Apply the specified amount of product in 100 gallons of water using a hydraulic sprayer.
Foliage Plants Anthuriums Cacti Orchids Poinsettia	Aphids Mealybugs Scale (Crawlers) Thrips Whiteflies	<p>½ lb (8 oz) (226.8 g)</p> <p>The maximum amount of product to be applied on a per acre basis is not to exceed 0.75 lb ai/acre for plants grown for cut flower production and 1.0 lb ai/acre for all other plants.</p>	Begin treatments when insects first appear. A repeat application, at a 2 week interval, may be necessary for control of mealybugs, Scale crawlers, and whiteflies.	<p>Apply the specified amount of product in 100 gallons of water using a hydraulic sprayer. The addition of a wetting agent may be required on difficult to wet foliage.</p> <p>Caution: Phytotoxicity has occurred on the following foliage plants: Bletchum gibbum, Cissus Antarctica, Ficus triangularis, Fittonia verschaffelii, Maranta leuconeura kerchoveana, Pachystachya lutea, Plectanthus australis, Polypodium aureus, Polystichum, Pteris ensiformis, Tolmiea menziesii.</p> <p>As a precaution, spray only a few plants and wait for 2 weeks to observe any varietal phytotoxicity. Application on poinsettias after bract formation may result in Phytotoxicity on certain varieties.</p>

Carnations Chrysanthemums Roses	Aphids Thrips	½ lb (8 oz) (226.8 g) The maximum amount of product to be applied on a per acre basis is not to exceed 0.75 lb ai/acre for plants grown for cut flower production and 1.0 lb ai/acre for all other plants.	Begin treatments when aphids first appear. As the thrips first appear or at the tight flower bud stage. Repeat applications may be necessary.	Apply the specified amount of product in 100 gallons of water using a hydraulic sprayer. Applications to Carnations and Chrysanthemums more than once every 28 days may cause phytotoxicity. Caution: Phytotoxicity has occurred on the following Chrysanthemum varieties: Albatross, Bonnie Jean, Dixie, Garland, Gem, Iceberg, Pride, Showoff, Statesman, Tally Ho, Westward Ho and Wild Honey. As a precaution, spray only a few plants and wait for 2 weeks to observe any varietal phytotoxicity. Applications to Chrysanthemums and Roses with open flowers may result in flower damage.
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Do not apply under conditions involving possible drift to food, forage or other plantings that might be damaged or the crops thereof rendered unfit for sale, use or consumption.

STORAGE AND DISPOSAL

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

STORAGE

Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Store in a cool, dry place. Protect from excessive heat. Do not contaminate food or foodstuffs. Do not store or transport near feed or food. For help with any spill, leak, fire or exposure involving this material, call CHEMTREC at 1-800-424-9300

PESTICIDE DISPOSAL

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

CONTAINER DISPOSAL

