

PM 14

34704-447

7-1-97

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ACCEPTED

JUL 01 1997



CARBARYL 4L

Insecticide

For Agricultural And Commercial Use Only

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 34704-447

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. _____
NET CONTENTS _____ GAL. (_____ KG)
IHT EXP05Y97

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

MAY BE HARMFUL IF SWALLOWED. Avoid breathing of spray mist. Do not take internally. Avoid contact with skin, eyes and clothing. Do not use this product in food areas of commercial food-handling establishments, restaurants or other places where food is prepared or processed.

Personal Protective Equipment:
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 statements:
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.

STATEMENT OF PRACTICAL TREATMENT

IF SWALLOWED: Call a physician or Poison Control Center immediately. Give victim 1 or 2 glasses of water and induce vomiting by touching the back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious or convulsing person.

IF IN EYES: Flush eyes with plenty of water. If irritation persists get medical attention.

IF ON SKIN: Wash skin with soap and water.

IF INHALED: Remove victim to fresh air. Apply artificial respiration if indicated.

NOTE FOR PHYSICIAN: Carbaryl is a moderate, reversible, cholinesterase inhibitor. Atropine is antidotal. Do not use 2-PAM opiates, or cholinesterase-inhibiting drugs.

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. 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 and shoes plus socks.

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 DISPOSAL: METAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. **PLASTIC:** Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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 $\frac{1}{4}$ to $\frac{3}{4}$ 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.

Apply when insects or their damage appear. Repeat application at 7 to 14 day intervals or as necessary to maintain control, unless otherwise specified below. If a dosage range is given, the lower rate should be used on young plants and early instars and the higher rate on mature plants, advanced instars and adults. Thorough and uniform spray coverage is essential for effective control.

Regional differences have been noted in the susceptibility of certain strains of fall armyworm to carbaryl insecticides. If local experience indicates inadequate control, use an alternative pesticide.

This product will not control spider mites. If spider mites are a problem, use a miticide registered for their control.

To avoid injury to tender foliage, do not apply to wet foliage or when rain or high humidity is expected during the next two days.

Avoid applications just before rainfall as poor insect control may result. Do not use on Boston ivy, Virginia creeper and maidenhair fern as injury will result. During early season, it may also injure Virginia and sand pines.

Observe all label instructions on apple thinning and on combinations with certain herbicides on rice and soybeans.

CHEMIGATION: Refer to supplemental labeling entitled "APPLICATION THROUGH IRRIGATION SYSTEMS-CHEMIGATION" for use directions for chemigation. Do not apply this product through any irrigation systems unless the supplemental labeling on chemigation is followed.

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

FORAGE, FIELD AND VEGETABLE CROPS

Use at least 1 gallon of finished spray per acre for aerial application and at least 3 gallons of finished spray per acre for concentrate ground application. To prepare small volumes of spray, use 1 tablespoonful ($\frac{1}{2}$ fluid ounce) of this product per gallon of water where rates of 1 quart per acre or 1 quart per 100 gallons are indicated in the tables below. This product may be applied up to and including the day of harvest or grazing of forage crops. Application may be made without removing livestock from area being treated.

CROP	INSECT	QTS. OF THIS PRODUCT /ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS	
All Forage, Field and Vegetable Crops in this Section		1/2 to 1 1/2	See specific Field or Vegetable Crop	Use 1/2 to 1 quart for nymphs on small plants or sparse vegetation in wasteland, rangeland, ditch banks and borders. Use 1 to 1 1/2 quarts for adult grasshoppers or applications to dense vegetation.	
Alfalfa, clovers	Blister Beetles, Mexican bean beetle	1/2 to 1	0 (clovers)	Observe plant response precautions.	
	Alfalfa caterpillar, Bean leaf beetle, Cucumber beetles, Green cloverworm, Japanese beetle, Leafhoppers, Three cornered alfalfa hopper, Thrips, Velvetbean caterpillar	1	3 (alfalfa)		
	Alfalfa weevil larvae, Armyworm, Cloverhead weevil, Corn earworm, Egyptian alfalfa weevil larvae, Essex skipper, European alfalfa beetle, Fall armyworm, Lygus bugs, Stink bugs, Webworms, Yellowstriped armyworm	1 to 1 1/2	0 (clovers) 3 (alfalfa)		For alfalfa weevil larvae, if pretreatment damage is extensive, cut alfalfa and treat the stubble. Use higher rate in areas east of the Rocky Mountains. On dense growth use 25 to 40 gallons per acre with ground equipment to ensure adequate coverage.
Asparagus	Asparagus beetle	1 to 2	1	Treat ferns or brush growth. Do not treat more than once every 3 days.	
	Apache cicada, Asparagus beetle	2 to 4	Post harvest application only		
Beans (including blackeyed peas, cowpeas, crowder or southern peas, dry beans, green beans, lima beans, navy beans and snap beans)	Blister beetles, Mexican bean beetle	1/2 to 1	0 (except cowpeas) 3 (cowpeas)	Observe plant response precautions.	
	Alfalfa caterpillar, Bean leaf beetle, Cucumber beetles, Flea beetles, Green cloverworm, Japanese beetle, Leafhoppers, Three cornered alfalfa hopper, Thrips, Velvetbean caterpillar	1			
	Western bean cutworm	1 to 2			0 (except cowpeas) 3 (cowpeas)
	Armyworm, Corn earworm, Cutworms, European corn borer, Fall armyworm, Stink bugs, Tarnished plant bug, Webworms	1 to 1 1/2			
	Cowpea curculio	2			
	Corn earworm, Limbean pod borer, Lygus bugs, Stink bugs	2			CALIFORNIA ONLY
Cabbage, Broccoli, Brussels Sprouts, Cauliflower, Kohlrabi	Flea beetles, Harlequin bug	1/2 to 1	3		
	Armyworm, Corn earworm, Fall armyworm, Imported cabbageworm	1 to 2			
Chinese cabbage, Collards, Hanover salad, Horseradish, Kale, Mustard greens, Radishes, Rutabagas, Turnips	Flea beetles, Harlequin bugs, Leafhoppers	1/2 to 1	3 (Horseradish, radishes, rutabagas and turnip roots)		
	Aster leafhopper	1 to 1 1/2			
	Armyworm, Corn earworm, Fall armyworm, Imported cabbageworm, Stink bugs	1 to 2			
	Tarnished plant bug	1 to 2			14 (Chinese cabbage, collards, Hanover salad, kale, mustard greens, and turnip tops)

CROP	INSECT	QTS. OF THIS PRODUCT /ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Carrots, Parsnips, Parsley, Celery		1/2 to 1	0 (carrots) 3 (parsnips) 14 (celery and parsley)	DO NOT USE ON CELERY IN CALIFORNIA. Treat on a 5 to 7 day schedule.
	Aster leafhopper, Lygus bugs, Spittlebugs	1 to 1 1/2		
	Armyworm, Corn earworm, Fall armyworm, Stink bugs, Tarnished plant bug	1 to 2		
Corn (field, sweet, pop)	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	0	OBSERVE BEE CAUTION: For insects attacking silks and ears apply at 1 to 6 day intervals 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 plants. Optimum timing and good coverage are essential for effective control. Treat when infestation averages 15% and at 90 to 100% tassel emergence. Treatment after 100% silk emergence will reduce effectiveness. Apply in a 12 inch band, using 6 fluid ounces per 1000 linear feet of row, in at least 15 gallons of water per acre. For broadcast application use 6.5 quarts in at least 20 gallons (ground) or 5 gallons (air) of water per acre.
	Western bean cutworm	2		
	Cutworms	2 to 6 1/2		
Cotton	Cotton flea hopper, Cotton leafworm, Flea beetles, Striped blister beetle, Thrips	1/2 to 1	7	Early season insect control. Treat on a 5 to 7 day schedule for as long as control is necessary. Mid and late season insect control. May be applied after bolls open.
	Boltworms, Cotton leaf perforator, Fall armyworm, Leafrollers, Leafhoppers, Tarnished plant bug, Yellowstriped armyworm (cotton cutworm)	1 to 2		
	Lygus bugs	1 to 2	7	For light to moderate populations in Western irrigated cotton. Aphid populations will be suppressed by repeated applications of this insecticide.
	Pink bollworm	1 1/2 to 2 1/2		
	Stink bugs, Saltmarsh caterpillar	2		
	Cucumber, Melons, Pumpkins, Squash	Pickleworm, Melonworm		
Cucumber beetles, Flea beetles, Leafhoppers, Squash bugs	1			
Dandelion, Endive (Escarole), Lettuce, Salsify	Flea beetles, Harlequin bug, Leafhoppers, Aster leafhopper, Lygus bugs, Spittlebugs	1/2 to 1	3 (head lettuce & salsify - roots)	Observe plant response precautions. Treat on a 5 to 7 day schedule after heads begin to form.
	Armyworm, Corn earworm, Fall armyworm, Imported cabbageworm, Stink bugs, Tarnished plant bug	1 to 2	14 (dandelion, endive (escarole) leaf lettuce & salsify tops)	
Forage Grasses, Pasture	Armyworm, Black grass bugs, Chinch bugs, Essex skipper, Fall armyworm, Range caterpillars, Range crane fly, Striped grass looper, Thrips, White grubs (green June beetle)	1 to 1 1/2	0	To control thrips in grasses grown for seed use high spray pressure to improve penetration into boot.
Garden beet, Spinach, Swiss chard	Flea beetles, Harlequin bug, Leafhoppers	1/2 to 1	3 (garden beet roots)	Treat on a 5 to 7 day schedule.
	Aster leafhopper	1 to 1 1/2		

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CROP	INSECT	QTS. OF THIS PRODUCT /ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Garden beet cont'd	Amyworm, Corn earworm, Fall armyworm, Stink bugs, Tarnished plant bug	1 to 2	14 (garden beet tops, spinach, Swiss chard)	
Okra	Corn earworm, Stink bugs	1 to 2	0	Treat on a 5 to 7 day schedule.
Peanuts	Bister beetles, Mexican bean beetle	1/2 to 1	0	Observe plant response precautions.
	Alfalfa caterpillar, Bean leaf beetle, Cucumber beetles, Green cloverworm, Japanese beetle, Leafhoppers, Rednecked peanut worm, Three cornered alfalfa hopper, Velvetbean caterpillar	1	0	
	Amyworm, Corn earworm, Fall armyworm, Stink bugs, Webworms	1 to 1 1/2		
	Whitefringed beetle adults, Cutworms	2	0	
Peas	Colorado potato beetle, Leafhoppers	1	3	
	Amyworm	1 to 1 1/2		
	Alfalfa caterpillar, Cutworms, Pea leaf weevil, Pea weevil, Yellowstroed armyworm	1 1/2		
	Colorado potato beetle, Flea beetles, Leafhoppers	1/2 to 1	0	
Potato, Tomato, Eggplant, Pepper	European corn borer, Fall armyworm, Lace bugs, Stink bugs, Tarnished plant bug, Tomato fruit worm, Tomato hornworm, Tomato worm	1 to 2	0	
	Cutworms	2		
	Colorado potato beetle, Flea beetles, Leafhoppers	1 to 2	0	
	Amyworm, Chinch bugs, Fall armyworm, Stink bugs	1 to 1 1/2	14	
Rice	Amyworm, Leafhoppers, Tadpole shrimp	2	14	CAUTION. May kill shrimp and crabs. Do not use in areas where these are important resources. Do not use on rice fields in which crayfish and/or catfish farming are included in the cultural practice. DO NOT APPLY PROPANIL HERBICIDES WITHIN 15 DAYS BEFORE OR AFTER APPLICATION OF THIS PRODUCT OR PLANT INJURY WILL RESULT. MISSISSIPPI DELTA & TEXAS CALIFORNIA ONLY. For optimum tadpole shrimp control apply to water when pest first appears.
	Amyworm, Chinch bugs, Fall armyworm, Stink bugs	1 to 1 1/2		
	Amyworm, Leafhoppers, Tadpole shrimp	2	14	
Sorghums (incl. grain sorghum, sweet sorghum and hybrids)	Amyworms, Chinch bugs, Corn earworm, Fall armyworm, Stink bugs, Webworms	1 to 2	21 (grain) 0 (forage)	Direct spray into forming heads for optimum insect control. Treat for sorghum midge when 25 to 30% of heads have emerged from boot and are in bloom. Repeat application 3 to 5 days later if adults are still active. A third application may be necessary in late planted sorghum or if midge are abundant. For chinch bugs use high gallonage ground application directed at the base of plants.
	Sorghum midge, Southwestern corn borer	1 1/2		
	Cutworms	2	21 (grains) 0 (forage)	
	Bean leaf beetle, Cucumber beetles, Green cloverworm, Mexican bean beetle, Velvetbean caterpillar	1/2	0	
Soybeans	Corn earworm	1/2 to 3/4	1 to 1 1/2	DO NOT APPLY A COMBINATION OF THIS PRODUCT AND 2,4-DB HERBICIDES TO SOYBEANS AS CROP INJURY MAY RESULT. Use the moderate rates for light to moderate populations and smaller instars. Use the higher rates for heavy populations and larger instars.
	Bister beetles, Grape colaspis, Mexican bean beetle	1/2 to 1	0	

CROP	INSECT	QTS. OF THIS PRODUCT /ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Soybeans cont'd	Alfalfa caterpillar, Bean leaf beetle, Cucumber beetles, Green cloverworm, Japanese beetle, Leafhoppers, Three cornered alfalfa hopper, Thrips, Velvetbean caterpillar	1		DO NOT APPLY A COMBINATION OF THIS PRODUCT AND 2,4-DB HERBICIDES TO SOYBEANS AS CROP INJURY MAY RESULT. Use lower rates for light to moderate populations and smaller instars. Use the higher rates for heavy populations and larger instars.
	Amyworm, Cutworms, Fall armyworm, Stink bugs, Webworms	1 to 1 1/2	0	
	Painted lady, (Thistle caterpillar) Saltmarsh caterpillar, Yellowstriped armyworm	2 to 2 1/2		
Sugarbeets	Amyworm, Beet leaf beetle, Flea beetles, Leafhoppers, Webworms	1 to 1 1/2	14	
	Cutworms	1 1/2	14	
Sunflower	Cutworms	1 1/2	60	DO NOT USE IN CALIFORNIA.
	Amyworm, Fall armyworm	1 1/2 to 2		
	Stem weevil, Sunflower beetle	1 to 2		
Sweet potato	Corn earworm, Cucumber beetles, Flea beetles, Sweet potato hornworm, Tortoise beetles	1 to 2	0	Apply as a foliar spray as needed. DO NOT USE IN CALIFORNIA. FOLIAR APPLICATION Full coverage of plants is essential. Use lower rate on young plants and higher rate on mature plants.
	Yellowstriped armyworm	2		
	Sweet potato weevil	1 to 2		
	Corn earworm, Cucumber beetles, Flea beetles, Sweet potato hornworm, Tortoise beetles	1 to 2		
Tobacco	Tobacco flea beetle	2 Tbs/gal or 1 qt/50 gal and apply 6 gal/100 sq. yards	0	IN PLANT BEDS. To prevent plant injury, avoid excessive applications. Apply only to areas that larvae have uprooted by sprinkling as a drench with 50 to 100 gallons per 100 square yards. IN FIELDS. 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. If late season applications are necessary, allow three days before priming or cutting.
	Green June beetle grubs	1/2 qt/100 gallons		
	Budworms, Fall armyworm, Flea beetles, Hornworms, Japanese beetle, June beetle, Suckly	1 to 2	0	
Wheat	Cereal leaf beetle	1	0 (forage) 21 (grain)	DO NOT USE IN CALIFORNIA. Do not make more than two applications after grain heads emerge from boot. Application is effective against eggs, larvae and adults.
	Amyworm, Fall armyworm	1 to 1 1/2		

TREE FRUIT AND NUT CROPS

For dilute sprays apply the specified dosage per 100 gallons of water. For concentrate and aerial sprays increase the concentration of this product in the spray mixture to apply an amount per acre equivalent to that in a dilute spray. The optimum spray gallonage will depend on tree size, density and stage of growth. Typical spray gallonages per acre range from 200-300 gallons for dilute sprays, 30-100 gallons for concentrate sprays and 10-25 gallons for aerial sprays. Do not exceed maximum label rate per acre per application.

CROP	QTS. OF THIS PRODUCT /ACRE	SPECIFIC DIRECTIONS
APPLES ONLY For Fruit Thinning	1 to 2	Apply 1 to 2 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 9mm 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.

CROP	INSECT	QTS. OF THIS PRODUCT /ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Almond	Peach twig borer, San Jose Scale, Fruitree leafroller	1	28	Apply in "popcorn" or petal fall stages and again when the May brood of the peach twig borer begins to hatch or thereafter as needed. Time early and mid season applications 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 5 quarts per acre.
	Navel orangeworm	1	28	
Apples, Pears	Apple aphid, Apple rust mite, Apple sucker, Bagworms, California pearstug (pear sawfly), Codling moth, Eyespotted bud moth, Green Fruitworm, Lecanium scales	¾ to 1	1	WEST OF ROCKY MOUNTAINS To avoid undesired apple thinning, delay use until at least 30 days after full bloom. For psylla control apply when eggs hatch or young nymphs are present.
	Lesser appleworm, Lygus bugs, Orange tortrix, Oystershell scale, Pear leaf blister mite, Pear psylla, Pear rust mite, San Jose scale, Tentiform leafminers, Woolly apple aphid		¾ to 1	1
	Apple mealybug, apple aphid, codling moth, white apple leafhopper	½	1	EAST OF ROCKY MOUNTAINS To avoid undesired apple thinning, delay use until at least 30 days after full bloom.
	Apple maggot, Apple rust mite, Bagworms, Eastern tent caterpillar, European apple sawfly, Eyespotted bud moth, Forbes scale, Fruitree leafroller, Green fruitworm, Japanese beetle, Tarnished plant bug, Tentiform leafminers, Lecanium scales	1	1	For optimum scale control apply when crawlers are present.
Chestnuts	Lesser appleworm, Oystershell scale, Pear psylla, Pear leaf blister mite, Pear rust mite, Periodical cicada, Plum curculio, Redbanded leafroller, Rosy apple aphid, San Jose scale, Woolly apple aphid, Yellowheaded firworm		1	1
	Chestnut weevil	2 to 3	1	DO NOT USE IN CALIFORNIA. Make 4 applications at weekly intervals beginning in late July for adult chestnut weevil control. Last application should be made prior to shuck split.

CROP	INSECT	QTS. OF THIS PRODUCT /ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Pistachios	Navel orangeworm	½ to 2	14	Apply dilute volumes of 150 to 300 gallons of mixed spray per acre for full coverage at onset of hull split.
Citrus Fruits (such as grapefruit, lemons, limes, oranges, tangelos, tangerines, citrus citron, kumquats and hybrids)	Avocado leafroller, California orangedog, Citrus cutworm, Citrus root weevil, Fruitree leafroller, Orange tortrix, Western tussock moth, West Indian sugarcane borer (adults)	1	5	Do not apply more than 20 quarts of this product per acre per application. Do not apply less than 10 gallons of dilute spray mixture per mature tree. May be mixed with petroleum oils commonly used on citrus.
	Black scale, Brown soft scale, California red scale, Citricola scale, Citrus snow scale, Yellow scale	¾ to 1		
Fibert	Fibert aphid, Fibert leafroller, Fibertworm	1	0	Apply when leafroller eggs are hatching. Repeat on first appearance of adult fibert moths and again 3 to 4 weeks later.
Olives	Olivescale	¾ to 1	0	For optimum scale control add 1 1/2 gallons of summer oil and apply mixture when crawlers are present. Do not exceed 2 applications per year. Do not apply more than 15 quarts of this product per acre per application.
Peaches, Apricot, Nectarines	Apple pandemis, Codling moth, Cucumber beetles, European earwig, Fruitree leafroller, Japanese beetle, June beetles, Lecanium scales, Lesser peachtree borer, Olive scale, Orange tortrix, Oriental fruit moth, Peach twig borer, Periodical cicada, Plum curculio, Redbanded leafroller, San Jose scale, Tarnished plant bug, Tussock moths, Variegated leafroller.	1	1 (peaches) 3 (apricots & nectarines)	Do not apply more than 6 quarts of this product per acre per application to apricots. For optimum scale control apply when crawlers are present. Spray limbs and trunk thoroughly, weekly during moth flight.
Pecans	Black margined aphid, Fall webworm, Hickory shuckworm, Lesser webworm, Pecan leaf phylloxera, Pecan nut casebearer, Pecan spittlebug, Pecan weevil, Twig girdler, Walnut caterpillar	1 to 2 ½	0	Do not apply more than 7.2 quarts of this product per acre per application.
Plums, Prunes, Cherries	Black cherry aphid, Brown soft scale, Cherry fruitworm, Cherry maggot, European earwig, Eyespotted bud moth, Forbes scale, Fruitree leafroller, Green fruitworm, Japanese beetle, Lecanium scales, Lesser peachtree borer, Mealy plum aphid, Oystershell scale, Peach Twig borer, Plum curculio, Prune leafhopper, Redbanded leafroller, Rose chafer, San Jose scale, Variegated leafroller	1	1	Do not apply more than 6 quarts of this product per acre per application. For optimum scale control apply when crawlers are present. For lesser peachtree borer control, spray limbs and tree trunks thoroughly, weekly during moth flight.
	Codling moth, Eastern tent caterpillar, Orange tortrix, Tussock moth	¾	1	
Walnut	Calico scale, European fruit lecanium, Fibertworm, Fruitree leafroller, Frosted scale	½	0	Apply 1000 gallons of dilute spray per acre for mature trees.

CROP	INSECT	QTS. OF THIS PRODUCT /ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Walnut cont'd.	Codling moth			For codling moth apply when average cross sectional diameters of developing nuts are 1/2 to 3/4 inch. Repeat during middle or late June as needed. Spray tree trunks to point of runoff.
	European earwig	2	0	

SMALL FRUIT CROPS

Recommended dosages refer to quarts of this product per acre. The optimum spray gallonage will depend on plant size, density and stage of growth. Typical spray gallonages per acre range from 100-300 gallons for dilute sprays, 30-100 gallons for concentrate sprays and 10-25 gallons for aerial sprays. Do not exceed maximum label rate per acre per application.

CROP	INSECT	QTS. OF THIS PRODUCT /ACRE	PRE-HARVEST INTERVAL (DAYS)	SPECIFIC DIRECTIONS
Blackberries, Raspberries, Dewberries, (including boysenberries and loganberries)	European raspberry aphid, Japanese beetle, Leafhoppers, Leafrollers, Rose chafer, Snowy tree cricket	1 to 2	7	CALIFORNIA ONLY
	Omnivorous leafroller, Raspberry sawfly	2		
Blueberries	Blueberry maggot, Cherry fruitworm, Cranberry fruitworm, European fruit lecanium, Japanese beetle	1 1/2	0	Apply 3 weeks before harvest and repeat as necessary.
Cranberries	Cutworms, Cranberry fruitworms, Cranberry fruitworm, Japanese beetle, Leafhoppers, Rose chafer	1 1/2 to 3	1	Apply in late bloom and as needed at 7 to 10 day intervals. CAUTION: May kill shrimp and crabs. Do not use in areas where these are important resources.
Grapes	European fruit lecanium, Grape leafhopper, Western grapeleaf skeletonizer, Western yellowstriped armyworm	1 to 2	0	Apply before first brood leafhopper larvae emerge from roils.
	Cutworms, Eight spotted forester, Grape berry moth, Japanese beetle, June beetles, Orange tortrix, Omnivorous leafroller, Redbanded leafroller, Saltmarsh caterpillar	2	0	
Strawberries	Flea beetles, Meadow spittlebug, Omnivorous leafroller (strawberry fruitworm), Strawberry leafroller, Strawberry weevil	1 to 2	1	Carbaryl may injure Early Dawn and Sunrise varieties on the Delmarva Peninsula.

POULTRY INSECT CONTROL

POULTRY	INSECT	SPECIFIC DIRECTIONS
Chickens, Ducks, Geese, Gamebirds, Pigeons, and Turkeys	Chicken mite, Fleas, Lice, Northern Fowl Mite	For use as a direct mist spray on birds by: 1. Mist with Electric Fog Machine: Mix 10 ounces of this product in 1 gallon of spray. Use 1 1/2 gallons per 1000 hens in cages, on litter or on slatted floor. Repeat in 4 weeks if necessary. OR 2. Spraying with knapsack or cylinder type compressed air sprayers: Mix 6 ounces of this product in 5 gallons of spray. Use 1 gallon per 100 hens in cages, on litter or on slatted floor. Repeat in 4 weeks if necessary. Direct mist spraying for chicken mite 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.
Roosts and Buildings	Bedbugs, Chicken mite, Fleas, Fowl tick, Lesser mealworms, Lice, Northern fowl mite	Spray roosts and buildings with conventional power spray or knapsack equipment. For chicken mite, fleas and bedbugs, use 4 quarts of this product per 100 gallons of water. For lesser mealworms, use 50 quarts per 100 gallons. Spray 1 to 2 gallons per 1000 square feet of wall, bedding, litter or roost surface. Force spray into cracks. Repeat as needed. Avoid spraying nests, eggs and feeding and watering troughs. Ventilate while spraying. Do not treat premises within 7 days of slaughter.

TREES AND ORNAMENTALS

For dilute-spray ground applications to trees (including shade trees, shelter belts, forests, plantations, parks and recreation areas), 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 recreational 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.

INSECT	AMOUNT OF THIS PRODUCT TO PREPARE		SPECIFIC DIRECTIONS
	3 GALLONS	100 GALLONS	
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 nipolepall maker, Holly bud moth, Holly leafminer, Jackpine budworm, Japanese beetle, Jeffrey pine needleminer, June beetles, Lace bugs, Leafhoppers, Leafrollers, Locust borers, Maple leafcutter, Mealybugs, Mimosa webworm, Nantucket pine tip moth, Oak leafminers, Oak leaf skeletonizer, Oakworm complex, Oleander caterpillar, Olive ash borer, Orange-striped oakworm, Orange tortrix, Periodical cicada, Pine sawfly, Pine spittlebug, Pitch pine tip moth, Plant bugs, Poinsettia homworm, Psyllids, Puss caterpillar, Redhumped oakworm, Rose aphid, Rose chafer, Roseshug, Saddled prominent, Sawflies (exposed), Scale insects, Sowbugs, Spiny elm caterpillar, Springtails, Spruce bugworm, Spruce needleminer, Subtropical pine tip moth, Tent caterpillars, Thombug, 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.
Elm bark beetle, Ips 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 bark surfaces on trunk, limbs and twigs.

LAWNS AND RECREATIONAL AREAS

SITE	INSECT	SPECIFIC DIRECTIONS
Turf grasses	Ants, Armyworm, Bluegrass billbug, Centipedes, Chiggers, Chinchbugs, Cutworms, Earwig, Essex skipper, European chafer, European crane fly, Fall armyworm, Fiery skipper, Fleas, Grasshoppers, June Beetles, Leafhoppers, 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 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)

MOSQUITO CONTROL

AMOUNT OF THIS PRO.
TO PREPARE

SITE	10 GALLONS	100 GALLONS	SPECIFIC DIRECTIONS
	1 to 3 oz.	¼ to 1 qt.	
Pastures, Rangeland, Yards, Parks, Recreational Areas, Logging Camps, Military Posts and Adjacent Forested Lands or Wastelands	2½ qts.	25 qts.	<p>ADULT MOSQUITOS CAUTION! May kill shrimp and crabs. Do not use in areas where these are important resources. 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.</p> <p>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.</p>

PEST CONTROL IN AND 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.

Indoors

ANTS/CRICKETS/FIREBRATS/SILVERFISH: Mix 3 oz. this product per gallon of water and apply as fine, low pressure (20 psi) spot spray or as crack and crevice application to areas where these pests hide, such as baseboards, storage areas, closets, around water pipes, doors and windows, behind and under refrigerators, cabinets, sinks, stoves, dishwashers, hot water heaters, the underside of shelves, drawers and similar areas. For ants, apply to ant trails, around doors and windows and other places where ants enter premises.

BEES AND WASPS: Mix 3 oz. this product per gallon of water and thoroughly spray nest and entrance and surrounding areas where insects alight. It is generally advisable to spray the nests in the evening when the insects are less active and have returned to the nest. For best results, check nest carefully one or two days after spraying to ensure complete kill, then remove and destroy nest to prevent emergence of newly hatched insects.

BROWN DOG TICKS AND FLEAS: Mix 3 oz. this product per gallon of water and thoroughly spray infested areas such as pet beds and resting quarters, nearby cracks and crevices, between and under cushions and upholstered furniture, along and behind baseboards, window and door frames and other areas where these pests may be present.

CARPENTER ANTS: Mix 3 oz. this product per gallon of water and apply to ant trails, around doors and windows and other places where ants enter premises. Where possible, apply this product directly to ant nest or infested wood.

CENTIPEDES/EARWIGS/MILLIPEDES/SCORPIONS: Mix 3 oz. this product per gallon of water and apply around water pipes, doors and windows, and other places where these pests may enter premises. Spray baseboards, storage areas, garages, carports, basements and other areas, where these pests are found.

COCKROACHES: Efficacy varies with species sensitivity. This product is generally not highly effective in controlling German cockroaches. However, the following may be controlled with the rates as stated. American roach, Australian roach, Brown roach, Smoky brown roach, and others. Mix 3 oz. this product per gallon of water and apply as a fine, low pressure (20 psi) spot spray or as crack and crevice application to areas where these pests hide, such as baseboards, storage areas, closets, around water pipes, doors and windows, behind and under refrigerators, cabinets, sinks, stoves, dishwashers, hot water heaters, the underside of shelves, drawers and similar areas.

SPIDERS: Mix 3 oz. this product per gallon of water and apply to infested baseboards, window and door frames, corners, pipes, storage areas, attics and under eaves. Make spot applications to other areas which these pests may crawl.

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.

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NOTICE
PLATTE WARRANTS THAT THIS PRODUCT CONFORMS TO THE CHEMICAL DESCRIPTION ON THE LABEL THEREOF AND IS REASONABLY FIT FOR THE PURPOSES STATED ON SUCH LABEL ONLY WHEN USED IN ACCORDANCE WITH THE DIRECTIONS UNDER NORMAL USE CONDITIONS. IT IS IMPOSSIBLE TO ELIMINATE ALL RISKS INHERENTLY ASSOCIATED WITH THE USE OF THIS PRODUCT. CROP INJURY, INEFFECTIVENESS, OR OTHER UNINTENDED CONSEQUENCES MAY RESULT BECAUSE OF SUCH FACTORS AS WEATHER CONDITIONS, PRESENCE OF OTHER MATERIALS, OR THE MANNER OF USE OR APPLICATION, ALL OF WHICH ARE BEYOND THE CONTROL OF PLATTE. IN NO CASE SHALL PLATTE BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT. ALL SUCH RISKS SHALL BE ASSUMED BY THE BUYER.

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FORMULATED FOR

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