34704-447 06/19/2009 1/18

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

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

JUN 19 2009

Mr. John Tice, Manager Registrations
Loveland Products, Inc.
P.O. Box 1286
Greeley, CO 80632-1286

Subject: Label Notification for Pesticide Registration Notice 2007-4 (EPA Registration Number 34704-447)

Dear Mr. Tice,

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 dated April 7, 2009 for the product Carbaryl 4L (EPA Registration Number 34704-447). The Registration Division (RD) has conducted its review of this request for its applicability under PRN 2007-4 and finds that the label changes requested fall within the scope of PRN 2007-4. The label submitted with the application has been stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please call me directly at 703-305-6249 or Steve Schaible of my staff at 703-308-9362.

Sincerely,

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

2/18

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060. Approval expires 2-28-95

EPA

United States
Environmental Protection Agency
Washington, DC 20460

☐ Registration
☐ Amendment
☑ Other

OPP Identifier Number

Application for Pesticide - Section I

1. Company/Product Number	2. EPA Product Manager	3. Proposed Classification
34704-447	John Hebert	☑ None ☐ Restricted
4. Company/Product (Name)	**PM#**	
Carbaryl 4L	7	

5. Name and Address of Applicant *(Include ZIP Code)*

Loveland Products, Inc.
P.O. Box 1286
Greeley, Colorado 80632-1286

☐ *Check if this is a new address*

6. Expedited Reveiw. In accordance with FIFRA Section 3(c)(3)(b)(i), my product is similar or identical in composition and labeling to:

EPA Reg. No. NOTIFICATION

Product Name JUN 19 2009

Section - II

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

Explanation: Use additional page(s) if necessary. (For section I and Section II.)

Notification per PR Notice 2007-4, Change in container disposal only.

Section - III

1. Material This Product Will Be Packaged In:

Child-Resistant Packaging	Unit Packaging	Water Soluble Packaging	2. Type of Container
☐ Yes ☑ No	☐ Yes ☑ No	☐ Yes ☑ No	☐ Metal ☑ Plastic ☐ Glass ☐ Paper ☐ Other (Specify)
** 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	4. Size(s) Retail Container	5. Location of Label Directions
☑ Label ☐ Container	1 & 2.5 gal.	☐ On a Booklet

6. Manner in Which Label is Affixed to Product ☐ Lithograph ☑ Paper glued ☐ Stenciled ☑ Other Pressure Sensitive Adhesive Booklet

Section - IV

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

Name	Title	Telephone No. (Include Area Code)
John T. Tice John.Tice@cpsagu.com	Manager Registrations	970-534-3415

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 knowlingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.

2. Signature	3. Title	6. Date Application Received (Stamped)
	Manager Registrations	
4. Typed Name	**5. Date**	
John T. Tice	April 7, 2009	

3|18

Loveland
PRODUCTS INC.

Performance *Quality* *Value*

April 7, 2009

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

RE: Notification: Storage and Disposal Changes In Accordance with PRN 2007-4, For Carbaryl 4L, EPA Reg, No. 34704-447

Dear Notification Desk:

Enclosed please find the revised label/notification for the product identified above. This label contains the new disposal statements required by PRN 2007-4 for containers less than 5 gallons in size.

Notification of label change per PR Notice 2007-4. This notification is consistent with the guidance in PR Notice 2007-4 and the requirements of EPA's regulations at 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156. No other changes have been made to the labeling or the Confidential Statement of Formula for this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if the amended label is not consistent with the requirements of 40 CFR §§ 156.10, 156.140, 156.144, 156.146, and 156.156, this product may be in violation of FIFRA and I may be subject to enforcement action and penalties under sections 12 and 14 of FIFRA.

If you have any questions, please feel free to call or contact me at 970-534-3415 or email at john.tice@cpsagu.com.

Sincerely,

John Tice

John Tice
Manager Registrations
Loveland Products, Inc.

Attachments

7251 W 4th Street (80634) • PO Box 1286 • Greeley, CO 80632-1286 • (t) 970/356-4400 • (f) 970/347-1565

4/18

CARBARYL 4L

For Agricultural And Commercial Use Only

N-Methyl Carbamate Insecticide

ACTIVE INGREDIENT:	
Carbaryl (1-naphthyl N-methylcarbamate)	43.0%
INERT INGREDIENTS	57.0%
TOTAL	100.0%

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA REG. NO. 34704-447

EPA EST. NO. 264-MO-003

NET CONTENTS 2½ GALS. (9.46 L)

IHT 091108 V2D 10Y08

FORMULATED FOR

Loveland PRODUCTS INC.

P.O. BOX 1286
GREELEY, COLORADO 80632-1286

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed, inhaled or absorbed through the skin. Avoid breathing of spray mist. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

Personal Protective Equipment (PPE):
Applicators and other handlers must wear: long-sleeved shirt and long pants, waterproof gloves and shoes plus socks. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering Controls Statement: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets with requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

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.

FIRST AID

If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have a 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 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 inhaled:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.

FOR A MEDICAL EMERGENCY INVOLVING THIS PRODUCT CALL:
1-866-944-8565.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
NOTE FOR PHYSICIAN: Carbaryl contains an N-methyl carbamate that inhibits cholinesterase. Atropine is antidotal.

ENVIRONMENTAL HAZARDS

This product is extremely toxic to aquatic and estuarine 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. Discharge from rice fields may kill aquatic and estuarine invertebrates. Do not contaminate water by cleaning equipment or disposal of wash waters.

BEE CAUTION

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops and 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.

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,
- 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.
The area being treated must be vacated by unprotected persons.
Keep unprotected persons out of treated areas until sprays have dried.

GENERAL INFORMATION

This product is a suspension of a microfine carbaryl insecticide in an aqueous medium. It is dispersible in water and may be applied by ground or air.

PREPARATION OF SPRAY

Before using, agitate, stir or recirculate product in container to assure product uniformity. Be certain mix tanks and entire spray system are clean and free from foreign matter. Flush with clean water. Fill tank ½ to ¾ with desired amount of water. Begin agitating tank and slowly add the required amount of this product. Add the remaining volume of water. Continually agitate spray during mixing and application to assure a uniform suspension. Do not store spray mix for prolonged periods. Prepare only as much spray mix as can be applied on the day of mixing.

PRODUCT COMPATIBILITY

When diluted with an equal volume of water, this product may be tank mixed with a wide range of pesticides. If compatibility with another product and the resulting crop response are unknown, the combination should be tested on a small scale. Do not mix this product with diesel fuel, kerosene, fuel oil or aromatic solvents.

When tank mixing, first add this product to at least an equal volume of water, mix thoroughly, and then add combination products. Do not apply this product in a tank mix unless previous experience indicates that the mixture is effective and will not result in application problems, excessive residues, or plant injury. Observe all precautions and limitations on labeling of all products used in mixtures.
This product is unstable under highly alkaline conditions and is not effective if used with alkaline materials such as Bordeaux, lime-sulfur and casein-lime spreaders.

APPLICATION

For all applications, use sufficient spray volume to obtain thorough and uniform coverage. Calibrate spray equipment to deliver the required volume. Use 50 mesh strainers in spray system and 25 mesh slotted strainers behind nozzles.
To clean spray system after use, drain and flush with a water and detergent mixture. Rinse thoroughly with clean water. Refer to the storage and Disposal section for disposal instructions.
Note: Staining may occur on certain surfaces such a stucco, brick, cinder block, and wood. Spray deposits on painted or strained surfaces or finishes (i.e., cars, houses, trailers, boats, etc.) should be immediately removed by washing to prevent discoloration. Avoid applications to surfaces where visible spray residues are objectionable.

Ground Application
Apply in sufficient volume for adequate coverage on all crops and sites. To prepare small volumes of spray mixture, use 1/3 fl. oz. (approximately 2 teaspoons) of this product in an adequate amount of water and apply to 500 sq.ft. where rates of 1 quart per acre are indicated.

Aerial Application
For adequate distribution, use at least 10 gallons of spray mixture per acre for application for tree and orchard crops or at least 2 gallons of spray mixture per acre for application to other crops.

APPLICATION THROUGH IRRIGATION SYSTEMS-CHEMIGATION
Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move; flood (basin); furrow; border; or drip (trickle) irrigation system(s). Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application 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 and make necessary adjustments should the need arise.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS
Note: Loveland Products, Inc. does not encourage connecting chemigation systems to public water supplies. The following information is provided for users who have diligently considered all other application and water supply options before electing to make such a connection.
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 out of the year.

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 system 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.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must 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.

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 pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of material that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

SPRINKLER CHEMIGATION

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.
The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

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.

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.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Mix in clean supply tank the recommended amount of this product for acreage to be covered, and needed quantity of water.

This product should not be tank-mixed with other pesticides, surfactants or fertilizers unless prior use has shown the combination noninjurious under your conditions of use.

Follow precautionary statements and directions for all tank-mix products.
On all crops, use sufficient gallonage of water to obtain thorough and uniform coverage, but not cause runoff or excessive leaching. This will vary depending on equipment, pest problem and stage of crop growth. Application of more or less than optimal quantity of water may result in decreased chemical performance, crop injury or illegal pesticide residues.

Meter this product into the irrigation water uniformly during the period of operation.

Do not overlap application. Follow recommended label rates, application timing, and other directions and precautions for crop being treated.

Provide constant mechanical agitation in supply tank to keep this product suspended throughout application operations.

Resistant Species

All references to armyworm on the crops listed below refer to the species, *Pseudaletia unipuncta.* Except where indicated otherwise, this product is not registered for the control of other armyworm species. Regional differences have been noted in the susceptibility of certain strains of fall armyworm, diamondback moth, Colorado potato beetle and Southern green stink bug to carbaryl. If local experience indicates inadequate control, use an alternative pesticide.

CAUTIONS AND RESTRICTIONS

Carbaryl 4L insecticide is a suspension of microfine brand carbaryl insecticide in an aqueous medium. It readily disperses in water to form a spray which may be applied by air or ground.

PLANT RESPONSE PRECAUTIONS

Application to wet foliage or during periods of high humidity may cause injury to tender foliage. Do not use on Boston Ivy, Virginia creeper and maidenhair fern as injury may result. Carbaryl may also injure Virginia and sand pines. The use of adjuvants may increase the potential for crop injury to sensitive crops.

PREHARVEST AND GRAZING RESTRICTIONS AND LIMITATIONS

Tolerances established under the Federal Food, Drug and Cosmetic Act permit the sale of labeled crops bearing probable carbaryl residues when this product is used in accordance with the label directions. If used as directed, treated forage may be grazed or used as feed for dairy and meat animals without causing illegal residues in meat or milk. Do not apply at greater rates or at more frequent intervals than stated on the label. To do so may result in illegal residues in crops, meat, and milk.

8/18

Do not use reclaimed irrigation water from crops treated with carbaryl or crops for which carbaryl tolerances are not established.

Do not plant rotational food and feed crops not listed on this or other carbaryl labels in carbaryl treated soil.

FRUIT, VEGETABLE, GRAIN CROPS, & TOBACCO

Begin application when insect populations reach recognized economic threshold levels. Consult the Cooperative Extension Service, or other qualified authorities to determine appropriate threshold levels for treatment and specific use information in your area. Where a dosage range is indicated, use the lower rate on light to moderate infestations, young plants and early instars and use the higher rate on heavy infestations, mature plants, advanced instars and adults. Thorough and uniform spray coverage is essential for effective control.

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
Asparagus	Asparagus beetle, cutworms, Apache cicada	1 to 2	Repeat applications as necessary up to a total of 3 times prior to harvest or a total of 5 times per crop but not more often than once every 7 days. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
		2 to 4	Application to ferns or brush growth following harvest of spears: Repeat applications as necessary but not more often than every 7 days. Do not make more than a total of 5 applications per year to spears and ferns combined.
• Do not apply more than a total of 6 quarts per acre before harvest of spears. • Do not apply more than a total of 10 quarts per acre per year. • Do not apply within 1 day of harvest.			
Broccoli, Brussels Sprouts, Cauliflower, Cabbage, Chinese Cabbage, Collards, Kale, Kohlrabi, Mustard Greens	Flea beetles, Harlequin bug, Leafhoppers,	½ to 1	Repeat applications as needed up to a total of 4 times but not more often than once every 7 days. Do not apply more than a total of 6 quarts per acre per crop.
	Armyworm, Aster Leafhopper, Corn earworm, Diamond back moth, Fall armyworm, Imported cabbageworm, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bug	1 to 2	
• Do not apply more than a total of 6 quarts per acre per crop. • For Chinese Cabbage, Collards, Kale, and Mustard Greens, do not apply within 14 days of harvest. • For Broccoli, Brussels Sprouts, Cabbage, Cauliflower, and Kohlrabi, do not apply within 3 days of harvest.			
Carrots, Parsnips, Garden Beets, Horseradish, Radishes, Rutabagas, Salsify, Potatoes	Flea beetles, Leaf hoppers	½ to 1	Repeat applications as necessary up to a total of 8 times but not more often than once every 7 days. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
	Armyworm, Aster leafhopper, Colorado potato beetle, Corn earworm, Cutworms, European corn borer, Fall armyworm, Lace bugs, Lygus bugs, Spittlebugs, Stink bugs, Tarnished plant bug	1 to 2	
• Do not apply more than a total of 6 quarts per acre per crop. • Do not apply within 7 days of harvest.			
Cucumber, Melons, Pumpkins, Squash	Pickleworm, Melonworm	½ to 1	Repeat applications as necessary up to a total of 6 times but not more often than once every 7 days. For optimum control of squash bugs, apply sufficient spray volume for thorough coverage and time sprays for early morning or late afternoon.
	Cucumber beetles, Flea beetles, Leafhoppers, Squash bugs	1	
• Do not apply more than a total of 6 quarts per acre per crop. • Observe plant response precautions. • Do not apply within 3 days of harvest.			

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
Legume Vegetables:	Bean leaf beetle, Blister beetle, Cucumber beetles, Grape colapsis, Green cloverworm,	½ to 1	Repeat applications as necessary up to a total of 4 times but not more often than once every 7 days.
Soybeans Kidney beans	Japanese beetle, Mexican bean beetle, Velvetbean caterpillar		For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
Navy beans	Corn earworm	½ to 1½	Use lower rates for light to moderate populations and smaller instars and provide maximum survival of beneficial insects and spiders.
Cowpea Southern pea Field pea	Alfalfa caterpillar, Colorado potatoto beetle, Flea beetles, Leafhoppers, Three cornered alfalfa hopper, Thrips, Western bean cutworm	1	Use the higher rates for heavy populations and larger instars.
Lentils	Armyworm, Cutworms, European corn borer, Fall armyworm, Stink bugs, Tarnished plant bug, Webworms	1 to 1½	
Do not use on lentils in California	Alfalfa looper (suppression), Cowpea curculio (suppression), Painted lady (Thistle caterpillar), Pea leaf weevil, Pea weevil, Saltmarsh caterpillar, Woollybean caterpillar, Yellow-striped armyworm	1½	
	California only: Corn earworm (suppression), Lima bean podborer (suppression), Lygus bugs (suppression), Stink bugs (suppression)	1½	

- Do not apply more than a total of 6 quarts per acre per crop.
- Do not apply a combination of this product and 2.4-DB herbicides to soybeans as crop injury may result.
- Observe plant response precautions.
- Do not apply within 14 days of grazing or harvest for forage or within 3 days of harvest of fresh beans or peas or within 21 days of harvest of dried beans or peas, seed, or hay.

Olives	Scale insects (olive scale, black scale)	5 to 7½	Up to 2 applications per crop may be made but not more often than once every 14 days.

- Do not apply more than a total of 15 quarts per acre per crop.
- Do not apply within 14 days of harvest.

Tomato, Eggplant, Pepper	Colorado potato beetle, European cornborer, Fall armyworm, Lace bugs, Stink bugs, Tarnished plant bug, Thrips (suppression), Tomato fruit worm, Tomato hornworm, Tomato pinworm	1 to 2	Repeat applications as necessary up to a total of 7 times but not more often than once every 7 days. Thorough coverage is essential to effectively suppress stink bugs. When disease transmission is suspected, monitor fields following application and retreat if reinfestation occurs but not more often than once every 7 days. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
	Flea beetles, Leafhoppers	½ to 1	
	Cutworms	2	

- Do not apply more than a total of 8 quarts per crop.
- Do not apply within 3 days of harvest.

Field corn, Popcorn	Armyworm, Chinch bugs, Corn earworm, Corn rootworm adults, European corn borer, Fall armyworm, Flea beetles, Japanese beetle, Sap beetles, Southwestern corn borer, Leafhoppers	1 to 2	OBSERVE BEE CAUTION. Repeat applications as needed up to a total of 4 times but not more often than once every 14 days. Optimum timing and good coverage are essential for effective control. For optimum chinch bug control, use 1½ to 2 ground equipment to apply at least 20 gallons of water per acre and direct spray toward stalk to provide thorough coverage. For optimum European corn borer control, do not apply in less than 3 gallons of water per acre by air and 15 gallons of water by ground. For Western bean cutworm, treat when infestation averages 15% and at 90% to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness. For optimum cutworm control, apply in a 12-inch band, over the row, using sufficient volume of water to obtain thorough coverage. For broadcast application, use at least 20 gallons by ground or 5 gallons
	European corn borer	1½ to 2	
	Cutworms, Western bean cutworms	2	

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
Field corn, Popcorn cont'd.:			by air per acre. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
• Do not apply more than a total of 8 quarts per acre per crop. • Do not apply within 48 days of harvest of grain and fodder or within 14 days of harvest or grazing of forage or silage.			
Flax Do not use in California.	Armyworm	1 to 1½	Up to 2 applications per crop may be made but not more often than once every 14 days.
• Do not apply more than a total of 3 quarts per acre per crop. • Do not apply within 42 days of harvest for seed or straw.			
Grain sorghums	Armyworms, Chinch bugs, Corn earworm, Fall armyworm, Stink bugs, Webworms	1 to 2	Repeat applications as necessary up to a total of 4 times but not more often than once every 7 days. Direct spray into forming heads for optimum control of insects attacking heads. For optimum chinch bug control, use high gallonage ground application at the base of plants. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
	Southwestern corn borer	1½	
	Cutworms	2	
• Do not apply more than a total of 6 quarts per acre per crop. • Do not apply within 21 days of harvest for grain or fodder or within 14 days of harvest or grazing of forage or silage.			
Peanuts	Blister beetles, Mexican bean beetle	½ to 1	Repeat applications as necessary up to a total of 5 times but not more often than once every 7 days. For optimum control of thrips, use directed or banded sprays with hollow cone spray nozzles. Ensure adequate coverage for the underside of leaves. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
	Alfalfa caterpillar, Bean leaf beetle, Cucumber beetles, Green cloverworm, Japanese beetle, Leafhoppers, Rednecked peanut worm, Three cornered alfalfa hopper, Thrips, Velvet bean caterpillar	1	
	Armyworm, Corn earworm, Fall armyworm, Stink bugs, Webworms	1 to 1½	
	Whitefringed beetle adults, Cutworms	2	
• Do not apply more than a total of 8 quarts per acre per crop. • Observe plant response precautions. • Do not apply within 14 days of harvest.			
Rice	Armyworm, Chinch bugs, Fall armyworm, Leafhoppers, Stink bugs	1 to 1½	Up to 2 applications per crop may be made but not more often than once every 7 days. California only: For optimum tadpole shrimp control, apply to water when pest first appears.
	Tadpole shrimp	1½	
• Do not apply more than a total of 4 quarts per acre per crop. • CAUTION: May kill shrimp, crabs and crayfish. • Do not apply propanil herbicides within 15 days before or after application of this product or plant injury will result. • Do not apply within 14 days of harvest for grain or straw.			

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
Small Fruits and Berries: Caneberries, Blueberries, Cranberries, Grapes, Strawberries	European fruit lecanium, European raspberry aphid, Flea beetles, Grape leaf folder, Grape leaf roller, Japanese beetle, Leafhoppers, Leafrollers, Meadow spittlebug, Omnivorous leaftier, Rose chafer, Snowy tree cricket, Strawberry bud weevil, Strawberry clipper, Strawberry fruitworm, Strawberry leafroller, Strawberry weevil, Western grape leaf skeletonizer, Western yellowstriped armyworm	1 to 2	OBSERVE BEE CAUTION Repeat applications as necessary up to a total of 5 times but not more often than once every 7 days. For cutworm control, this product is most effective against species which feed on the upper portions of the plant. In grapes for grape leaffolder control, apply before first brood larvae emerge from rolls. In grapes, do not concentrate spray on the bunch or visible residues may result.
	Blueberry maggot, Cherry fruitworm, Cranberry fireworm, Cranberry fruitworms, Cranberry twig girdler, Elm spanworm, Gypsy moth, Spaganothus worm, Tarnished plant bug	1½ to 2	
	Eight-spotted forester, Cutworms, Grape berry moth, June beetles, Omnivorous leafroller, Orange tortrix, Raspberry fruitworm, Raspberry sawfly, Redbanded leafroller, Saltmarsh caterpillar	2	
• Do not apply more than a total of 10 quarts per acre per crop. • CAUTION: Use in cranberries may kill shrimp and crabs. Do not use in areas where these are important resources. • Carbaryl may injure Early Dawn and Sunrise varieties of strawberries. • Do not apply within 7 days of harvest.			
Sugar beets	Armyworm, Beet leaf beetle, Fall armyworm, Flea beetles, Leaf hoppers, Webworms	1 to 1½	Repeat applications as necessary up to a total of 2 times but not more often than once every 14 days. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
	Cutworms	1½	
• Do not apply more than a total of 3 quarts per acre per crop. • Do not apply within 28 days of harvest for roots or forage.			
Sunflower Do not use in California.	Stem weevil, Sunflower beetle	1 to 1½	Up to 2 applications may be made but not more often than once every 7 days. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
	Cutworms, Armyworm, Fall armyworm, Sunflower moth	1½	
• Do not apply more than a total of 3 quarts per acre per crop. • Do not apply within 30 days of grazing or harvest for forage or within 60 days of harvest for seed.			
Sweet Corn	Armyworm, Chinch bugs, Corn earworm, Corn rootworm adults, Fall armyworm, Flea beetles, Japanese beetle, Sap beetles, Southwestern corn borer, Leafhoppers	1 to 2	OBSERVE BEE CAUTION Repeat applications as necessary up to a total of 8 times but not more often than once every 3 days. Optimum timing and good coverage are essential for effective control. For insects attacking silks and ears, insecticide sprays should be applied starting when first silks appear and continuing until silks begin to dry. During silking, the minimum retreatment interval (3 days) may not provide adequate levels of protection under conditions of rapid growth or severe pest pressure. The use of an alternative product should be considered in conjunction with this product. For optimum chinch bug control, use ground equipment to apply at least 20 gallons of water per acre and direct spray toward stalk to provide thorough coverage. For optimum European cornborer control, do not apply in less than 3 gallons of water per acre by air and 15 gallons of water by ground. For Western bean cutworm, treat when infestation average at 15% and 90% to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness.
	European corn borer	1½ to 2	
	Western bean cutworm, Cutworms	2	

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
Sweet Corn cont'd.:			For optimum cutworm control, apply in a 12-inch band, over the row, using sufficient volume of water to obtain thorough coverage. For broadcast application, use at least 20 gallons by ground or 5 gallons by air per acre. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
• Do not apply more than a total of 16 quarts per acre per crop. • Do not apply within 2 days of harvest of ears, within 14 days of harvest or grazing of forage, or within 48 days of harvest of fodder.			
Sweet potatoes	Corn earworm, Cucumber beetles, Flea beetles, Sweet potato hornworm, Sweet potato weevil, Whitefringed beetle, Tortoise beetles	1 to 2	For foliar sprays, repeat applications as necessary up to a total of 8 times but not more often than once every 7 days.
	Yellowstriped armyworm	2	
• Do not apply more than a total of 8 quarts per acre per crop with in-season sprays. • Do not apply within 7 days of harvest.			
Tobacco	Budworms, Fall armyworm, Tobacco flea beetles, Hornworms, Japanese beetle, June beetle, Suckfly	1 to 2	Plant bed and Field Treatment Repeat treatments as necessary up to a total of 4 times per crop but not more often than once every 7 days. Use lower rate on young plants (up to knee height). Use at least 10 gallons of prepared spray per acre. Begin treatments when worms are small.
• Do not apply more than a total of 8 quarts per acre per crop. • Observe plant response precautions. • Tobacco may be harvested on the day of treatment.			

TREE FRUIT AND NUT CROPS

For all tree fruit and nut crops, apply in sufficient volume for adequate coverage. This will vary depending on the pest and its severity, the tree conditions, size, density, and other factors.

CROP	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
APPLES ONLY For Fruit Thinning	1 to 3	Apply 1 to 3 quarts per acre. Use higher rates on difficult to thin varieties and lower rates on easy to thin varieties. Apply to apples between 90% petal fall and up to 16 mm fruit size. Use sufficient water volume to ensure thorough coverage. Avoid spraying to runoff. Direct spray volume to upper $^2/_3$ of tree canopy and reduce spray coverage to lower $^1/_3$ of tree canopy or possible over-thinning may occur. Tree age, variety, nutrition, previous crop, pruning, bloom, and degree of set influence fruit thinning results. Exercise caution to avoid possible over thinning. Avoid application when temperatures exceed 85°F. Consult with your County Extension Service or other experts for advice on the proper use of this product.
• Do not apply more than a total of 15 quarts per acre per crop. • Do not make more than a total of 8 applications per crop. • Do not apply within 3 days of harvest.		

Note: 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 trees or weeds if bees are visiting the treatment area. Applications must be timed to coincide with periods of minimum bee activity, between late evening and midnight. If weeds (particularly dandelions) are in bloom, mow the cover crop on the orchard floor and borders prior to the application to remove weed blooms and reduce bee foraging. Remove all bee hives from the orchard area to be treated prior to the application. Notify beekeepers and surrounding orchardists of planned applications 24-48 hours in advance.

Dandelions on the orchard floor are a main attractant to bees during and shortly after the apple blooming period. To control dandelions and other broadleaf weeds, apply a labeled 2,4-D in the fall after apple harvest or in the spring prior to bloom. Refer to restrictions pertaining to 2,4-D applications.

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
Apples, Pears, Loquats, Crabapple, Oriental pears	White apple leafhopper	½ to 1½	OBSERVE BEE CAUTION
	Apple aphid, Codling moth	1 to 3	On apples, avoid use during the period from full bloom until 30 days after full bloom unless fruit thinning is desired. Use for pest control during this period also may result in fruit removal. Repeat applications as necessary up to a total of 8 times per crop (including thinning sprays on apples) but not more often than once every 14 days. For psylla control, apply when eggs hatch or young nymphs are present. For scale control, apply when crawlers are present.
	Apple aphid, Apple maggot, Apple mealy bug, Apple rust mite, Bagworms, California pearslug (pear sawfly), European apple sawfly, Eyespotted bud moth, Fruittree leafroller, Gypsy moth, Japanese beetle, Lesser appleworm, Lygus bugs, Orange tortrix, Pearleaf blister mite, Pear psylla, Pear rust mite, Periodical cicada, Plum curculio, Red-banded leafroller, Rosy apple aphid, Scale insects (Forbes scale, Lecanium scale, San Jose scale), Tarnished plant bug, Tentiform leafminers, Woolly apple aphid, Yellowheaded fireworm	1½ to 3	

- Do not use on pears between the tight flower cluster up to the 20 mm fruit size.
- Do not use on quince.
- Do not apply more than a total of 15 quarts per acre per crop.
- Do not make more than a total of 8 applications per crop.
- Do not apply within 3 days of harvest.

Apricots, Cherries, Nectarines, Peaches, Plums, and Prunes	Apple pandemis, Black cherry aphid, Cherry fruitworm, Cherry maggot (Cherry fruit fly), Codling moth, Cucumber beetles, Eastern tent caterpillar, Eyespotted bud moth, European earwig, Fruittree leafroller, Green fruitworm, Gypsy moth, Japanese beetle, June beetle, Lesser peachtree borer, Mealy plum aphid, Orange tortrix, Oriental fruit moth, Peach twig borer, Periodical cicada, Plum curculio, Prune leafhopper, Redbanded leafroller, Rose chafer, Scale insects (Brown soft scale, Forbes scale, Lecanium scale, Olive scale, Oystershell scale, San Jose scale), Tarnished plant bug, Tussock moth, Variegated leafroller	2 to 3	OBSERVE BEE CAUTION Repeat applications as necessary up to a total of 3 times per crop but not more often than once every 7 days. An additional application at the dormant or delayed dormant timing may be made. For optimum scale control, apply when crawlers are present. For lesser peachtree borer, best results have been found by thoroughly spraying limbs and tree trunks at weekly intervals during moth flight.
	California only: Black cherry aphid, Cherry fruitworm, Cherry maggot (Cherry fruit fly), Codling moth, Cucumber beetles, Eyespotted bud moth, European earwig, Fruittree leafroller, Green fruitworm, Mealy plum aphid, Orange tortrix, Oriental fruit moth, Peach twig borer, Scale insects (Brown soft scale, Forbes scale, Lecanium scale, Olive scale, Oystershell scale, San Jose scale), Tarnished plant bug, Tussock moth	3 to 4	OBSERVE BEE CAUTION Repeat applications as necessary up to a total of 3 times per crop but not more often than once every 14 days. An additional application at the dormant or delayed dormant timing may be made. For optimum scale control, apply when crawlers are present.
	Peach twig borer, Scale insects (Brown soft scale Forbes scale, Lecanium scale, Olive scale, Oystershell scale, San Jose scale)	4 to 5	For dormant or delayed dormant timing, apply in combination with recommended dormant oil. Refer to the dormant oil product label or additional use directions and restrictions.

- Do not apply more than a total of 14 quarts per acre per crop.
- Do not apply more than a total of 5 quarts per acre at the dormant or delayed dormant timing.
- Do not apply more than a total of 9 quarts per acre during the production season.
- Do not apply within 3 days of harvest. In California do not apply within 1 day of harvest.

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
Citrus Fruits	Avocado leafroller, California orangedog, Citrus cutworm, Fruittree leafroller, Orange Tortrix, Western tussock moth	2 to 3	OBSERVE BEE CAUTION. Repeat applications as necessary up to a total of 8 times but not more often than once every 14 days.
	Citrus rust mite, Eriophyid mites, Plant bugs, Scale insects (Black scale, brown soft scale, California red scale (except in California), citrus snow scale, yellow scale (except in California)	3 to 5	For scale control, apply when crawlers are present. For best control of Eriophyid mites including citrus rust mite, apply when pest populations are low.
	Apopka weevil (adult), Citrus root weevils (adults), Fuller Rose Beetle, Little leaf notcher (adult)	5 to 7½	
	California only: California red scale, Yellow scale	5 to 16	Do not make more than 1 application per season for California red scale. Apply when crawlers are present.
• Do not apply more than a total of 20 quarts per acre per crop. • Do not apply within 5 days of harvest.			
Pistachios	Brown soft scale, Lecanium scale, Navel orangeworm	3 to 5	Repeat applications as necessary up to a total of 4 times per crop (including any applications at the dormant or delayed dormant timing) but not more often than once every 7 days. For scale control, apply when crawlers are present. For dormant or delayed dormant timing, apply in combination with a recommended dormant oil. Refer to the dormant oil product label for additional use directions and restrictions.
	Scale insects	4 to 5	
• Do not apply more than a total of 15 quarts per acre per crop, including any application at the dormant or delayed dormant timing. • Do not apply within 14 days of harvest.			
Almonds, Chestnuts, Filberts, Pecans, Walnuts	Black margined aphid, Calico scale, Codling moth, European fruit lecanium, Fall webworm, Filbert aphid, Filbert leafroller, Filbertworm, Frosted scale, Fruittree leafroller, Hickory shuckworm, Lesser webworm, Navel orangeworm, Peach twig borer, Pecan leaf phylloxera, Pecan nut casebearer, Pecan spittlebug, Pecan weevil, San Jose scale, Twig girdler, Walnut caterpillar	2 to 5	OBSERVE BEE CAUTION Repeat applications as necessary up to a total of 4 times per crop (including any applications at the dormant or delayed dormant timing) but not more often than once every 7 days. Use lower rates for pests attacking leaves. Use higher rates for pests attacking fruit and for higher infestations. For scale control, apply when crawlers are present. For peach twig borer, best results with foliar applications have been found by making applications in "popcorn" or petal fall stages when the May brood begins to hatch. For navel orangeworm in almonds and walnuts, best results have been found by timing early and midseason applications to correspond with moth flight peaks. For filbert leafroller, best results have been found by making applications when eggs are hatching, repeating application on first appearance of moths and again 3 to 4 weeks later. For codling moth in walnuts, best results have been found by making applications when average cross-sectional diameters of developing nuts are 0.5 to 0.75 inches and again during middle or later June as needed.
	Chestnut weevil, European earwig	4 to 5	For chestnut weevil, best results have been found with 4 applications at weekly intervals beginning in late July. The last application should be made prior to shuck split. For European earwig, thorough coverage of trunks, branches, and nuts is needed for best results.
Almonds only	Peach twig borer, Scale insects	4 to 5	For dormant or delayed dormant timing, apply in combination with a recommended dormantoil. Refer to the dormant oil product label for additional use directions and restrictions.
• Do not apply more than a total of 15 quarts per acre per crop, including any application at the dormant or delayed dormant timing. • Do not apply within 14 days of harvest.			

FORAGE CROPS

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
Alfalfa, Clovers, Birdsfoot trefoil	Blister Beetles, Mexican been Beetle	½ to 1	OBSERVE BEE CAUTION. Observe plant response precautions. On dense growth, use 25 to 40 gallons of water per acre with ground equipment to ensure adequate coverage. For alfalfa weevil larvae, if pretreatment damage is extensive, cut alfalfa and treat the stubble. This product is not effective against adult alfalfa weevils. For cutworm control, this product is most effective against species which feed on the upper portions of the plant.
	Alfalfa caterpillar, Bean leaf beetle, Cucumber beetles, Green cloverworm, Japanese beetle, Leafhoppers, Three cornered alfalfa hopper, Thrips, Velvet bean caterpillar	1	
	Alfalfa weevil larvae, Armyworm, Cloverhead weevil, Corn earworm, Egyptian alfalfa weevil larvae, Essex skipper, European alfalfa beetle, Fall armyworm, yellow striped armyworm	1 to 1½	
	Alfalfa weevil larvae (west of the Rocky Mountains)	1 to 1½	
	Alfalfa weevil larvae (east of the Rocky Mountains)	1½	

- Do not apply more than once per cutting.
- Do not exceed 1½ quarts per acre per cutting.
- Carbaryl may cause a temporary bleaching of tender alfalfa foliage.
- Do not apply with 7 days of harvest or grazing.

Pasture, Grasses Grown for Seed	Armyworm, Chinch bugs, Essex skipper, Fall armyworm, Striped grass looper, Thrips, Range caterpillar, Range cranefly, Ticks	1 to 1½	Up to 2 applications per year may be made but not more often than once every 14 days. To control thrips in grasses grown for seed use high spray pressure to improve penetration into roots. Carefully mark swaths to avoid over-application.

- Do not exceed a total of 3 quarts per acre per year.
- Do not apply within 14 days of harvest or grazing.

Rangeland	Black grass bug, Grasshoppers, Mormon cricket, Range caterpillar, Range crane fly.	½ to 1	Do not make more than 1 application per year. Carefully mark swaths to avoid over-application.
	Ticks	1	

- Do not apply more than 1 quart per acre per year.
- May be harvested or grazed the same day as treatment.

NONCROPLAND

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
Conservation Reserve Program, Acreage Set-aside Program, Acreage Wasteland, Rights-of-Way, Hedgerows, Ditch-banks, Roadsides	Black grass bug	¼ to ½	Up to 2 applications per year may be made but not more often than once every 14 days. Carefully mark swaths to avoid over-application.
	Mormon cricket, Range caterpillar, Range crane fly	½ to 1	
	Ticks	1 to 1½	

- Do not apply more than a total of 3 quarts per acre per year.
- Do not apply within 14 days of grazing or harvest for forage or hay.

GRASSHOPPER CONTROL

CROP	INSECT	QTS. OF THIS PRODUCT/ACRE	SPECIFIC DIRECTIONS
All crops on this label	Grasshopper	½ to 1½*	Apply ½ to ¾ quarts per acre of this product for nymphs on small plants or sparse vegetation. Apply 1 to 1½ quarts per acre for mature grasshoppers or applications to dense foliage or if extended residual control is desired. Be certain spray volumes are appropriate to asssure adequate coverage.

*Note: Refer to individual site listings elsewhere on this label for use limitations and restrictions. Do not use rates higher than listed for the site or exceed other use restrictions.

TREES AND ORNAMENTALS

For dilute-spray ground applications to trees (including shade trees, shelter belts, non-urban forests, tree plantations, Christmas trees, rangeland trees, parks and recreations areas, rural shelter belts), ornamentals, woody plants and shrubs, apply in the specified dosage per 100 gallons of water. For concentrate spray ground applications, apply the specified dosage per acre in sufficient spray volume to provide thorough coverage. For aerial applications to forest trees (including shade trees, shelter belts, plantations, parks and recreations areas) and commercially grown ornamentals, woody plants and shrubs apply the specified dosage per acre in sufficient spray volume to provide thorough coverage. Avoid direct application to lakes, streams and ponds. Do not make more than 6 folliar and 2 direct trunk applications per year.

	AMOUNT OF THIS PRODUCT TO PREPARE		
INSECT	**3 GALS.**	**100 GALS.**	**SPECIFIC DIRECTIONS**
Ants, Apple aphid, Armyworm, Azalea leafminer, Bagworms, Birch leafminer, Blister beetle, Boxelder bug, Boxwood leafminer, Brown tail moth, Cankerworms, Catalpa sphinx, Chiggers, Cooley spruce gall aphid, Cutworms, Cypress tip moth, Douglas fir tussock moth, Eastern spruce gall aphid, Elm leaf aphid, Elm leaf beetle, Elm spanworm, Eriophyid mites, European pine shoot moth, Fall armyworm, Flea beetles, Fuller rose beetle, Gall midges, Gall wasps, Green striped mapleworm, Grasshoppers, Gypsy moth, Hackberry nipplegall maker, Holly bud moth, Holly leafminer, Jackpine budworm, Japanese beetle, Jeffrey pine needleminer, June beetles, Lace bugs, Leaf hoppers, Leafrollers, Locust borers, Maple leafcutter, Mealy bugs, Mimosa webworm, Nantucket pine tip moth, Oak leafminers, Oak leaf skeletonizer, Oakworm complex, Oleander caterpillar, Olive ash borer, Orangestriped oakworm, Orange tortrix, Periodical cicada, Pine sawfly, Pine spittlebug, Pitch pine tip moth, Plant bugs, Poinsettia horn worm, Psyllids, Puss caterpillar, Red humped oak worm, Rose aphid, Rose chafer, Roseslug, Saddled prominent, Sawflies (exposed), Scale insects, Sow bugs, Spiny elm caterpillar, Springtails, Spruce budworm, Spruce needleminer, Sub-tropical pine tip moth, Tent caterpillars, Thornbug, Thrips (exposed), Ticks, Walnut caterpillar, Webworms, Western hemlock looper, Western spruce budworm, Willow leaf beetles, Yellow poplar weevil	1 oz.	1 qt.	Use sufficient spray volume to obtain thorough coverage of upper and lower leaf surfaces. To control scale insects, treat trunks, stems, and twigs in addition to plant foliage. For optimum worm control, treat when in early instars. Addition of a sticker may improve residual control. Observe plant response precautions. Applications for control of Maple leafcutter on sugar maple should be made when larvae are in 2nd instar after mining, and as cases are being formed. Repeat treatments as necessary up to a total of 2 times per year but not more often than once every 7 days.
Elm bark beetle, lips engraver beetles, Mountain pine beetle Roundheaded pine beetle, Western pine beetle	18 oz.	4 gals.	Effective as a preventive treatment only. Repeat annually as required to prevent beetle attacks. Apply 1 gallon of spray per 50 square feet of bark in May to early July or prior to beetle attack. Treat tree trunks from ground level up until trunk diameter is less than 5 inches. Applications for control of Elm bark beetle should consist of 20-30 gallons of spray for 50 foot height of elm tree for thorough coverage of all bank surfaces on trunk, limbs and twigs.

- Do not make more than 2 applications per year.
- DO NOT ALLOW PUBLIC USE OF TREATED AREAS DURING APPLICATIONS OR UNTIL SPRAYS HAVE DRIED.

LAWNS AND RECREATIONAL AREAS (COMMERCIAL APPLICATION ONLY)

SITE	INSECT	SPECIFIC DIRECTIONS
Turf grasses	Ants, Armyworm, Bluegrass billbug, Centipedes,Chiggers, Chinch bugs, Cutworms, Earwig, Essex skipper, European chafer, European crane fly, Fall armyworm, Fiery skipper, Fleas, Grasshoppers, June Beetles, Leaf hoppers, Lucerne moth, Millipedes, Mosquitoes, Sod webworms (lawn moths), Sowbugs, Spittlebugs, Springtails, Ticks, White grubs, Yellowstriped armyworm	Use 6 fl. oz. of this product per 1000 square feet (8 quarts per acre) of turf grass. Make application in sufficient spray volume for thorough coverage and turf thatch penetration. Repeat treatment as necessary. For Armyworm, Cutworm, Fall Armyworm and Sod Webworm Control: Do not irrigate treated areas within 24 hours following insecticide application. For Chinch Bug Control: Treat entire turf grass area rather than just damaged areas. Irrigation of turf grass area before insecticide application will aid in penetration into turf grass. For White Grub Control: Applications should be made when grubs are feeding near the soil surface, usually during late March through May, or July to early September or as recommended by local Agricultural Extension Service Agents. Water or irrigate turf grasses thoroughly soon after treatment.
	Imported Fire Ants	(Refer to OUTDOORS section of PEST CONTROL IN AND AROUND BUILDINGS)

ADULT MOSQUITO CONTROL

CROP	RATE PER 10 GALS.	RATE PER 100 GALS.	SPECIFIC DIRECTIONS
Pastures, Rangeland, Yards, Parks, Recreational Areas, Logging Camps, Military Posts,	1 to 3 oz.	¼ to 1 qt.	OBSERVE BEE CAUTION Treat shrubbery and areas where adult mosquitoes congregate. Treat when adult mosquitoes are active in early morning or late evening. Repeat at 7 to 10 day intervals. Mix ¼ to ½ quart of this product per 100 gallons in mist blower; mix ½ to 1 quart of this product in sufficient volume of water per acre in aerial sprays; mix 1 quart of this product in sufficient volume of water per acre in low pressure ground sprayers.
Forested Lands, Wastelands	2½ qts.	25 qts.	For residual control in subtropical regions apply 4 gallons of prepared spray per 2000 square feet of surface areas. Repeat in 3 to 6 months or when necessary.

- Do not allow public use of treated areas during application or until sprays have dried.
- May kill shrimp and crabs. Do not use in areas where these are important resources.

PEST CONTROL AROUND BUILDINGS
GENERAL INFORMATION

Note: Staining may occur on certain surfaces such as stucco, brick, cinder block and wood. Therefore, applications of this product to surfaces where a noticeable residue or discoloration is objectionable should be avoided. Do not apply to carpets or draperies as staining may occur. Care should also be exercised to avoid spotting of wallpaper and fabrics. Do not use this product in commercial food areas of food handling establishments, restaurants or other places where food is prepared or processed.
Do not use in serving areas while food is exposed.

OUTDOORS

Perimeter Treatment: Residual spray for control of ants, bees and wasps, brown dog ticks, carpenter ants, centipedes, cockroaches, crickets, earwigs, firebrats and silverfish, fleas, millipedes, scorpions and spider. Mix 16 oz. this product per 50 gallons of water (2 fl. oz. per 3 gallons), and apply via power spray or other spray methods. To help prevent infestations of buildings by the above pests, outside perimeter treatment should be in a band 6 to 10 feet wide and confined to shrub beds, foundation plantings and lawn or soil areas immediately adjacent to the structure. Direct application to structures should be minimal and restricted to cracks and crevices and other areas where insects tend to congregate.

Imported Fire Ants: Mix 1½ pints of this product per 50 gallons of water (½ fl. oz. per gallon). Apply a total of 2 gallons of the diluted solution over the surface of each mound or at least 1 quart per 6 inches of mound diameter using a bucket, can or other appropriate equipment. Thoroughly wet mound and surrounding area to a 4 ft. diameter (12 sq. ft.). Do not disturb mounds prior to treatment. Pour solution from a height of about three feet to give sufficient force to break mound apex and flow into ant tunnels. For best results apply in cool weather, 65-80°F, or in early morning or late evening hours. Repeat application if mound activity resumes after 10 days. Treat new mounds as they appear. Pressurized sprays may disturb the ants and cause migration, reducing product effectiveness.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Do not reuse empty container. Do not store under conditions which might adversely affect the container or its ability to function properly.

STORAGE: Store in a safe manner. Store in original container only. Store in cool, dry place. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength. Personnel should use clothing and equipment consistent with good pesticide handling.

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:

Nonrefillable container. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer, or contact The Agricultural Container Recycling Council (ACRC) at www.acrecycle.org. If not recycled, then 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. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

(For packages up to 5 gallons:) 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 ¼ 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For help with any spill, leak, fire or exposure involving this material, call day or night CHEMTREC – 1-800-424-9300.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

BEFORE BUYING OR USING THIS PRODUCT, read the entire Directions for Use and the following Conditions of Sale and Limitation of Warranty and Liability. By buying or using this product, the buyer or user accepts the following Conditions of Sale and Limitation of Warranty and Liability, which no employee or agent of LOVELAND PRODUCTS, INC. or the seller is authorized to vary in any way.

Follow the Directions for Use of this product carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop or other plant injury, ineffectiveness, or other unintended consequences may result from such risks as weather or crop conditions, mixture with other chemicals not specifically identified in this product's label, or use of this product contrary to the label instructions, all of which are beyond the control of LOVELAND PRODUCTS, INC. and the seller. The buyer or user of this product assumes all such inherent risks.

Subject to the foregoing inherent risks, LOVELAND PRODUCTS, INC. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use when the product is used in strict accordance with such Directions for Use under normal conditions of use. EXCEPT AS WARRANTED IN THIS LABEL, THIS PRODUCT IS SOLD AS IS TO THE EXTENT ALLOWED BY APPLICABLE LAW. LOVELAND PRODUCTS, INC. MAKES NO OTHER WARRANTY, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ELIGIBILITY OF THIS PRODUCT FOR ANY PARTICULAR TRADE USAGE.

IN THE UNLIKELY EVENT THAT BUYER OR USER BELIEVES THAT LOVELAND PRODUCTS, INC. HAS BREACHED A WARRANTY CONTAINED IN THIS LABEL, BUYER OR USER MUST SEND, TO THE EXTENT REQUIRED BY APPLICABLE LAW, WRITTEN NOTICE OF SUCH CLAIM TO THE FOLLOWING ADDRESS: LOVELAND PRODUCTS, INC., ATTENTION: LAW DEPARTMENT, 7251 WEST 4TH STREET, GREELEY, CO 80634.

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