

19713-89

04/09/2003

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



OFFICE OF  
PREVENTION, PESTICIDES  
AND TOXIC SUBSTANCES

APR 9 2003

Ms. Luz Piwonka  
Drexel Chemical Company  
PO Box 13327  
Memphis, TN 38113-0327

Dear Ms. Piwonka:

Subject: Revised Labeling  
Drexel Carbaryl 2L  
EPA Registration No. 19713-89  
Your Submission Dated September 11, 2002

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided you make the following changes indicated below before you release the product for shipment bearing the amended labeling:

1. Under Environmental Hazards delete "For terrestrial uses..." This product is only registered for terrestrial uses.
2. Under the Precautionary Statements remove "Do not use....food is prepared or processed." Also add, "Wash regularly with soap and water after handling."
3. Under Directions for Use for Pest Control Around Buildings revise "food" to "food/feed" wherever it appears.

Submit two copies of your final printed labeling before you release the product for shipment. A stamped copy is enclosed for your records. If you have any questions, please contact me at (703) 308-6249 or [hebert.john@epa.gov](mailto:hebert.john@epa.gov).

Regards,

A handwritten signature in black ink, appearing to read "John Hebert".  
John Hebert  
Insecticide-Rodenticide Branch  
Registration Division (7505C)

ACCEPTED  
with COMMENTS  
In EPA Letter Dated:

APR 9 2003  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
19713-89



# Carbaryl 2L

## Insecticide

For effective control of many listed Insect pests on Vegetable crops, Tree fruit and Nut crops, small Fruit crops, Trees, Ornamentals, Lawns and Recreation areas. Also for control of Mosquitoes and listed Poultry pests. Can be used in the home as directed.

**ACTIVE INGREDIENT:**

Carbaryl .....	22.5%
<b>OTHER INGREDIENTS:</b> .....	77.5%
<b>TOTAL:</b> .....	100.0%

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

See FIRST AID Below  
SHAKE WELL BEFORE USING

EPA Reg. No. 19713-89

EPA Est. No. 19713-GA-1

Net Contents: \_\_\_\_\_

FIRST AID
<p><b>IF SWALLOWED:</b></p> <ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<p><b>IF IN EYES:</b></p> <ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> </ul>
<p><b>IF ON SKIN OR CLOTHING:</b></p> <ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> </ul>
<p><b>IF INHALED:</b></p> <ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> </ul>
<p>Call a poison control center or doctor for treatment advice. Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information on this pesticide product, (including health concerns, medical emergencies or pesticide incidents), call the National Pesticide Information Center at 1-800-858-7378.</p>
<p><b>NOTE TO PHYSICIAN:</b> Carbaryl is an N-methyl carbamate that inhibits cholinesterase. Do not use 2-PAM (pyridine-2-aldoxime methiodide), narcotics or other sedatives.</p>

**PRECAUTIONARY STATEMENTS (Con't)**

**NON-WPS USES:** Applicators and other handlers who handle this pesticide for any uses NOT covered by the Worker Protection Standard (40 CFR Part 170) (in general, agricultural plant uses are covered) must wear: Long-sleeved shirt and long pants, shoes plus socks and household latex or rubber gloves when applying this product.

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: 1) Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. 2) Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. 3) 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 product is extremely toxic to aquatic and estuarine invertebrates. For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark, except under the forest canopy. Do not contaminate water by cleaning of equipment or disposal of wastes.

**BEE CAUTION:** 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.

**GENERAL INFORMATION**

CARBARYL 2L is for effective control of many listed Insect pests on Vegetable crops, Tree fruit and Nut crops, Small fruit crops, Trees and Ornamentals and Lawn and Recreation areas. Also for control of Mosquitoes and listed Poultry pests. Can be used in the home as directed.

This product readily disperses in water to form a spray suspension suitable for home and garden use. Read label before use. Strictly observe label directions and applicable Federal and State regulations. To avoid possible injury to tender foliage, do not apply to wet foliage or when rain or high humidity is expected during the next two days. This product injures Boston ivy, Maidenhair fern and Virginia creeper. During early season, it may also injure Virginia and Sand pines.

**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 through any type of irrigation system. 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 Tribes, consult the agency responsible for pesticide regulation.

**PRECAUTIONARY STATEMENTS**  
Hazards to Humans and Domestic Animals.

**CAUTION:** Harmful if swallowed. Avoid breathing spray mist. Avoid contact with eyes, skin or clothing. Do not use this product in commercial food areas of food handling establishments, restaurants or other places where food is prepared or processed.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**WPS USES:** Applicators and other handlers who handle this pesticide for any uses covered by the Worker Protection Standard (40 CFR Part 170) (in general, agricultural plant uses are covered) must wear: Long-sleeved shirt and long pants, waterproof gloves and shoes plus socks.

(Continued)



Manufactured By:  
**Drexel Chemical Company**  
P.O. BOX 13327, MEMPHIS, TN 38113-0327  
SINCE 1972

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval (REI). The requirements in this box only apply to uses of this product that are covered by the WPS. Do not enter or allow worker entry into treated areas during the REI of 12 hours. PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, such as plants, soil or water is: Coveralls, water-proof gloves and shoes plus socks.

**RESIDENTIAL USER SAFETY REQUIREMENT**

Wear long-sleeved shirt, long pants, shoes plus socks and household latex or rubber gloves when applying this product. Wear a hat and eye protection when making overhead applications. Remove clothing immediately if pesticide soaks clothing. Change clothing as soon as possible after use. Wash the outside of gloves before removing. As with any pesticide product, wash hands thoroughly immediately after handling and before eating, smoking or using the toilet. Do not allow children or pets to contact treated area until sprays have dried.

**DIRECTIONS FOR RESIDENTIAL USE**

Apply when air is calm to avoid drift and contact with eyes and skin. Start spraying at the farthest corner of the treatment area and work backward to avoid contact with wet surfaces. Allow spray to dry in treated areas before re-entering. For trees taller than 10 feet, consider hiring a licensed professional. Spray thoroughly to wet upper and lower leaf surfaces, stems and branches. Do not repeat applications more than once a week. Subsequent planting of food and feed crops in treated soil must be made with crops on this or other carbaryl labels. Do not use application methods, dosages, concentrations or frequencies not listed on labeling. Do not apply against target pests or crops not listed on labeling. Do not mix with fertilizers.

**SPRAY PREPARATION**

To assure a uniform product, stir or shake all product containers prior to use. Clean sprayer thoroughly before use. Prepare only as much spray mixture as is needed on the day of mixing. Fill sprayer with one-half to three-quarters the desired amount of water. Slowly add the required amount of this product and then the remaining volume of water. Shake spray mixtures frequently before and during use to prevent settling. Do not store spray mixtures overnight. To clean your sprayer after use, drain and flush with water. Do not use contaminated teaspoons or other measuring devices for other purposes.

**COMPATIBILITY**

This product, when diluted with an equal volume of water, is compatible with a wide range of pesticides. It is not compatible with diesel fuel, kerosene, fuel oil or aromatic solvents. If compatibility of this product with another product and the resulting plant response is unknown, it should be tested on a small scale. Curdling, precipitation, greasing, layer formation or increased viscosity are symptoms of incompatibility. When preparing combination sprays, first add this product to at least an equal volume of water, mix thoroughly and then add combination products to the mixture. Do not apply combinations unless your previous experience indicates the mixture is effective and will not result in application problems, excessive residues or plant injury. Unstable under highly alkaline conditions. Not effective if used with alkaline materials such as Bordeaux, lime-sulfur and casein-lime spreaders.

**INSECT CONTROL**

Apply when insects or their damage appear. To maintain control, repeat at 7-to 14-day intervals or as necessary unless a shorter interval is specified below. Where a dosage range is indicated, use lower rate on young plants and early instars and higher rate on mature plants, advanced instars and adults. Thorough and uniform spray coverage is essential for effective control. Avoid applications just before rainfall as poor insect control may result. This product does not control Spider mites. If Spider mites are a problem, use a registered miticide.

**VEGETABLE CROPS**

All dosages refer to teaspoons of this product per gallon of water. Typical spray gallonage per 430 square feet ranges from 1 to 2 gallons. Do not exceed maximum dosage rate per 430 square feet per application. One teaspoon equals 0.17 fluid ounces or 5 milliliters. Three teaspoons equal one tablespoon.

Crops	Insects	Tsp. Per Gal.	PHI (Days)
All Vegetable crops in this section.	Grasshoppers	2 to 6	See specific Vegetable crop.
	SPECIFIC DIRECTIONS: Use 2 to 3 tsp. per gal. for nymphs on small plants or sparse vegetation. Use 4 to 6 tsp. per gal. for adult Grasshoppers or application to dense vegetation.		
Asparagus	Asparagus beetles	4 to 8	Post-harvest application only.
	Apache cicadas, Asparagus beetles	8 to 16	
SPECIFIC DIRECTIONS: Treat ferns or brush growth. Do not treat more than once every 7 days.			
Beans (including Blackeyed peas, Cowpeas, Crowder or Southern peas, Dry beans, Green beans, Lima beans, Navy beans, Snap beans)	Blister beetles, Mexican bean beetles	2 to 4	3 (Fresh)
	Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Flea beetles, Green clover-worms, Japanese beetles, Leafhoppers, Three-cornered alfalfa hoppers, Thrips, Velvet-bean caterpillars, Western bean cutworms	4	21 (Dried)
	Amyworms, Com earworms, Cutworms, European corn borers, Fall amyworms, Stink bugs, Tarnished plant bugs, Webworms	4 to 6	
	Cowpea curculios	8	
SPECIFIC DIRECTIONS: Observe plant response precautions.			
	Com earworms, Limabean pod borers, Lygus bugs, Stink bugs	8	3 (Fresh) 21 (Dried)
	SPECIFIC DIRECTIONS: CA only.		
Broccoli, Brussels sprouts, Cabbage, Cauliflower, Kohlrabi	Flea beetles, Harlequin bugs	2 to 4	3
	Amyworms, Com earworms, Fall amyworms, Imported cabbageworms	4 to 8	
Chinese cabbage, Collards, Hanover salad, Horseradish, Kale, Mustard greens, Radishes, Rutabagas, Turnips	Flea beetles, Harlequin bugs, Leafhoppers	2 to 4	7 (Horseradish, Radishes, Rutabagas, Turnip roots) 14 (Chinese cabbage, Collards, Hanover salad, Kale, Mustard greens, Turnip tops)
	Aster leafhoppers	4 to 6	
Carrots, Celery, Parsley, Parsnips	Amyworms, Com earworms, Fall amyworms, Imported cabbageworms, Stink bugs, Tarnished plant bugs	4 to 8	7 (Carrots, Parsnips) 14 (Celery, Parsley)
	Flea beetles, Leafhoppers	2 to 4	
	Aster leafhoppers, Lygus bugs, Spittlebugs	4 to 6	
	Amyworms, Com earworms, Fall amyworms, Stink bugs, Tarnished plant bugs	4 to 8	
SPECIFIC DIRECTIONS: Do not treat more than once every 7 days.			
Com	Amyworms, Chinch bugs, Com earworms, Com root-worm adults, European corn borers, Fall amyworms, Flea beetles, Japanese beetles, Sap beetles, Southwestern corn borers, Leafhoppers	4 to 8	2
	SPECIFIC DIRECTIONS: Observe Bee Caution. For insects attacking silks and ears, apply no more than once every 7 days, starting when first silks appear and continuing until silks begin to dry. For larvae in whorl and foliage feeders, apply as necessary. For Chinch bugs, use high gallonage ground application directed at the base of plant. Optimum timing and good coverage are essential for effective control.		

(Continued)

Crops	Insects	Tsps. Per Gal.	PHI (Days)
Corn (Cont'd)	Western bean cutworms	8	3
	SPECIFIC DIRECTIONS: Treat when infestation averages 15% and 90% to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness.		
Cucumbers, Melons, Pumpkins, Squash	Melonworms, Pickleworms	2 to 4	3
	Cucumber beetles, Flea beetles, Leafhoppers, Squash bugs	4	
	SPECIFIC DIRECTIONS: Observe plant response precautions. Avoid excessive applications.		
Dandelions, Endive (Escarole), Lettuce, Salsify	Flea beetles, Harlequin bugs, Leafhoppers	2 to 4	7 (Salsify roots)
	Aster leafhoppers, Lygus bugs, Spittlebugs	4 to 6	14 (Dandelions, Endive)
	Amyworms, Corn earworms, Fall armyworms, Imported cabbageworms, Stink bugs, Tarnished plant bugs	4 to 8	(Escarole), Head lettuce, Leaf lettuce, Salsify tops)
	SPECIFIC DIRECTIONS: Observe plant response precautions. Do not treat more than once every 7 days.		
Eggplant, Peppers, Potatoes, Tomatoes	Colorado potato beetles, Flea beetles, Leafhoppers	2 to 4	3 (Eggplant, Peppers, Tomatoes)
	European corn borers, Fall armyworms, Lace bugs, Stink bugs, Tarnished plant bugs, Tomato fruitworms, Tomato hornworms, Tomato pinworms	4 to 8	7 (Potatoes)
	Cutworms	8	
	SPECIFIC DIRECTIONS: Observe plant response precautions. Do not treat more than once every 7 days.		
Garden beets, Spinach, Swiss chard	Flea beetles, Harlequin bugs, Leafhoppers	2 to 4	7 (Garden beet roots)
	Aster leafhoppers	4 to 6	14 (Garden beet tops, Spinach, Swiss chard)
	Amyworms, Corn earworms, Fall armyworms, Stink bugs, Tarnished plant bugs	4 to 8	
SPECIFIC DIRECTIONS: Do not treat more than once every 7 days.			
Okra	Corn earworms, Stink bugs	4 to 8	3
	SPECIFIC DIRECTIONS: Do not apply more than once every 7 days.		
Peanuts	Blister beetles, Mexican bean beetles	2 to 4	14
	Alfalfa caterpillars, Bean leaf beetles, Cucumber beetles, Green cloverworms, Japanese beetles, Leafhoppers, Rednecked peanutworms, Threecornered alfalfa hoppers, Thrips, Velvetbean caterpillars	4	
	Amyworms, Corn earworms, Fall armyworms, Stink bugs, Webworms	4 to 6	8
	Cutworms, Whitefringed beetles (adults)	8	
Peas	Colorado potato beetles, Leafhoppers	4	3 (Fresh)
	Amyworms	4 to 6	14 (Dried)
	Alfalfa caterpillars, Cutworms, Pea leaf weevils, Pea weevils, Yellowstriped armyworms	6	
	SPECIFIC DIRECTIONS: Observe plant response precautions.		
	Alfalfa loopers	10	0
SPECIFIC DIRECTIONS: WA only.			

**TREE FRUIT AND NUT CROPS**

All dosages refer to teaspoons of this product per gallon of water. Use sufficient spray gallonage to obtain thorough coverage. Do not exceed maximum rate of this product per gallon of spray. (One teaspoon equals 0.17 fluid ounces or 5 milliliters. Three teaspoons equal one tablespoon.)

Crops	Tsps. Per Gal.	PHI (Days)
Apple thinning	1 to 2	3
Apples only	2 to 4	
SPECIFIC DIRECTIONS: Apply 1 full coverage dilute spray between 10 and 25 days after full bloom. If factors such as tree age, variety, nutrition, previous crop, pruning, bloom and degree of set favor excessive fruit thinning with this product, exercise caution to avoid possible yield reduction. For easily thinned varieties including Cortland, Grimes, Jonathan, McIntosh, Orleans, Rome beauty, Puritan, Red delicious, Winesap and Yellow newton. For difficult to thin varieties including Baldwin, Ben Davis, Duchess, Early mcintosh, Golden delicious, Lady apple, Northern spy, Rhode Island greening, Steele red, Turley, Wealthy, Yellow transparent and York imperial.		

Crops	Insects	Tsps. Per Gal.	PHI (Days)
Almonds	Fruitree leafrollers, Peach twig borers, San Jose scales	4	14
	SPECIFIC DIRECTIONS: Apply in "popcorn" or petal fall stages and again when the May brood of the Peach twig borers begin to hatch or thereafter as needed.		
	Navel orangeworms	4	28
SPECIFIC DIRECTIONS: Time early and mid-season application to correspond to moth flight peaks. Make a late season application at initiation of hull split or up to 10% hull split. Do not apply more than 3 fl. ozs. per 430 sq. ft. per application of this product.			
Apples	Apple aphids, Apple rust mites, Apple suckers, Bagworms, California pearslugs (Pear sawflies), Codling moths, Eyespotted bud moths, Green fruitworms, Lecanium scales, Lesser appleworms, Lygus bugs, Orange tortrix, Oystershell scales, Pearleaf blister mites, Pear psylla, Pear rust mites, San Jose scales, Tentiform leafminers, Woolly apple aphids	3 to 4	3
WEST OF THE ROCKY MOUNTAINS: To avoid undesired Apple thinning, delay use at least 30 days after full bloom. For Psylla control, apply when eggs hatch or young nymphs are present.			
Apples	Apple aphids, Apple mealybugs, Codling moths, White apple leafhoppers	2	3
	EAST OF THE ROCKY MOUNTAINS: To avoid undesired Apple thinning, delay use until at least 30 days after full bloom.		
Apples	Apple maggots, Apple rust mites, Bagworms, Eastern tent caterpillars, European apple sawflies, Eyespotted bud moths, Forbes scale, Fruitree leafrollers, Green fruitworms, Japanese beetles, Lecanium scales, Lesser appleworms, Oystershell scales, Pear psyllas, Pearleaf blister mites, Pear rust mites, Periodical cicadas, Plum curculios, Redbanded leafrollers, Rosy apple aphids, San Jose scales, Tarnished plant bugs, Tentiform leafminers, Woolly apple aphids, Yellowheaded fireworms	4	3
SPECIFIC DIRECTIONS: For optimum Scale control, apply when crawlers are present.			

Crops	Insects	Tsps. Per Gal.	PHI (Days)
Apricots, Nectarines, Peaches	Apple pandemis, Codling moths, Cucumber beetles, European earwigs, Fruitree leafrollers, Japanese beetles, June beetles, Lecanium scales, Les-ser peachtree borers, Olive scales, Orange tortrix, Oriental fruit moths, Peach twig borers, Periodical cicadas, Plum curculios, Redbanded leafrollers, San Jose scales, Tarnished plant bugs, Tussock moths, Variegated leafrollers	4	3
SPECIFIC DIRECTIONS: Do not apply more than 4 fl. ozs. of this product per 430 sq. ft. per application to Apricots. For optimum Scale control, apply when crawlers are present. Thoroughly spray limbs and trunks weekly during moth flight.			
Cherries, Plums, Prunes	Black cherry aphids, Brown soft scales, Cherry fruitworms, Cherry mag-gots, European earwigs, Eyespotted bud moths, Forbes scales, Fruitree leafrollers, Green fruitworms, Japan-ese beetles, Lecanium scales, Lesser peachtree borers, Mealy plum aphids, Oystershell scales, Peach twig borers, Plum curculios, Prune leafhoppers, Redbanded leafrollers, Rose chafers, San Jose scales, Variegated leafrollers	4	3
	Codling moths, Eastern tent caterpillars, Orange tortrix, Tussock moths	3	
SPECIFIC DIRECTIONS: Do not apply more than 4 fl. ozs. of this product per every 430 sq. ft. per application. For optimum Scale control, apply when crawlers are present. For Lesser peachtree borer control, thoroughly spray limbs and tree trunks weekly during moth flight.			
Citrus Fruit (such as Citron, Citrus, Grapefruit, Hybrids, Kumquats, Lemons, Limes, Oranges, Tangelos and Tangerines)	Avocado leafrollers, California orange-dogs, Citrus cutworms, Citrus root weevils, Fruitree leafrollers, Orange tortrix, Western tussock moths, West Indian sugarcane borers (adult)	4	5
	Black scales, Brown soft scales, California red scales, Citricola scales, Citrus snow scales, Yellow scales	3 to 4	
SPECIFIC DIRECTIONS: Do not apply more than 13 fl. ozs. of this product per every 430 sq. ft. per application. Do not apply less than 10 gals. of dilute spray mixture per mature tree. May be mixed with petroleum oils commonly used on Citrus.			
Filberts	Filbert aphids, Filbert leafrollers, Filbertworms	4	14
SPECIFIC DIRECTIONS: Apply when Leafroller eggs are hatching. Repeat on first appearance of adult Filbert moths and again 3 to 4 weeks later.			
Olives	Olive scales	3 to 4	14
SPECIFIC DIRECTIONS: For optimum Scale control, apply mixture when crawlers are present. Do not exceed 2 applications per year. Do not apply more than 9.6 fl. ozs. of this product per every 430 sq. ft. per application.			
Pecans	Black margined aphids, Fall webworms, Hickory shuckworms, Lesser webworms, Pecan leaf phyloxeras, Pecan nut casebearers, Pecan spittlebugs, Pecan weevils, Twig girdlers, Walnut caterpillars	4 to 10	14
SPECIFIC DIRECTIONS: Do not apply more than 5 fl. ozs. of this product per 430 sq. ft. per application.			
Walnuts	Calico scales, European fruit lecaniums, Filbert worms, Fruitree leafrollers, Frosted scales	2	14
	Codling moths	2	14
	SPECIFIC DIRECTIONS: Apply 3 fl. ozs. of this spray product per every 430 sq. ft. for mature trees. For Codling moths, apply first spray when average cross-sectional diameter of developing nuts is one-half to three-quarters inch. Repeat during middle or late June as needed.		
	European earwigs	8	14
SPECIFIC DIRECTIONS: Spray tree trunks to point of runoff.			

**SMALL FRUIT CROPS**

Recommended dosages refer to teaspoons of this product per gallon of water. Use sufficient spray gallonage to obtain thorough coverage. Do not exceed maximum rate of this product per gallon of spray. (One teaspoon equals 0.17 fluid ounce or 5 milliliters. Three teaspoons equal one tablespoon.)

Crops	Insects	Tsps. Per Gal.	PHI (Days)
Blackberries, Dewberries (including Boysenberries and Loganberries), Raspberries	European raspberry aphids, Japanese beetles, Leafhoppers, Leafrollers, Rose chafers, Snowy tree crickets	4 to 8	7
	Omnivorous leafrollers, Raspberry sawflies	8	
SPECIFIC DIRECTIONS: CA only.			
Blueberries	Blueberry maggots, Cherry fruitworms, Cranberry fruitworms, European fruit lecaniums, Japanese beetles	6	7
SPECIFIC DIRECTIONS: Apply 3 weeks before harvest and repeat as necessary.			
Cranberries	Cranberry fireworms, Cranberry fruitworms, Cutworms, Japanese beetles, Leafhoppers, Rose chafers	6 to 12	7
SPECIFIC DIRECTIONS: CAUTION. May kill shrimp and crabs. Do not use in areas where these are important resources. Apply in late bloom and as needed at 7- to 10-day intervals.			
Grapes	European fruit lecaniums, Grape leaffolders, Grape leafhoppers, Western grapeleaf skeletonizers, Western yellowstriped armyworms	4 to 8	7
	Cutworms, Eightspotted foresters, Grape berry moths, Japanese beetles, June beetles, Orange tortrix, Omnivorous leaf-rollers, Redbanded leafrollers, Saltmarsh caterpillars	8	
SPECIFIC DIRECTIONS: Apply before first brood Leaffolder larvae emerge from rolls.			
Strawberries	Flea beetles, Meadow spittlebugs, Omnivorous leafliers (Strawberry fruitworms), Strawberry leafrollers, Strawberry weevils	4 to 8	7
SPECIFIC DIRECTIONS: This product may injure Early dawn and Sunrise varieties on the Delmarva Peninsula.			

**TREES AND ORNAMENTALS**

For dilute spray applications to trees (including shade trees, shelter belts, plantations, parks and recreational areas), ornamentals, woody plants and shrubs, apply the specified dosage per 100 gallons of water in sufficient spray volume to provide thorough coverage. (One teaspoon equals 0.17 fluid ounce or 5 milliliters. Three teaspoons equal one tablespoon.)

Crops	Insects	Tsps. Per Gal.
GROUND APPLICATION: Trees (including shade trees, shelter belts, plantations, parks and recreational areas) Ornamentals (including roses, flowers and other herbaceous plants), Woody plants and shrubs.	Ants, Apple aphids, Armyworms, Azalea leafminers, Bagworms, Birch leafminers, blister beetles, Boxelder bugs, Boxwood leafminers, Brown-tail moths, Cankerworms, Catalpa sphinx, Chiggers, Cokerley spruce gall aphid, Cutworms, Cypress tip moths, Douglas fir, Eastern spruce gall-aphid's, Elm leaf aphids, Elm leaf beetles, Elm spanworms, Eriophid mites, European pine shoot moths, Fall armyworms, Flea beetles, Fuller rose beetles, Gall midges, Gall wasps, Greenstriped maple worms, Grasshopper, Gypsy moths, Hackberry nipplegall makers, Holly bud moths, Holly leafminers, Jack pine budworms, Japanese beetles, Jeffrey pine needleminers, June beetles, Lace bugs, Leafhoppers, Leafrollers, Locust borers, Mealybugs, Maple leaf-tyers, Mimosa webworms, Nantucket pine tip moths, Oak leafminers, Oak leaf skeletonizers, Oak worm complexes, Oleander caterpillars, Olive ash borers, Orangestriped oakworms, Orange tortrix, Periodical cicadas, Pine sawflies, Pine spittle bugs, Pitch pine tip moths, Plant bugs, (Continued)	4

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Crops	Insects	Tsp. Per Gal.
GROUND APPLI-CATION: Trees (including shade trees, shelter belts, plantations, parks and recreational areas) Orna-mentals (including roses, flowers and other herbaceous plants), Woody plants and shrubs. (Cont.)	Poinsettia hornworms, Psyllids, Puss cater-pillars, Redhumped oakworms, Rose aphids, Rose chafers, Roseslug, Saddled prominents, Sawflies (exposed), Scale insects, Sowbugs, Spiny elm caterpillars, Springtails, Spruce budworms, Spruce needleminers, Subtropical pine tip moths, Tent caterpillars, Thornbugs, Thrips (exposed), Ticks, Tussock moths, Walnut caterpillars, Webworms, Western hemlock loopers, Western spruce budworms, Willow leaf beetles, Yellow-poplar weevils	4
	SPECIFIC DIRECTIONS: Observe plant response pre-cautions. Apply dilute sprays 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.	
GROUND APPLI-CATION: Trees (including shade trees, shelter belts, plantations, parks & recreational areas) Orna-mentals (including roses, flowers and other herbaceous plants), Woody plants and shrubs.	Ips engraver beetles, Mountain pine beetles, Roundheaded pine beetles, Western pine beetles	13.3 fl. ozs. per gal.
	SPECIFIC DIRECTIONS: Effective as a preventative treatment only. Repeat annually as required to prevent Beetle attacks. Apply 1 gal. of spray per 50 sq. ft. of bark in late May to early July, or prior to Beetle attack. Treat tree trunks from ground level up, until trunk diameter is less than 5 inches.	

**LAWNS AND RECREATIONAL AREAS**

Crops	Insects	Specific Directions
Lawns and Recreational Areas (including turf, golf courses and parks)	Ants, Armyworms, Bluegrass billbugs, Centipedes, CHG-gers, Cutworms, Earwigs, Essex skippers, European chafers, Fall armyworms, Fiery skippers, Fleas, Grasshoppers, June beetles, Leafhoppers, Lucerne moths, Millipedes, Mosquitoes, Sod webworms (Lawn moths), Sowbugs, Springtails, Ticks, Yellow-striped armyworms	Use 2 qts. of this product in 150 to 200 gals. of spray mixture per 5,000 sq. ft. of established lawn, recreational area, roadway or path border. For best results, mow lawn and apply after wetting or rain to ensure good penetration of turf. Garden hose or pressure applications may be used. Repeat 2 or 3 weeks later if necessary.
	Chinch bugs, White grubs	Use 3 qts. of this product in 150 to 200 gals. of spray per 5,000 sq. ft.

**MOSQUITO CONTROL**

For dilute spray ground applications to trees (including shade trees, shelter belts, plantations, parks and recreational areas), Ornamentals, Woody plants and shrubs, apply the specified dosage per 1 gallon of water. Avoid direct application to lakes, streams and ponds.

Crops	Amount Per Gal.	Specific Directions
Yards and Recreational Areas	1 to 2 tbsps. 16 fl. ozs.	ADULT MOSQUITOES: Caution. May kill shrimp and crabs. Do not use where these are important resources. 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. For residual control in subtropical regions, apply 4 gals. of prepared spray per 2,000 sq. ft. of surface area. Repeat in 3 to 6 months or when necessary.

**PEST CONTROL AROUND BUILDINGS LIMITED TO PEST CONTROL OPERATORS ONLY**

Insect	Amount Per Gal.	Specific Directions
Ants, Cockroaches	17 fl. ozs.	For use in and around buildings such as homes, apartments, warehouses, barns and municipal and recreational areas. Apply as a coarse wet spray or with a paintbrush to outdoor sleeping quarters of pets, outside perimeter of dwellings and other areas where insects tend to congregate. Do not use in food areas or food handling establishments, restaurants or other areas where food is commercially prepared or pro-cessed. Do not use in serving areas while food is exposed.
Brown dog ticks, Earwigs, Fleas, Millipedes, Silverfish	7 fl. ozs.	

**POULTRY INSECT CONTROL**

Poultry	Insect	Specific Directions
Chickens, Ducks, Game-birds, Pigeons, Turkeys	Chicken mites, Fleas, Lice, Northern fowl mites	For Use As A Direct Mist Spray On Birds By: 1. Misting with Electric Fog Machine: Mix 20 fl. ozs. of this product in 1 gal. of spray. Use 1.5 gals. per 1,000 hens in cages, on litter or on slatted floors. Repeat in 4 weeks if necessary, or 2. Spraying with knapsack or cylinder type compressed air sprayers: Mix 12 fl. ozs. of this product in 5 gals. of spray. Use 1 gal. per 100 hens in cages, on litter or slatted floors. Repeat in 4 weeks if necessary. Direct mist spraying for Chicken mites and Fleas is a supplement to spraying roosts and buildings for control of these pests. Do not apply to Poultry and Game birds within 7 days of slaughter.

**POULTRY ROOSTS AND BUILDINGS ONLY**

Insects Poultry Quarters	Amount Per Gal.	Specific Directions
Bedbugs, Chicken mites, Fleas, Lice, Northern fowl mites	5 tbsps.	Apply 12 to 25 fl. ozs. of spray mixture per 100 sq. ft. of wall, litter or roost surface. Force spray into cracks. Repeat as needed. Avoid contamination of nests, eggs and feeding and water troughs. Ventilate while spraying. Do not treat premises within 7 days of slaughter.
Fowl ticks	10 fl. ozs.	
Lesser mealworms	33 fl. ozs.	Apply 25 fl. ozs. of spray mixture per 100 sq. ft. of floor space or litter surface. Repeat as needed. Ventilate while spraying. Do not treat premises within 7 days of slaughter.

**STORAGE AND DISPOSAL**

Do not contaminate water, food or feed by storage and disposal.

**PESTICIDE STORAGE:** Storage should be under lock and key and secure from access by unauthorized persons and children. Storage should be in a cool, dry area away from any heat or ignition source. Avoid storage at high temperatures. Do not stack over 2 pallets high. Move containers by handles or cases. Do not move containers from one area to another unless they are securely sealed. Keep container tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Avoid contamination with acids and alkalis. Store in original containers only. If the contents are leaking or material is spilled, follow these steps:

1. Contain spill. Absorb with a material such as sawdust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with soap and water to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in a plastic tub and transfer the contents, as soon as possible, to an empty, original container.
6. Do not allow runoff to enter sewer or contaminate water supplies.
7. Dispose of wastes as indicated below:

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL:** Triple rinse (or equivalent). Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

**WARRANTY—CONDITION OF SALE**

OUR RECOMMENDATIONS FOR USE of this product are based upon tests believed reliable. Follow directions carefully. Timing and method of application, weather and crop conditions, mixtures with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the Seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. In no case shall the Manufacturer or the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product when such use and/or handling is not in strict accordance with directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.