

19713-399

4-29-2003

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ACCEPTED

APR 29 2003

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 19713-399

Drexel

Endosulfan 3EC

Insecticide

For Agricultural or Commercial Use Only. Not for use or storage in or around residential sites - see DIRECTIONS FOR USE / GENERAL INFORMATION for prohibited areas.

ACTIVE INGREDIENT:

Endosulfan: Hexachlorohexahydromethano-2,4,3-benzodioxathiepin-3-oxide	34.0%
OTHER INGREDIENTS*	66.0%
TOTAL:	100.0%

This product contains 3 pounds of Endosulfan per gallon.
*Contains xylene range aromatic solvent.

KEEP OUT OF REACH OF CHILDREN

DANGER  **PELIGRO**
POISON  **VENENO**

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

See FIRST AID Below
SHAKE WELL BEFORE USING

EPA Reg. No. 19713-399
EPA Est. No. 19713-GA-1 Net Contents: _____

FIRST AID
<p>IF SWALLOWED:</p> <ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious or convulsing person.
<p>IF INHALED:</p> <ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
<p>IF ON SKIN OR CLOTHING:</p> <ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes.
<p>IF IN EYES:</p> <ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
<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>NOTE TO PHYSICIAN: Endosulfan is a central nervous system stimulant absorbable by mouth, inhalation or through contact with skin. It may cause convulsions. There is no specific antidote. Diazepam I.V. is the drug of choice. Barbituric acid derivatives such as Phenobarbital may be used additionally. A neuromuscular blocking agent may be used if convulsions persist. This type of drug may be used only if complete control of respiration can be maintained. Epinephrine derivatives are absolutely contraindicated. This formula contains petroleum hydrocarbons (xylene range aromatic solvent). Care should be taken to prevent aspiration because of the possibility of chemical pneumonia or pulmonary edema due to the organic solvent in the formulation.</p>

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

DANGER: Fatal if swallowed. Corrosive. Causes irreversible eye damage. Do not get in eyes, on skin or on clothing. May be fatal if inhaled or absorbed through skin. Do not breathe vapor or spray mist. Do not contaminate food or feed. Keep out of reach of domestic animals. Food utensils such as teaspoons or measuring cups must not be used for food purposes after use in measuring pesticides.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category G on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear: Coveralls over long-sleeved shirt and long pants, chemical-resistant gloves, such as Barrier laminate or Viton ≥ 14 mils., chemical-resistant footwear plus socks, protective eyewear, chemical-resistant headgear for overhead exposure, a respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G) or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE prefilter. Add a chemical-resistant apron when cleaning equipment, mixing or loading.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Engineering controls statement: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the 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: 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 toxic to fish, birds and other wildlife. Birds feeding on treated areas may be killed. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Due to the risk of runoff and drift, do not apply within a distance of 300 feet of lakes, ponds, streams and estuaries. Shrimp and crab may be killed at application rates recommended on this label. Do not apply where fish, shrimp, crab and other aquatic life are important resources. Do not contaminate water by cleaning of equipment or disposal of equipment washwaters. This product must not be used in areas where impact on threatened endangered species is likely. Contact your State Fish and Game Agency before applying this product. Apply this product only as specified on this label. This pesticide is toxic to bees exposed to direct application. Applications should be timed to coincide with periods of minimum bee activity, usually between late evening and early morning.

Manufactured By:

Drexel Chemical Company

P.O. BOX 13327, MEMPHIS, TN 38113-0327

SINCE 1972

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Note: Add this statement to all container sizes of 5 gallons and higher. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL OR CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame.

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 (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 24 hours.

Exception: If the product is soil-injected or soil-incorporated, the WPS, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 over long-sleeved shirt and long pants, chemical-resistant gloves such as Barrier laminate or Vilon \geq 14 mils., protective eyewear, chemical-resistant footwear plus socks and chemical-resistant headgear for overhead exposure.

See "California Supplemental Label" (at the end of this label) for required procedures for reducing risk of contamination of aquatic ecosystems.

GENERAL INFORMATION

Not for use or storage in or around residential sites, including, homes, non-agricultural outbuildings, non-commercial greenhouses, recreational vehicles, preschools, day care centers, and not for application to humans and pets. Do not use in undiluted form. Apply the listed amount per acre when insects first appear and repeat as required, unless otherwise noted, to maintain effective control. Use in sufficient water for thorough coverage of listed crops, unless otherwise noted. Coverage of upper and lower leaf surfaces is essential for good control. For ground application, apply recommended amount of pesticide in a minimum of 10 gallons of water per acre on vegetable or row crops, unless otherwise noted. Observe use limitations. If insect control is required beyond the following use patterns, supplement the control program with other suitable pesticides.

When applying this material by aircraft, mix the recommended amount with sufficient water to provide a minimum of 1 gallon of finished spray per acre on vegetable and field crops, unless otherwise noted, and a minimum of 20 gallons of finished spray per acre on fruit and nut trees and on vines. Where more than 2 quarts of this material are recommended, mix with sufficient water to provide a minimum of finished spray equal to twice the amount of this product used. Do not plant root crops other than Carrots, Potatoes, Sweet potatoes and Sugar beets as follow-up crops. Observe days interval between last application and harvest.

Observe state and regional restrictions and limitations if indicated in the crop headings. (CA only) indicates instructions specific to California. (Except CA) indicates uses for all states excluding California. No state restrictions indicates that the use is valid in California and all other states.

CHEMIGATION STATEMENT

CHEMIGATION USE INSTRUCTIONS—POTATOES ONLY (Not registered for use in California)

Do not apply this product through any type of irrigation system to other crops. Do not apply this product to Potatoes through any type of irrigation system unless chemigation application instructions are followed.

APPLICATION THROUGH IRRIGATION SYSTEMS—CHEMIGATION

Apply this product only through sprinkler, including center pivot, lateral move, end tow, side (wheel) roll, traveler, bug gun, solid set or hand move irrigation systems. 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 non-uniform distribution of treated water.

If you have questions about calibration, you should contact your 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 the operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

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 non-injurious 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 state 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. Continuous mild agitation of pesticide mixture may be needed to assure a uniform application, particularly if the supply tank requires a number of hours to empty.

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

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

Note: DREXEL CHEMICAL 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 selecting 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 a 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 shutdown.

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 materials that are compatible with pesticides and capable of being fitted with a system interlock.

SPRINKLER CHEMIGATION (FOLIAR SPRAY USES)

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.

PROCEDURES FOR REDUCING THE RISK OF CONTAMINATION OF AQUATIC ECOSYSTEMS

FOR CROP USES LISTED ON THE PRODUCT LABEL

Endosulfan may be a source of contamination in aquatic ecosystems as a result of runoff from agricultural land due to discharge of irrigation water or during periods of heavy rainfall.

To minimize the chance of aquatic impact, the following conditions must be met to allow applications of this product:

DIRECTIONS FOR USE (GENERAL)

In addition to specific instructions under "DIRECTIONS FOR USE" on the principal label, the following conditions must also be followed for use in California:

1. Do not apply this product to fields during irrigation or irrigate for 72 hours following an application.
2. Do not apply this product through any type of irrigation system.
3. Do not apply more than 1.5 pounds of active ingredient per acre per application, or more than 3 pounds of active ingredient per acre per season. (Orchard crops and Strawberries exempted on rate per acre per application restriction).
4. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark.
5. Do not apply by ground or air within a distance of 300 feet to natural bodies of water including lakes, ponds, streams and estuaries.

FOR DRIFT CONTROL

1. All application equipment should be properly maintained and calibrated using appropriate carriers.
2. Do not make aerial or ground applications during temperature inversions.
3. Make aerial or ground applications when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 10 mph. Do not discharge at a height of more than 10 feet above the crop or target.
4. For aerial applications, a positive shutoff system shall be in place to control flow of liquid to spray nozzles as follows: Each individual nozzle shall be equipped with a check valve and the flow controlled by a suckback device or a boom pressure release device; or each nozzle shall be equipped with a positive action valve.
5. For aerial applications, the spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip or rotor vortices. The working boom length must not exceed 75% of wingspan or rotor diameter.
6. Aircraft boom pressure shall not exceed 40 pounds per square inch.
7. Aircraft nozzles shall be equipped with orifices directed backward, parallel to the horizontal axis of the aircraft in flight.
8. Aircraft nozzles shall not be equipped with any device or mechanism which would cause a sheet, cone, fan or similar type dispersion of the discharged material except as otherwise provided.
9. Fixed-wing aircraft and helicopters operating in excess of 60 mph shall be equipped with jet nozzles having an orifice not less than 1/8 inch in diameter (D-4 or larger).
10. Helicopters operating at 60 mph or less shall be equipped with nozzles having an orifice not less than 1/8 inch in diameter. A number 46 or equivalent whirlplate may be used.
11. For ground applications, equipment other than handguns shall be equipped with nozzles having an orifice not less than 1/8 inch in diameter or larger. Boom nozzles shall be operated at a boom pressure not to exceed 30 pounds per square inch.

ACCEPTABLE SITES FOR APPLICATION OF THIS PRODUCT

1. Fields, with no drains, having containment through berms (able to hold irrigation water and normal rainwater), levees and non-draining circulation systems.
2. Fields with drains, but drainage flows to sump, farm pond, evaporation pond or recirculation system without drainage (uncontrollable overflow acceptable, e.g., 10 or 100 year flood). Only grower maintained recirculation systems without drainage are acceptable.
3. Fields with surface drains that naturally flow onto pastureland or fallow fields that have no channeled drainage and are at least 300 feet long.

UNACCEPTABLE SITES FOR APPLICATION OF THIS PRODUCT

1. Fields draining directly into surface waters such as streams, rivers, lakes, ponds, marshes, bays, estuaries or the ocean.
2. Fields draining into surface drainage ditches or canals that flow directly into surface waters such as streams, rivers, lakes, ponds, marshes, bays, estuaries or the ocean.
3. Any and all fields with surface drainage patterns in the Moss Landing Drainage System having main arteries that drain into the Eikhorn Slough (Northern portion of Monterey County).
4. Any and all fields with drainage patterns in San Diego Creek Drainage System having main arteries that drain into Newport Bay.

OBSERVE DAYS INTERVAL BETWEEN LAST APPLICATION AND HARVEST INDICATED BY NUMBER IN () FOLLOWING CROP.

Crop	Pests	Rate of Application
Apples (21) (Except CA)	Aphids (including Apple aphids, Rosy apple aphids, Woolly apple aphids), Apple rust mites, Green fruitworms, Tarnished plant bugs, Tentiform leafminers, White apple leafhoppers (first generation)	3/4 qt. per 100 gals. or a maximum of 3 1/2 qts. per acre
	SPECIFIC DIRECTIONS: Applications made at pink and/or petal fall provide best control of Tarnished plant bugs and Green fruitworms. For best control of first generation White apple leafhoppers, apply when nymphs first appear on leaves. If necessary, prior to petal fall, use 1 qt. per 100 gals. to control Apple aphids and Rosy apple aphids. For control of Tentiform leafminers, make first application as soon as moth flight begins. A second application should be made 10 days later.	
Note: Do not feed pomace from treated Apples to livestock. Do not feed cull fruits to animals or allow livestock to graze in treated orchards. Do not make more than 2 applications during the fruiting period. Do not make more than 3 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Apples (30) (CA only)	Aphids (including Apple aphids, Rosy apple aphids, Woolly apple aphids), Apple rust mites, White apple leafhoppers (first generation)	3/4 qt. per 100 gallons or a maximum of 3 1/2 qts. per acre
	SPECIFIC DIRECTIONS: For best control of first generation White apple leafhoppers, apply when nymphs first appear on leaves. If necessary, prior to petal fall, use 1 qt. per 100 gals. to control Apple aphids and Rosy apple aphids.	
Note: Do not feed pomace from treated Apples to livestock. Do not feed cull fruits to animals or allow livestock to graze in treated orchards. Do not make more than 2 applications during the fruiting period. Do not make more than 3 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Apricots (21), Nectarines (21), Peaches (21) (Except CA)	Peachtree borers, Lesser peachtree borers	1 qt. per 100 gals. or 2 1/2 to 3 1/2 qts. per acre Pacific Northwest: 3/4 to 1 qt. per 100 gals. Southeastern States: 2 to 3 1/2 qts. per 100 gals.
	SPECIFIC DIRECTIONS: Best control is obtained with a single application post-harvest. Spray all bark areas from ground level to lower scaffold limbs.	
Note: Do not feed cull fruits to animals or allow livestock to graze in treated orchards. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Apricots (30), Nectarines (30), Peaches (30) (Except CA)	Aphids (including Black cherry aphids, Black peach aphids, Green peach aphids, Rusty plum aphids), Catfacing insects (Stink bug type), Green fruitworms, Peach silver mites, Peach twig borers	3/4 qt. per 100 gals. or a maximum of 3 1/2 qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Do not feed cull fruits to animals or allow livestock to graze in treated orchards. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Apricots (30), Nectarines (30), Peaches (30) (CA only)	Aphids (including Black cherry aphids, Black peach aphids, Green peach aphids, Rusty plum aphids), Catfacing insects (Stink bug type), Peach silver mites, Peach twig borers	3/4 qt. per 100 gals. or a maximum of 3 1/2 qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Do not feed cull fruits to animals or allow livestock to graze in treated orchards. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Barley, Oats, Rye, Wheat (Except CA) (Continued)	Army cutworms	3/4 qt. per acre
	SPECIFIC DIRECTIONS: Apply when small larvae are readily found in the field. For aerial application, apply in 2 gals. of crop oil per acre.	

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Crop	Pests	Rate of Application
(Cont)	Cereal leaf beetles (L, IN, MI, OH Only)	½ to ¾ qt. per acre
Barley, Oats, Rye, Wheat (Except CA)	SPECIFIC DIRECTIONS: Apply when small larvae are readily found in the field. For aerial application, use a minimum of 1 to 2 gals. of water per acre.	
	Aphids (including Russian wheat aphids)	¾ to 1 qt. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Do not apply after heads begin to form. Do not feed treated forage to livestock. Do not make more than 2 applications per year. Do not exceed a maximum of 1.0 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Barley, Oats, Rye, Wheat (CA Only)	Army cutworms	¾ qt. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Aphids (including Russian wheat aphids)	¾ to 1 qt. per acre
Note: Do not apply after heads begin to form. Do not feed treated forage to livestock. Do not make more than 2 applications per year. Do not exceed a maximum of 1.0 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Beans, Succulent and Dry (except Lima beans) (3) and Southern field peas (Succulent type, including Black-eyed peas, Crowder peas and Southern peas) (3) (Except CA)	Black bean aphids, Bean leaf skeletonizers, Cowpea curculios, Cucumber beetles, Flea beetles, Green stink bugs, Leafhoppers, Mexican bean beetles	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. For control of Cowpea curculios, make 3 applications at 5-day intervals starting when the pods are ½ inch long.	
	Aphids, Armyworms, Western bean cutworms, Whiteflies	1½ qts. per acre
Note: Do not feed treated threshings or allow livestock to graze in treated fields. Do not use on Lima beans that are to be removed from the field for processing. Do not make more than 3 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Beans, Succulent and Dry (except Lima beans) (3) and Southern field peas (Succulent type, including Black-eyed peas, Crowder peas and Southern peas) (3) (CA Only)	Black bean aphids, Bean leaf skeletonizers, Cucumber beetles, Flea beetles, Green stink bugs, Leafhoppers, Mexican bean beetles	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Aphids, Western bean cutworms, Whiteflies	1½ qts. per acre
Note: Do not feed treated threshings or allow livestock to graze in treated fields. Do not use on Lima beans that are to be removed from the field for processing. Do not make more than 3 applications per year. Do not exceed a maximum of 3.0 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Blueberries (Except CA)	Blueberry bud mites	2 qts. per acre per 300 gals. of water
	SPECIFIC DIRECTIONS: Apply immediately after harvest and repeat 6 to 8 weeks later.	
Note: Do not apply after buds are well-formed. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Broccoli (7), Brussels sprouts (14), Cabbage (7), Cauliflower (14) (Except CA)	Cabbage aphids, Cabbage loopers, Cross-striped cabbageworms, Diamondback moths (larvae), Flea beetles, Harlequin bugs, Imported cabbageworms, Leafhoppers, Stink bugs	1 to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Armyworms, Cutworms, Whiteflies	1½ qts. per acre
Note: Do not make more than 4 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		

Crop	Pests	Rate of Application
Broccoli (7), Brussels sprouts (14), Cabbage (7), Cauliflower (14) (CA Only)	Cabbage aphids, Cabbage loopers, Cross-striped cabbageworms, Diamondback moths (larvae), Flea beetles, Harlequin bugs, Imported cabbageworms, Stink bugs	1 to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Armyworms, Cutworms, Whiteflies	1½ qts. per acre
Note: Do not make more than 2 applications per year. Do not exceed a maximum of 2.0 lbs. of active ingredient (i.e., 2½ qts.) per acre per year.		
Carrots (7) (Except CA)	Green peach aphids, Leafhoppers	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	
	Armyworms, Flea beetles, Whiteflies	1½ qts. per acre
Note: Do not use tops for food or feed. Do not make more than 1 application per year. Do not exceed a maximum of 1.0 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Carrots (7) (CA Only)	Green peach aphids	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	
	Flea beetles, Whiteflies	1½ qts. per acre
Note: Do not use tops for food or feed. Do not make more than 1 application per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Celery (4) (Except CA)	Green peach aphids, Cabbage loopers, Leafhoppers	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	
	Armyworms, Flea beetles, Whiteflies	1½ qts. per acre
Note: Do not make more than 1 application per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Celery (7) (Except CA)	Green peach aphids	¾ qt. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Do not make more than 2 applications per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Celery (4) (CA Only)	Green peach aphids, Cabbage loopers	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	
	Flea beetles, Whiteflies	1½ qts. per acre
Note: Do not make more than 1 application per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Celery (7) (CA Only)	Green peach aphids	¾ qt. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Do not make more than 2 applications per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Cherries (21) (Except CA)	Peachtree borers, Lesser peachtree borers	1 qt. per 100 gals. or 2½ to 3½ qts. per acre Pacific Northwest: ¾ to 1 qt. per 100 gals.
	SPECIFIC DIRECTIONS: Best control is obtained with a single application post-harvest after leaves have dropped. Spray all bark areas from ground level to lower scaffold limbs.	
	(Continued)	

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Crop	Pests	Rate of Application
(Cont.) Cherries (21) (Except CA)	Black cherry aphids, Green fruitworms, Plum rust (Nursery) mites	¾ qt. per 100 gals. or 2¾ to 3½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Pacific Northwest only: Eyespotted bud moths, Fruitree leafrollers	¾ qt. per 100 gals. or 2¾ to 3½ qts. per acre
	SPECIFIC DIRECTIONS: For Bud moth control, apply at popcorn stage. For Leafroller control, apply during pre-pink stage of growth.	
	MI Only: Mineola moths	1½ qts. per 100 gals.
SPECIFIC DIRECTIONS: Apply in the delayed-dormant period.		
Note: Do not feed cull fruits to animals or allow livestock to graze in treated orchards. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Cherries (21) (CA Only)	Black cherry aphids, Plum rust (Nursery) mites	¾ qt. per 100 gals. or 2¾ to 3½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Pacific Northwest only: Eyespotted bud moths, Fruitree leafrollers	¾ qt. per 100 gals. or 2¾ to 3½ qts. per acre
SPECIFIC DIRECTIONS: For Bud moth control, apply at popcorn stage. For Leafroller control, apply during pre-pink stage of growth.		
Note: Do not feed cull fruits to animals or allow livestock to graze treated orchards. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Cherry, Peach, Plum Nursery Stock Dip (Except CA)	Peachtree borers	2¾ qts. per 40 gals.
	SPECIFIC DIRECTIONS: Mix thoroughly. Immerse trees so that the roots and crowns are covered well above the grafting bud scar.	
Note: Plant immediately or dry before returning stock to storage. Full personal protective equipment (PPE) requirements for applicators also apply to this dipping operation.		
Cherry, Peach, Plum Nursery Stock Dip (CA Only)	Peachtree borers	2¾ qts. per 40 gals.
	SPECIFIC DIRECTIONS: Mix thoroughly. Immerse trees so that the roots and crowns are covered well above the grafting bud scar.	
Note: Plant immediately or dry before returning stock to storage. Full personal protective equipment (PPE) requirements for applicators also apply to this dipping operation.		
Citrus (Non-bearing trees and Nursery stock) (Including CA)	Citrus aphids	¾ qt. per 100 gals. or a maximum of 3½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Do not apply to bearing trees or trees that will bear fruit within 12 months. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Collards (21) (Except CA)	Aphids, Cabbage loopers, Diamond-back moths (larvae), Fall armyworms, Flea beetles, Harlequin bugs, Imported cabbageworms, Leafhoppers	1 to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	
	Whiteflies	1½ qts. per acre
SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.		
Note: Do not make more than 1 application per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Collards (21) (CA Only)	Aphids, Cabbage loopers, Diamondback moths (larvae), Flea beetles, Harlequin bugs, imported cabbageworms, Whiteflies	1 qt. per acre
	SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	
Note: Do not make more than 1 application per year. Do not exceed a maximum of 0.75 lb. of active ingredient (i.e., 1 qt.) per acre per year.		

Crop	Pests	Rate of Application
Cotton (Except CA)	Aphids	½ to 1 qt. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Thorough coverage is important.	
	Boll weevils	¾ to 2 qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Bollworms, Cabbage loopers, Cotton leafperforators, Cotton leafworms, Fleahoppers, Lygus bugs, Stink bugs, Tobacco budworms	1½ to 2 qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Whiteflies	1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Thrips	2 qts. per acre	
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Note: Applications may be made using ground or aerial application equipment. The higher rate should be used under heavy pest pressure. Do not apply after bolls open. Do not graze dairy or meat animals in treated fields. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Cotton (CA Only)	Aphids	½ to 1 qt. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Thorough coverage is important.	
	Boll weevils	¾ to 2 qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Bollworms, Cabbage loopers, Cotton leafperforators, Fleahoppers, Lygus bugs, Stink bugs	1½ to 2 qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Whiteflies	1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Thrips	2 qts. per acre	
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Note: Applications may be made using ground or aerial application equipment. The higher rate should be used under heavy pest pressure. Do not apply after bolls open. Do not graze dairy or meat animals in treated fields. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Cucumbers (2), Melons (2), Pumpkins (2), Summer and Winter squash (2) (Except CA)	Aphids, Cucumber beetles, Melonworms, Pickleworms, Rindworms (on Watermelons), Squash beetles, Squash bugs, Squash vine borers, Striped flea beetles	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. For Squash vine borer control, apply weekly to flower buds, stems and vines beginning when moths first appear.	
	Cabbage loopers, Omnivorous leafrollers, Whiteflies	1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Note: Do not make more than 6 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Cucumbers (2), Melons (2), Pumpkins (2), Summer and Winter squash (2) (CA Only)	Aphids, Cucumber beetles, Melonworms, Pickleworms, Rindworms (on Watermelons), Squash beetles, Squash bugs, Squash vine borers, Striped flea beetles	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. For Squash vine borer control, apply weekly to flower buds, stems and vines beginning when moths first appear.	
	Cabbage loopers, Omnivorous leafrollers, Whiteflies	1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Note: Do not make more than 3 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		

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Crop	Pests	Rate of Application
Eggplant (1) (Except CA)	Blister beetles, Colorado potato beetles, Flea beetles, Green peach aphids, Green stink bugs	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Whiteflies	1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Note: Do not make more than 2 applications per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Eggplant (1) (CA Only)	Blister beetles, Colorado potato beetles, Flea beetles, Green peach aphids, Green stink bugs	¾ to 1½ pts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Whiteflies	1½ pts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Note: Do not make more than 2 applications per year. Do not exceed a maximum of 0.5 lb. of active ingredient (i.e., 1½ pts.) per acre per year.		
Grapes (7) (Including CA)	Grape leafhoppers, Grape phylloxera (leaf form), Rose chafers	¾ qt. per 100 gals. or 1½ to 2 qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Do not apply to Concord variety as severe plant injury is likely to occur. Ground application is preferred. Do not make more than 3 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Kale (21) (Including CA)	Cabbage flea beetles, Harlequin bugs, Imported cabbageworms	1 qt. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Do not make more than 1 application per year. Do not exceed a maximum of 0.75 lb. of active ingredient (i.e., 1 qt.) per acre per year.		
Lettuce (14) (Except CA)	Cabbage loopers, Diamondback moths (larvae), Green peach aphids, Imported cabbageworms, Leafhoppers	1 to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Amyworms, Whiteflies	1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Note: On Head lettuce - Do not make more than 3 applications after thinning. Remove wrapper leaves at harvest. On Leaf lettuce - Do not make more than 2 applications per year. Do not feed crop refuse to livestock. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Lettuce (14) (CA Only)	Cabbage loopers, Diamondback moths (larvae), Green peach aphids, Imported cabbageworms	1 to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Whiteflies	1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Note: On Head lettuce - Do not make more than 3 applications after thinning. Remove wrapper leaves at harvest. On Leaf lettuce - Do not make more than 2 applications per year. Do not feed crop refuse to livestock. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Mustard greens (21) (Except CA)	Aphids, Cabbage loopers, Diamondback moths (larvae), Fall armyworms, Flea beetles, Harlequin bugs, Imported cabbageworms, Leafhoppers	1 to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Whiteflies	1½ qts. per acre
SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.		
Note: Do not make more than 1 application per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Mustard greens (21) (CA Only)	Aphids, Cabbage loopers, Diamondback moths (larvae), Flea beetles, Harlequin bugs, Imported cabbageworms, Whiteflies	1 qt. per acre
	SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	
Note: Do not make more than 1 application per year. Do not exceed a maximum of 0.75 lb. of active ingredient (i.e., 1 qt.) per acre per year.		

Crop	Pests	Rate of Application
Pears (7) (Except CA)	Green fruitworms, Tarnished plant bugs	¾ qt. per 100 gals. or 2¾ to 3½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications at white bud or petal fall when insects appear or feeding is noticed.	
	Pear psylla	3½ qts. per acre
SPECIFIC DIRECTIONS: Apply in a minimum of 10 gals. of water for aerial application or in 300 gals. of water for dilute application. Apply when adults are first observed or nymphs are small and repeat to maintain control.		
Pear rust mites, Consperse stink bugs (Foliar treatment)		¾ qt. per 100 gals. or 2¾ to 3½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Stink bugs must be wet by spray to obtain control.	
Consperse stink bugs (Soil treatment)		¾ qt. per 100 gals. or 200 to 400 gals. per acre
	SPECIFIC DIRECTIONS: Apply to orchard floor and around trees prior to bloom.	
Pearleaf blister mites		½ to ¾ qt. per 100 gals.
SPECIFIC DIRECTIONS: Apply to trees as a post-harvest or dormant treatment.		
Note: Do not feed cull fruits to animals or allow livestock to graze in treated orchards. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year. Aerial application may not result in satisfactory control and should only be employed if impossible to apply by ground.		
Pears (7) (CA Only)	Pear psylla	3½ qts. per acre
	SPECIFIC DIRECTIONS: Apply in a minimum of 10 gals. of water for aerial application or in 300 gals. of water for dilute application. Apply when adults are first observed or nymphs are small and repeat to maintain control.	
	Pear rust mites, Consperse stink bugs (Foliar treatment)	¾ qt. per 100 gals. or 2¾ to 3½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Stink bugs must be wet by spray to obtain control.		
Consperse stink bugs (Soil treatment)		¾ qt. per 100 gals. or 200 to 400 gals. per acre
	SPECIFIC DIRECTIONS: Apply to orchard floor and around trees prior to bloom.	
Pearleaf blister mites		½ to ¾ qt. per 100 gals.
SPECIFIC DIRECTIONS: Apply to trees as a post-harvest or dormant treatment.		
Note: Do not feed cull fruits to animals or allow livestock to graze in treated orchards. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year. Aerial application may not result in satisfactory control and should only be employed if impossible to apply by ground.		
Pecans (Except CA)	Black pecan aphids, Pecan nut casebearers, Spittlebugs	1 qt. per 100 gals.
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. For Casebearers, apply when eggs of first generation appear on the tips of the young nuts. Another application may be required after the second generation of eggs is deposited. For Spittlebugs, apply when first leaves are half grown and repeat as required.	
	Pecan leaf phylloxera	¾ to 1 qt. per 100 gals.
SPECIFIC DIRECTIONS: Apply when nymphs appear and before they are enclosed in plant tissue. For high populations, use the higher rate.		
Note: Do not apply after shuck split. Do not graze livestock on orchard crops or grasses in treated areas. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Pecans (CA Only)	Black pecan aphids, Pecan nut casebearers, Spittlebugs	1 qt. per 100 gals.
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. For Casebearers, apply when eggs of first generation appear on the tips of young nuts. Another application may be required after the second generation of eggs is deposited. For Spittlebugs, apply when first leaves are half grown and repeat as required.	
Note: Do not apply after shuck split. Do not graze livestock on orchard crops or grasses in treated areas. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		

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Crop	Pests	Rate of Application
Peppers (1) (Including CA)	Flea beetles, Green peach aphids, Hornworms, Pepper maggots SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	¾ qt. per acre
Note: Do not make more than 2 applications per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Peppers (4) (Except CA)	Armyworms, Flea beetles, Green peach aphids, Hornworms, Leafhoppers, Pepper maggots SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	¾ to 1½ qts. per acre
	Whiteflies SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	1½ qts. per acre
Note: Do not make more than 2 applications per year. Do not exceed a maximum of 2 lbs. of active ingredient (i.e., 2¾ qts.) per acre per year.		
Peppers (4) (CA Only)	Flea beetles, Green peach aphids, Hornworms, Pepper maggots SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	¾ to 1½ qts. per acre
	Whiteflies SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	1½ qts. per acre
Note: Do not make more than 2 applications per year. Do not exceed a maximum of 2 lbs. of active ingredient (i.e., 2¾ qts.) per acre per year.		
Pineapple (7)	Pineapple fruit mites SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Apply at intervals of 7 to 10 days, if necessary, particularly during the 40-day blooming period.	2 to 2½ qts. per acre
Fresh Market Only (CA Only)		
Note: Do not feed forage or Pineapple by-products to livestock. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Plums (7), Prunes (7) (Except CA)	Fruitree leafrollers (Pacific Northwest Only) SPECIFIC DIRECTIONS: Apply during pre-pink stage of growth when insects appear or feeding is noticed.	¾ qt. per 100 gals. or 2½ to 3½ qts. per acre
	Aphids (including Hop aphids, Leafcurl aphids, Thistle aphids), Plum rust (Nursery) mites SPECIFIC DIRECTIONS: For control of Aphids, apply when eggs hatch during pre-bloom or petal fall. Summer applications should be made before leaves curl.	¾ qt. per 100 gals. or 2½ to 3½ qts. per acre
	Peach twig borers SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	¾ qt. per 100 gals. or 2½ to 3½ qts. per acre
	Lesser peachtree borers, Peachtree borers SPECIFIC DIRECTIONS: Best control is obtained with a single application post-harvest, after leaves have dropped. Spray all bark areas from ground to lower scaffold limbs.	1 qt. per 100 gals. or 2½ to 3½ qts. per acre Pacific Northwest: ¾ to 1 qt. per 100 gals. or 2½ to 3½ qts. per acre
Note: Do not allow livestock to graze on orchard crops or grasses in treated areas. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Plums (7), Prunes (7) (CA Only)	Fruitree leafrollers (Pacific Northwest Only) SPECIFIC DIRECTIONS: Apply during pre-pink stage of growth when insects appear or feeding is noticed.	¾ qt. per 100 gals. or 2½ to 3½ qts. per acre
	Aphids (including Hop aphids, Leafcurl aphids, Thistle aphids), Plum rust (Nursery) mites SPECIFIC DIRECTIONS: For control of Aphids, apply when eggs hatch during pre-bloom or petal fall. Summer applications should be made before leaves curl.	¾ qt. per 100 gals. or 2½ to 3½ qts. per acre
	Peach twig borers SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	¾ qt. per 100 gals. or 2½ to 3½ qts. per acre
	Lesser peachtree borers, Peachtree borers SPECIFIC DIRECTIONS: Best control is obtained with a single application post-harvest, after leaves have dropped. Spray all bark area from ground level to lower scaffold limbs.	¾ to 1 qt. per 100 gals. or 2½ to 3½ qts. per acre
Note: Do not allow livestock to graze on orchard crops or grasses in treated areas. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		

Crop	Pests	Rate of Application
Potatoes (1) (Except CA)	Aphids, Armyworms, Colorado potato beetles, Green stink bugs, Leaffooted bugs, Plant bugs, Potato flea beetles, Potato leafhoppers, Potato tuber-worms, Threeined potato beetles SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	¾ to 1½ qts. per acre
	European corn borers, Potato psyllids SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	1 to 1½ qts. per acre
	False chinch bugs, Whiteflies SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	1 to 1½ qts. per acre
Note: Do not make more than 6 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year. CHEMIGATION: For application by irrigation systems, apply the specified amount of this product per acre. Follow all directions given under the "CHEMIGATION USE INSTRUCTIONS" section of this label.		
Potatoes (1) (CA only)	Aphids, Armyworms, Colorado potato beetles, Green stink bugs, Leaffooted bugs, Plant bugs, Potato flea beetles, Potato leafhoppers, Potato tuber-worms, Threeined potato beetles SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	¾ to 1½ qts. per acre
	European corn borers, Potato psyllids SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	1 to 1½ qts. per acre
	False chinch bugs, Whiteflies SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	1 to 1½ qts. per acre
Note: Do not make more than 6 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year. Chemigation using endosulfan is NOT permitted in California.		
Spinach (21) (Except CA)	Armyworms, Crown mites, Flea beetles, Green peach aphids, Leafhoppers SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	1 to 1½ qts. per acre
	Whiteflies SPECIFIC DIRECTIONS: Make application when insects appear or feeding is noticed.	1½ qts. per acre
Note: Do not make more than 1 application per year. Do not exceed a maximum of 1 lb. of active ingredient (i.e., 1½ qts.) per acre per year.		
Spinach (21) (CA Only)	Crown mites, Flea beetles, Green peach aphids, Whiteflies SPECIFIC DIRECTIONS: Make application when insects appear and feeding is noticed.	1 qt. per acre
Note: Do not make more than 1 application per year. Do not exceed a maximum of 0.75 lb. of active ingredient (i.e., 1 qt.) per acre per year.		
Strawberries (4) (Including CA)	Meadow spittlebugs, Strawberry aphids, Tarnished plant bugs, Whiteflies SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Do not reapply within 15 days or more than twice during a 35-day period when fruit is present.	1½ qts. per acre
	Cyclamen mites SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Thoroughly wet the foliage, stem and crown of the plant. For multiple applications, do not apply at intervals less than 35 days when fruit is present.	2½ qts. per acre in 400 gals.
Note: Do not make more than 3 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		

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Crop	Pests	Rate of Application
Strawberries (Northwest Use Only) (Except CA)	Garden symphylans (Aids in reducing damage)	1½ qts. per 100 gals.
	SPECIFIC DIRECTIONS: Mix thoroughly. Dip entire plant. When immersing bundles of plants, make certain any trapped air is forced out to assure thorough wetting of the entire plant.	
Note: Full personal protective equipment (PPE) requirements for applicators also apply to this dipping operation. Drain and allow plants to dry before setting them out in the field.		
Strawberries (Northwest Use Only) (CA Only)	Garden symphylans (Aids in reducing damage)	1½ qts. per 100 gals.
	SPECIFIC DIRECTIONS: Mix thoroughly. Dip entire plant. When immersing bundles of plants, make certain any trapped air is forced out to assure thorough wetting of the entire plant.	
Note: Full personal protective equipment (PPE) requirements for applicators also apply to this dipping operation. Drain and allow plants to dry before setting them out in the field.		
Sweet corn (1) (Fresh Vegetable Use Only) (Including CA)	Corn leaf aphids, Whiteflies	1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Corn earworms	2 qts. per acre
SPECIFIC DIRECTIONS: Apply when silks first appear and continue until they begin to dry. Allow 5 days between applications.		
Note: Do not apply to Sweet corn to be processed. Do not feed treated forage or ensilage to livestock or allow livestock to graze in treated fields. Do not make more than 3 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Sweet potatoes (1) (Except CA)	Sweet potato flea beetles, Sweet potato weevils	¾ qt. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. For Flea beetle control, begin applications shortly after transplanting or as soon as Flea beetles appear. For Sweet potato weevil control, apply in sufficient water for complete coverage. Applications may be made to transplants in the nursery and/or in the field. Repeat applications may be made as necessary. For Sweet potato weevil control in a clean-up program, apply at a rate of 2½ qts. per acre to the soil under the Sweet potato nursery beds and the area immediately surrounding the nursery beds. Do not place the seed tubers directly on the ground treated with this product.	
	Whiteflies	1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insect activity or feeding is noticed.	
	Banded cucumber beetles (larvae) - (Aids in control) (South Central states and Puerto Rico Only)	1½ to 2½ qts. per acre broadcast or ½ to 1 qt. per acre on a 16" band over the row (48" row spacing)
SPECIFIC DIRECTIONS: Work into the soil to a depth of approximately 3 inches. Treatment should be made just prior to plant set.		
Note: Do not feed cull Potatoes to livestock or allow livestock to graze in treated fields. Do not make more than 3 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Sweet potatoes (1) (CA Only)	Sweet potato flea beetles, Sweet potato weevils	¾ qt. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. For Flea beetle control, begin applications shortly after transplanting or as soon as Flea beetles appear. For Sweet potato weevil control, apply in sufficient water for complete coverage. Applications may be made to transplants in the nursery and/or in the field. Repeat applications may be made as necessary.	
Note: Do not feed cull Potatoes to livestock or allow livestock to graze in treated fields. Do not make more than 3 applications per year. Do not exceed a maximum of 1.5 lbs. of active ingredient (i.e., 2 qts.) per acre per year.		

Crop	Pests	Rate of Application
Tobacco (5) (Except CA)	Aphids (including Green peach aphids, Tobacco aphids), Budworms, Cabbage loopers, Flea beetles, Hornworms	Seed Bed: ¾ qt. per 100 gals.
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Apply approximately 6 gals. of finished spray per 100 sq. yds.	
	Green June bugs (larvae)	Plant Bed: ¾ pt. per 100 gals.
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Drench at a rate of 1 gal. per sq. yd.	
	Aphids (including Green peach aphids, Tobacco aphids), Budworms, Cabbage loopers, Flea beetles, Green June bugs (larvae), Hornworms	Field: ¾ to 1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insect activity or feeding is noticed.		
Stink bugs	Field: ¾ qt. per 100 gals.	
SPECIFIC DIRECTIONS: Make applications when insect activity or feeding is noticed.		
Note: Do not make more than 6 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Tomatoes (2) (Field and Greenhouse) (Except CA)	Aphids, Blister beetles, Colorado potato beetles, Flea beetles, Tomato hornworms	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Cabbage loopers, Stink bugs	1 to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Tomato fruitworms, Tomato russet mites, Whiteflies, Yellowstriped armyworms	1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Whiteflies	Use ¾ qt. per 100 gals. of water. Use 100 to 200 gals. of spray per acre.	
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Higher spray volumes may be necessary for thorough coverage when high Whitefly populations exist.		
Note: Do not make more than 6 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Tomatoes (2) (Field and Greenhouse) (CA Only)	Aphids, Blister beetles, Colorado potato beetles, Flea beetles, Tomato hornworms, Webworms	¾ to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Cabbage loopers, Stink bugs	1 to 1½ qts. per acre
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
	Tomato fruitworms, Tomato russet mites, Whiteflies, Yellowstriped armyworms	1½ qts. per acre
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.		
Whiteflies	Use ¾ qt. per 100 gals. of water. Use 100 to 200 gals. of spray per acre.	
SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. Higher spray volumes may be necessary for thorough coverage when high Whitefly populations exist.		
Note: Do not make more than 6 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		

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Crop	Pests	Rate of Application
Walrus (Except CA)	Walrus aphids	2 to 2½ qts. per acre. Apply in a minimum of 100 gals. of water per acre.
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Do not apply after husk split. Do not graze livestock on orchard crops or grasses in treated areas. Do not make more than 2 applications per year. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		

**COMMERCIALIY GROWN ORNAMENTALS
GROWN OUTDOORS ONLY**
Ornamental Trees and Shrubs

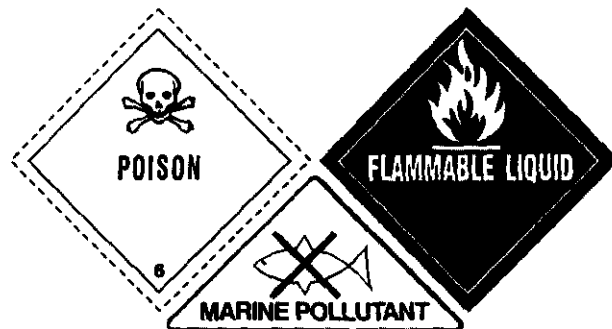
Crop	Pests	Rate of Application
Dogwood, Lilac (Except CA)	Dogwood borers, Lilac borers	¾ to 1½ qts. per 100 gals. (1½ to 2½ tps. per gal.)
	SPECIFIC DIRECTIONS: Apply in early June and repeat in 10 to 14 days. Drench all bark areas down to the ground level.	
Note: Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Douglas fir (Grown for Ornamentals, Nursery Stock or Christmas Trees) (Pacific Northwest Only) (Including CA)	Aphids, Cooley spruce gall adelgids, Douglas-fir needle midges	¾ qt. per 100 gals. (1½ tps. per gal.)
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed. For control of Gall adelgids, apply when white cottony tufts appear. For control of Needle midges, apply in late April or early May just before buds open.	
Note: Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Pines (Austrian, Jack, Red, Scotch, White) (Except CA)	Zimmerman pine moths	1 qt. per 100 gals. (2 tps. per gal.)
	SPECIFIC DIRECTIONS: Apply in mid-April and again, if necessary, in late Fall. Thoroughly wet bark and main stem, especially where branches join main stem.	
Note: Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Shade trees (Except Birch), Shrubs (Including CA)	Aphids	¾ qt. per 100 gals. (1½ tps. per gal.)
	SPECIFIC DIRECTIONS: Make applications when insects appear or feeding is noticed.	
Note: Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Spruce (New England Area Only)	Spruce gall aphids	¾ qt. per 100 gals. (1½ tps. per gal.)
	SPECIFIC DIRECTIONS: Apply in late April or early May when Aphids are present but before galls are formed.	
Note: Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		
Taxus (Except CA)	Taxus bud mites	¾ qt. per 100 gals. (1½ tps. per gal.)
	SPECIFIC DIRECTIONS: Make 3 to 5 applications beginning in mid-May. Thoroughly spray foliage, twigs and bark.	
	Black vine weevils	1½ qt. per 100 gals. (2½ tps. per gal.)
SPECIFIC DIRECTIONS: Spray thoroughly and drench soil under the plants. Apply when the Weevils first appear and repeat in 14 days.		
Note: Food utensils such as teaspoons must not be used for food purposes after use in measuring pesticides. Do not exceed a maximum of 3 lbs. of active ingredient (i.e., 4 qts.) per acre per year.		

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage and disposal. **PESTICIDE STORAGE:** Do not store in or around the home. Do not store below 20°F (-7°C). Do not use or store near heat, open flame or hot surfaces. Keep out of reach of children and animals. Store in original containers only. Store in cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or diluted material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage and disposal. In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents. **PESTICIDE DISPOSAL:** Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. **CONTAINER DISPOSAL:** 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. Do not cut or weld metal containers. Do not reuse empty container. **Returnable/Refillable Sealed Containers:** Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

WARRANTY—CONDITIONS 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 the directions given herewith. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.



**Organochlorine pesticide,
liquid, toxic, flammable,
n.o.s., (Endosulfan/Xylene),
6.1, UN-2995, PG-III,
Marine Pollutant, RQ 1 Lb.**

Add this DOT on DRUMS & BULK packaging.
Not required on 4 x 1 & 2 x 2½ gal. case labels.

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CALIFORNIA SUPPLEMENTAL LABEL

Procedures for reducing risks of contamination of aquatic ecosystems

FOR CROP USES LISTED ON THE PRODUCT LABEL

ENDOSULFAN 3EC may be a source of contamination in aquatic ecosystems as a result of runoff from agricultural land due to discharge of irrigation water or during periods of heavy rainfall. To minimize the chance of aquatic impact, the following conditions must be met to allow application of this product:

DIRECTIONS FOR USE IN CA (General)

IN ADDITION TO SPECIFIC INSTRUCTIONS UNDER "DIRECTIONS FOR USE" ON THE PRINCIPAL LABEL, THE FOLLOWING CONDITIONS MUST ALSO BE FOLLOWED FOR USE IN CALIFORNIA:

1. Do not apply this product to fields during irrigation or irrigate for 72 hours following an application.
2. Do not apply this product through any type of irrigation system.
3. Do not apply more than 1.5 pounds active ingredient per acre per application or more than 3 pounds active ingredient per acre per season. (Orchard crops and Strawberries exempted on rate per acre per application restriction.)
4. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark.
5. Do not apply by ground or air within a distance of 300 feet to natural bodies of water including lakes, ponds, streams and estuaries.

FOR DRIFT CONTROL

1. All application equipment should be properly maintained and calibrated using appropriate carriers.
2. Do not make aerial or ground-applications during temperature inversions.
3. Make aerial or ground applications when the wind velocity favors on-target product deposition (approximately 3 to 10 mph). Do not apply when wind velocity exceeds 10 mph. Do not discharge at a height of more than 10 feet above the crop or target.
4. For aerial applications, a positive shutoff system shall be in place to control flow of liquid to spray nozzles as follows: Each individual nozzle shall be equipped with a check valve and the flow controlled by a suckback device or a boom pressure release device; or each nozzle shall be equipped with a positive action valve.
5. For aerial applications, the spray boom must be mounted on the aircraft so as to minimize drift caused by wing tip or rotor vortices. The working boom length must not exceed 75% of the wingspan or rotor diameter.

6. Aircraft boom pressure shall not exceed 40 pounds per square inch.
7. Aircraft nozzles shall be equipped with orifices directed backward, parallel to the horizontal axis of the aircraft in flight.
8. Aircraft nozzles shall not be equipped with any device or mechanism which would cause a sheet, cone, fan or similar type dispersion of the discharged material, except as otherwise provided.
9. Fixed-wing aircraft and helicopters operating in excess of 60 mph shall be equipped with jet nozzles having an orifice not less than d inch in diameter (D-4 or larger).
10. Helicopters operating at 60 mph or less shall be equipped with nozzles having an orifice not less than d inch in diameter. A number 46 or equivalent whirlplate may be used.
11. For ground applications, equipment other than handguns shall be equipped with nozzles having an orifice not less than d inch in diameter or larger. Boom nozzles shall be operated at a boom pressure not to exceed 30 pounds per square inch.

ACCEPTABLE SITES FOR APPLICATION OF THIS PRODUCT

1. Fields with no drains, having containment through berms (able to hold irrigation water and normal rainwater), levees and non-draining circulation systems.
2. Fields with drains, but drainage flows to sump, farm pond, evaporation pond or recirculation system without drainage (uncontrollable overflow acceptable, e.g., 10 or 100 year flood). Only grower maintained recirculation systems without drainage are acceptable.
3. Fields with surface drains that naturally flow onto pastureland or fallow fields that have no channeled drainage and are at least 300 feet long.

UNACCEPTABLE SITES FOR APPLICATION OF THIS PRODUCT

1. Fields draining directly into surface waters such as streams, rivers, lakes, ponds, marshes, bays, estuaries or the ocean.
2. Fields draining into surface drainage ditches or canals that flow directly into surface waters such as streams, rivers, lakes, ponds, marshes, bays, estuaries or the ocean.
3. Any and all fields with surface drainage patterns in the Moss Landing Drainage System having main arteries that drain into the Elkhorn Slough (Northern portion of Monterey County).
4. Any and all fields with drainage patterns in the San Diego Creek Drainage System having main arteries that drain into Newport Bay.

All applicable directions, restrictions and precautions on the EPA registered label are to be followed.

This label must be in the possession of the user at the time of pesticide application.