



RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms

For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

Permethrin 3.2EC

Insecticide

ACTIVE INGREDIENTS:

*Permethrin**	38.4%
INERT INGREDIENTS:***	61.6%
	100.0%

*(3-Phenoxyphenyl)methyl (±) cis-trans 3-(2,2-dichloroethyl)-2,2-dimethylcyclopropanecarboxylate
**cis/trans ratio: Max. 55% (±) cis and min. 45% (±) trans
***Contains xylene range aromatic solvents.

Contains 3.2 pounds permethrin per gallon.
U.S. Patent No. 4,024,163

EPA REG. NO. 279-3014-5905

EPA Est. 279-FL-1

KEEP OUT OF REACH OF CHILDREN

CAUTION

See other panels for additional precautionary information.

Distributed by:

Helena Chemical Company
225 Schiling Boulevard, Suite 300
Collierville, TN 38017

Net Content: 1 Gallon

1505xxxx

FIRST AID

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

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

If in Eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If Swallowed: 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

HOTLINE NUMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact **1-800-424-9300** for emergency medical treatment information.

Note to Physician: Vomiting should be supervised by a physician or the professional staff because of the possible pulmonary damages by aspiration of the solvent.

For Emergency Assistance Call 1-800-424-9300.

PRECAUTIONARY STATEMENTS

Hazards to Humans (and Domestic Animals)

CAUTION

Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling.

Personal Protective Equipment:

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: Long-sleeved shirt and long pants, Chemical-resistant gloves, such as Barrier Laminate or Viton, and Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations:

Users should:

- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Environmental Hazards

This pesticide is extremely toxic to fish and aquatic 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. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

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

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/Chemical Hazards

Do not use 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.

Resistance. Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or state agricultural authorities for details.

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local company representative or agricultural advisor for the best alternative method of control for your area.

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, Chemical-resistant gloves, such as Barrier Laminate or Viton, and Shoes plus socks.

STORAGE AND DISPOSAL

Pesticide Storage

Do not store below 10°F, (- 12°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 a cool dry place and avoid excess heat. Carefully open containers. After partial use replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food, or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call **800-424-9300**.

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 toxic. 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 of the nearest EPA Regional Office for guidance.

Container Disposal

Metal Containers: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other approved State and local procedures. Do not cut or weld metal containers.

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

Returnable/Refillable Sealed Container: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

Chemigation Use Directions

Apply this product only through sprinkler including center pivot, lateral move end tow, side (wheel) roll, traveler, big gun, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.

Crop injury, lack of effectiveness, or illegal residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

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.

Permethrin 3.2 EC insecticide should be applied continuously for the duration of the water application. Permethrin 3.2 EC should be diluted in sufficient volume to ensure accurate application over the area to be treated. When using chemigation, a minimum of 0.1 inch per acre of irrigation water is recommended. Agitation generally is not required when a suitable diluent is used. A diluent test should be conducted to

ensure that phase separation will not occur during dilution and application. Failure to achieve a uniform dilution throughout the time of application may result in undesirable residues or less than desirable control.

COMMERCIAL IMPREGNATION AND APPLICATION OF PERMETHRIN 3.2 EC ON DRY BULK FERTILIZERS

Permethrin 3.2EC insecticide may be impregnated on dry bulk fertilizers. When applied as directed, Permethrin/dry bulk fertilizer mixtures provide insect control equal to that provided by the same rates of Permethrin applied in water.

The Permethrin/fertilizer mixtures may be surface applied or shallow incorporated. The higher rate should be used if incorporation is used.

Impregnation: Apply using a minimum of 200 pounds of dry bulk fertilizer per acre and up to a maximum of 450 pounds per acre with the recommended amount of Permethrin 3.2EC insecticide per acre. Use a closed rotary-drum mixer or a similar type of closed blender equipped with suitable spray equipment. The spray nozzle(s) should be positioned to provide a uniform, fine spray pattern over the tumbling fertilizer for thorough coverage. The physical properties of fertilizers vary, particularly in liquid absorptive capacity. When absorptivity is sufficient, simple spray impregnation of the fertilizer with Permethrin provides a satisfactory, dry mixture. If the absorptive capacity is inadequate, use of a highly absorptive powder is required to provide a dry, flowable mixture. Microcel E (Johns-Manville Products Corporation) is a recommended absorbent powder. Generally less than 2% by weight of Microcel E is required. **DO NOT** impregnate Permethrin 3.2EC onto straight coated ammonium nitrate or straight limestone because these materials will not absorb the insecticide. Dry fertilizer blends containing mixtures of ammonium nitrate or limestone may be impregnated with Permethrin.

The amount of Permethrin actually required in the preparation of individual fertilizer mixtures should be determined carefully for each production operation. This is necessary to ensure that the amount of pesticide actually contained in the mixture applied to the soil represents the correct rate of use. Bulk fertilizer impregnated with Permethrin 3.2EC insecticide should be applied immediately, not stored.

All individual state regulations relating to bulk dry fertilizer blending, registration, labeling, and application of the mixtures are the responsibility of the individual and/or company selling the fertilizer and Permethrin mixture.

GENERAL INSTRUCTIONS

Unless otherwise directed by registered supplemental labeling, follow the Directions for Use in each crop group section.

Permethrin 3.2 EC is a 3.2 pounds per gallon formulation of the insecticide permethrin. Apply Permethrin 3.2 EC when insects appear or feeding is noticed. The higher rate should be used as pest populations increase. Repeat the application as necessary to maintain control. Permethrin 3.2 EC may be applied by both ground and aerial equipment. Use sufficient water to obtain full coverage. With the exception of crops listed below, rotational crops should not be planted within 60 days of last application.

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

Alfalfa; Alfalfa grown for seed (0 day phi)* (Includes lucerne, sainfoin, holy clover, esparcet, birdsfoot trefoil and varieties and/or hybrids of these)

Insects Controlled	Rate of Application	Method of Application
Alfalfa Caterpillar Armyworms Blue Alfalfa Aphid Cutworms Green Cloverworm Green Peach Aphid	Loopers Pea Aphid Spotted Alfalfa Aphid Velvetbean Caterpillar Webworms	2 to 8 ounces (0.05 to 0.2 pound active) per acre
Alfalfa Weevil Cucumber Beetle Egyptian Alfalfa Weevil Meadow Spittlebug Plant Bugs (including <i>Lygus</i> spp.) Potato Leafhopper Stink Bugs		4 to 8 ounces (0.1 to 0.2 pound active) per acre
Use higher recommended dosage for increased pest pressure or for increased residual pest control. Apply with ground equipment in a minimum of 10 gallons of finished spray per acre or 2 gallons of finished spray per acre by aircraft.		
Do not apply more than 0.2 pound active ingredient per cutting. *When rates greater than 0.1 pound active per acre are used, do not apply within 14 days of harvest.		

Almonds (7 day phi)

Insects Controlled	Rate of Application	Method of Application
Navel Orangeworm Peach Twig Borer	8 to 16 ounces (0.2 to 0.4 pound active) per acre	Apply when insects appear. Apply in a minimum of 15 gallons of finished spray per acre by aircraft or 25-400 gallons of finished spray per acre with ground equipment.
Ants	16 ounces (0.4 pound active) per acre	Apply by ground equipment in a minimum of 15 gallons of finished spray per acre. Application should follow mowing of weed growth to insure maximum coverage of the soil surface. Overhead moisture following application will enhance activity.
Do not apply more than 0.8 pound active per acre during hull split. Do not apply more than 2 pounds active per acre per season. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Apples

Insects Controlled	Rate of Application	Method of Application
Green Fruitworm Oblique Banded Leafroller Plum Curculio Redbanded Leafroller Rosy Apple Aphid Spotted Tentiform Leafminer Tarnished Plant Bug White Apple Leafhopper	4 to 16 ounces (0.1 to 0.4 pound active) per acre	Use with ground equipment only. Apply in 25 - 400 gallons of finished spray per acre when insects appear and repeat as required to maintain control.
Do not apply more than 0.6 pound active per acre per season. Do not apply after petal fall. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Artichoke (0 day phi)

Insects Controlled	Rate of Application	Method of Application
Artichoke Plume Moth Leafminers	4 to 12 ounces (0.1 to 0.3 pound active) per acre.	Apply with ground equipment in a minimum of 10 gallons of finished spray per acre or in a minimum of 2 gallons per acre by aircraft. Apply as needed. Buds may be harvested on the day of application.
Do not apply more than 5 applications (1.5 pounds active ingredient) per acre per season.		

Asparagus (1 day phi)

Insects Controlled	Rate of Application	Method of Application
Asparagus Beetle Cutworms	2 to 4 ounces (0.05 to 0.1 pound active) per acre	Apply with ground equipment in a minimum of 10 gallons of finished spray per acre. Apply as needed.
Asparagus Beetle Japanese Beetle (Adult stage)* Lygus Bugs Tarnished Plant Bug	4 ounces (0.1 pound active) per acre	For post harvest application, apply to the fern stage of the asparagus plant after spear harvest when larval and adult stage are present. *Not for control of this insect in California.
Do not apply more than 0.4 pound active ingredient per acre per season.		

Avocado (7 day phi)

Insects Controlled	Rate of Application	Method of Application
Avocado Caterpillar Avocado Lace Bug Avocado Leafhopper Avocado Leafroller Avocado Looper Avocado Tree Girdler Avocado Whitefly Brown Soft Scale Mirids Omnivorous Looper Orange Tortrix Scale Crawlers Spanworm Thrips Twig Borers	8 ounces (0.2 pound active) per acre	Apply with ground equipment in a minimum of 25-400 gallons of finished spray per acre. Apply when insects first appear and repeat at 7 to 10 day intervals as needed to provide control.
Do not apply more than 1.2 pounds active ingredient per acre per season. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Broccoli; Chinese Broccoli (gai lan, white flowering broccoli); Brussels Sprouts; Cauliflower; Cavalo broccolo; Kohlrabi (1 day phi)

Insects Controlled	Rate of Application	Method of Application
Armyworm spp. Cabbage Looper Diamondback Moth Imported Cabbageworm Plant Bugs Thrips	2 to 4 ounces (0.05 to 0.1 pound active) per acre	Apply with ground equipment in a minimum of 10 gallons of finished spray per acre or in a minimum of 2 gallons per acre by aircraft. Apply as needed.
Do not apply more than 0.8 pound active ingredient per acre per season.		

Cabbage; Cabbage, Chinese (napa) (tight-heading varieties only) (1 day phi)

Insects Controlled	Rate of Application	Method of Application
Cabbage Looper Diamondback Moth Imported Cabbageworm Southern White Butterfly	2 to 8 ounces (0.05 to 0.2 pound active) per acre	Apply with ground equipment in a minimum of 10 gallons per acre or in a minimum of 2 gallons per acre by aircraft. Apply as needed.
Armyworm spp. Cutworms Flea Beetles	4 to 8 ounces (0.1 to 0.2 pound active) per acre	
Do not apply more than 1.0 pound active ingredient per acre per season.		

Cantaloupes: For general use directions refer to the **Cucurbit Vegetables** crop grouping.

Celery, Florence fennel (sweet anise, sweet fennel, finocchio) (fresh leaves and leaf petioles only): For general use directions refer to the **Leafy Vegetable** crop grouping.

Cherries (Includes Sweet Cherries and Tart Cherries) (3 day phi)

Insects Controlled	Rate of Application	Method of Application
Green Fruitworm Lesser Peach Tree Borer Plum Curculio Redbanded Leafroller Rose Chafer Tarnished Plant Bug	4 to 8 ounces (0.1 to 0.2 pound active) per acre	Use Permethrin 3.2 AG insecticide as a dilute spray. Apply when insects appear. Apply with ground equipment in 25-400 gallons of finished spray per acre.
Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock. <i>East of the Rockies</i> , do not exceed 6 applications per season, with no more than 4 applications after petal fall. <i>West of the Rockies</i> , do not apply more than 4 applications per season, with no more than 3 applications after petal fall.		

Chrysanthemums

Insects Controlled	Rate of Application	Method of Application
Liomyza Leafminer Flies	20 fluid ounces (0.5 pound active) per 100 gallons (1 teaspoon per gallon)	Avoid spraying the blooms. Permethrin 3.2 AG may be applied on a weekly schedule. Caution: Permethrin 3.2 AG has demonstrated excellent plant safety, however, not all cultivars have been tested. Before treating large numbers of plants of a particular cultivar, treat a few plants and observe prior to full scale applications.

Collards and Turnips (1 day phi)

Insects Controlled	Rate of Application	Method of Application
Beet Armyworm Cabbage Looper Corn Earworm Cutworms Diamondback Moth European Corn Borer Fall Armyworm Green Cloverworm	Imported Cabbageworm Leafhoppers Leafminer Southern Armyworm Southern White Butterfly Tobacco Budworm Vegetable Leafminer Aphids*	2 to 4 ounces (0.05 to 0.1 pound active) per acre Apply with ground equipment only. Apply with ground equipment in a minimum spray volume of 10 gallons of finished spray per acre. Apply as needed.
For use on Collards in AR, AZ, GA, IL, NC, OK, SC, and TX and on Turnips in FL, GA, IL, IN, OK, SC, TX, and WA. Do not apply more than 0.8 pound active ingredient per acre per season on Collards and Turnips (AR, TX & IN). Do not apply more than 0.4 pound active ingredient per acre per season on Turnips (SC, GA, FL & WA). * Suppression only.		

Conifers (Container and Field Grown)

Insects Controlled	Rate of Application	Method of Application
Nantucket Pine Tip Moth	4 to 8 fluid ounces (0.1 to 0.2 pound active) per acre	Permethrin 3.2 AG may be diluted in a non-volatile vegetable oil or water in a minimum of 1 gallon of finished spray per acre using equipment calibrated to give adequate coverage. Begin application when the adults appear and repeat at 5 to 7 day intervals or as needed throughout the season.

Corn (Field), Field Corn Grown for Seed, Popcorn

Insects Controlled	Rate of Application	Method of Application
<i>Preemergent Use:</i> Armyworms Cutworms Stalk Borers	4 to 8 ounces (0.1 to 0.2 pound active) per acre as a broadcast spray OR 0.3 to 0.6 ounces per 1000 linear feet row (based on a 4" band and 40" row spacing.)	Permethrin may be applied as a preplant incorporated, preemergence, or at planting time application. Apply as a broadcast spray by ground or air (minimum of 2 gallons finished spray per acre by air) or 4-15 inch band using sufficient spray volume to achieve adequate coverage. Linear row calculations should be used proportional to the standard Band Width/Row Width formula to adjust rates for different band widths or row spacings. Use higher rates of Permethrin 3.2 AG when incorporating into the soil without exceeding the recommended dosage. When using tank mixes, observe all restrictions and precautions which appear on the labels of these products. Provide constant agitation during mixing and application to keep the mixture in solution.

Corn (Field), Field Corn Grown for Seed, Popcorn (continued)

Insects Controlled	Rate of Application	Method of Application
<i>Foliar Use:</i> Armyworm (including Fall Armyworm) Corn Borer European Southwestern Corn Earworm Corn Rootworm Beetles Cutworms Flea Beetle Hop Vine Borer Stalk Borers Webworms	4 to 8 ounces (0.1 to 0.2 pound active) per acre	When treating for stalk borers, Permethrin 3.2 AG must be applied when or shortly before the stalk borer larvae are moving into the corn from surrounding weeds and grasses. Mowing or burndown herbicide are suggested to initiate movement. For control of Corn Earworm apply just before silking and continue as necessary to maintain control. Apply a minimum of 2 gallons of finished spray per acre by air or 10 gallons per acre with ground equipment.
<i>Foliar Use:</i> Western Bean Cutworm	2 to 4 ounces (0.05 to 0.1 pound active) per acre	
Up to 0.6 pound active ingredient may be used per season. Do not make treatments less than 6 days apart or apply less than 30 days prior to harvest of grain or fodder (stover). Forage may be harvested on the day of application.		

Corn (Field), Field Corn Grown for Seed, Popcorn (At Plant Use)

Insects Controlled	Rate of Application	Method of Application
Armyworms Cutworms Seed Corn Maggot* Wireworm* *Not for use in California.	0.3 ounces per 1,000 linear feet of row	Apply as an in-furrow, band or T-band treatment using a minimum 4" band. Use table below to determine the Permethrin 3.2 AG needs for each acre.
Row Spacings (inches)	40	30 20
Permethrin 3.2 AG (pounds ai per acre)	0.10	0.15 0.20
Permethrin 3.2 AG (formulated ounces per acre)	4.0	6.0 8.0

Corn, Sweet (1 day phi)

Insects Controlled	Rate of Application	Method of Application
Corn Earworm Corn Rootworm Beetles* Cutworms European Corn Borer Fall Armyworm Flea Beetle Hop Vine Borer Leafhoppers Southern Armyworm Stalk Borers	4 to 8 ounces (0.1 to 0.2 pound active) per acre	Apply every 3 to 5 days or as needed. Apply with ground equipment in a minimum of 10 gallons of finished spray per acre or in a minimum of 2 gallons per acre by aircraft. *Pest does not occur on this crop in California.
Do not apply more than 1.2 pounds active ingredient per acre per season.		

Corn, Sweet (Florida Only)

Insects Controlled	Rate of Application	Method of Application
Aster Leafhopper Corn Earworm Cutworm European Corn Borer Fall Armyworm Southern Armyworm	4 to 10 ounces (0.1 to 0.25 pound active) per acre	Apply every 3 to 5 days or as needed. Apply with ground equipment in a minimum of 10 gallons of finished spray per acre or in a minimum of 2 gallons per acre by aircraft.
Do not apply more than 2.0 pounds active ingredient per acre per season.		

Cucurbit Vegetables (0 day phi): Chayote (fruit) (*Sechium edule*); Chinese waxgourd (Chinese preserving melon) (*Bernincasa hispida*); Citron melon (*Citrullus lanatus* var. *citroides*); Cucumber (*Cucumis sativus*); Gherkin (*Cucumis anguria*); Gourd, edible (*Lagenaria* spp.) (includes hyotan, cucuzza); (**Luffa spp.**) (includes hechima, Chinese okra); (**Momordica spp.**) (includes balsam apple, balsam pear, bitter melon, Chinese cucumber); Muskmelon (hybrids and/or cultivars of *Cucumis melo*) (includes true cantaloupe, cantaloupe, casaba, crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, and snake melon); Pumpkin (*Cucurbita* spp.); Squash, summer (*Cucurbita pepo* var. *meloapepo*) (includes crookneck squash, scallop squash, straightneck squash, vegetable marrow, zucchini); Squash, winter (*Cucurbita maxima*; *C. moshata*) (includes butternut squash, calabaza, hubbard squash); (*C. mixta*; *C. pepo*) includes acorn squash, spaghetti squash); Watermelon (includes hybrids and/or varieties of *Citrullus* spp.).

Insects Controlled	Rate of Application	Method of Application
Aphids Leafminers Squash Bug	8 ounces (0.2 pound active) per acre	Apply with ground equipment in a minimum spray volume of 20 gallons of finished spray per acre or in a minimum of 4 gallons per acre by aircraft.
Cabbage Looper Cucumber Beetle (adults) Cutworms Leafhoppers Melonworm	Pickleworm Plant Bugs (including Lygus and Slink Bugs) Rindworms Squash Vine Borer	4 to 8 ounces (0.1 to 0.2 pound active) per acre
Do not apply more than 1.6 pounds active ingredient per acre per season. Applications may be made up to harvest.		

Eggplants (3 day phi)

Insects Controlled	Rate of Application	Method of Application
Colorado Potato Beetle	8 ounces (0.2 pound active) per acre	Apply with ground equipment in a minimum of 10 gallons of finished spray per acre or a minimum of 2 gallons by aircraft. Apply using sufficient water to obtain uniform coverage. Apply as needed.
Cabbage Looper Flea Beetles Vegetable Leafminer	4 to 8 ounces (0.1 to 0.2 pound active) per acre	
Do not apply more than 2.0 pounds active ingredient per acre per season.		

Filberts (14 day phi)

Insects Controlled	Rate of Application	Method of Application
Filbertworm Oblique Banded Leafroller	8 to 16 ounces (0.2 to 0.4 pound active) per acre	For full coverage application apply 0.05 to 0.1 pound active per 100 gallons (based on 400 gallons finished spray per acre) and spray to run-off, OR for low volume concentrate application apply 0.2 to 0.4 pound active per acre (50 to 200 gallons finished spray per acre). For aerial application apply 0.2 to 0.4 pound active in a minimum of 10 gallons of finished spray per acre. Apply when insects appear.
Do not apply more than 1.6 pounds active per acre per season. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Horseradish (30 day phi)

Insects Controlled	Rate of Application	Method of Application
Imported Crucifer Weevil (<i>Baris lepidii</i>)	0.1% active solution (2 pints, 1 ounce of Permethrin 3.2 AG per 100 gallons)	As a spring preplant dip, soak sets for 30 minutes and air-dry before planting.
	8 ounces (0.2 pound active) per acre	For foliar application, apply with ground equipment in a minimum spray volume of 20 gallons finished spray per acre. Make up to 3 foliar applications as needed to control weevil adults during oviposition.

Leafy Vegetables (except Brassica) (1 day phi): Amaranth (leafy amaranth, Chinese spinach, tampala); Arugula (Roquette); Cardoon; Celery; Celery, Chinese; Celtuce; Chervil; Chrysanthemum, edible-leaved and garland; Corn salad; Cress, garden; Cress, upland (yellow rocket, winter cress); Dandelion; Dock (sorrel); Endive (escarole); Fennel, Florence (finochio); Lettuce, head and leaf; Orach; Parsley; Purslane, garden; Purslane, winter; Radicchio (red chicory); Rhubarb; Swiss chard.

Spinach (including New Zealand and vine, Malabar spinach, Indian spinach).*

Insects Controlled	Rate of Application	Method of Application
Aphids Beet Armyworm Corn Earworm Cutworms European Corn Borer	Fall Armyworm Green Cloverworm Leafminers Southern Armyworm Tobacco Budworm	4 to 8 ounces (0.1 to 0.2 pound active) per acre
Alfalfa Looper Cabbage Looper Leafhoppers		
		2 to 8 ounces (0.05 to 0.2 pound active) per acre
Do not apply more than 2.0 pounds active ingredient per acre per season. *For Spinach, do not apply more than 1.0 pound active ingredient per acre per season.		

Lettuce Head: For general use directions refer to the **Leafy Vegetable** crop grouping.

Mushrooms (Mushroom houses and adjacent premise areas) (3 day phi)

Insects Controlled	Rate of Application	Method of Application
Mushroom Flies (Sciarid and Phorid adults)	Apply as a fogging or aerosol treatment at the rate of 2.0 to 2.5 ounces (0.05-0.0625 lb.ai) per 30 ounces of water or suitable diluent. Use 1 quart of solution per standard double house (35,000 cu. ft.: 8000 sq. ft.)	Preparation of the building prior to fogging: (1) Close all doors, windows, and ventilators, (2) Lock or barricade all entrances, turn off pilot lights, post warning signs, and take precautions to prevent persons and animals from entering the area. Use prior to filling the house, during cool-down, during spawning, up to pinning, and between breaks. Do not use when mushrooms are present. Treat once daily as needed when flies appear. Do not make more than 20 applications prior to pinning of first break; apply no more than two applications between each break. Do not apply more than 30 applications total per crop of 5 breaks. Length of exposure time should be limited to 1 hour; then ventilate the house. Use fans to ventilate in houses that do not have forced air circulation. Wear a respirator with either 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).

Onions, Bulb and Garlic (1 day phi)

Insects Controlled	Rate of Application	Method of Application
Armyworms Onion Thrips	6 to 12 ounces (0.15 to 0.3 pound active) per acre	Apply with ground equipment in a minimum of 20 gallons of finished spray per acre or in a minimum of 5 gallons per acre by aircraft. Begin applications when pests appear and repeat as necessary to maintain control. Use the higher label rates as Onion Thrips population increases and avoid rescue situations.
Cutworms Leafminers Onion Maggots (Adults) Stink Bugs	4 to 12 ounces (0.1 to 0.3 pound active) per acre	
Do not apply more than 2.0 pounds active ingredient per acre per season.		

Ornamental Nursery Stock (Field Grown)

Insects Controlled	Rate of Application	Method of Application
Bagworm Beet Armyworm Cabbage Looper Citrus Thrips <i>Heliothis</i> spp. Lace Bug Leafhoppers Leafminers Whiteflies	4 to 8 ounces (0.1 to 0.2 pound active) per 100 gallons of water	Permethrin 3.2 AG may be used to control specified pests on non-edible ornamentals and non-bearing plants of fruiting species. Caution: Marginal leaf burn may occur on <i>Salvia</i> , <i>Dieffenbachia</i> and <i>Pteris</i> Fern. Application to blooming plants may cause browning of petals. Permethrin 3.2 AG has demonstrated excellent plant safety; however, not all species and varieties have been tested. Before treating large numbers of plants of a particular variety, treat a few plants and observe prior to full scale application.

Papaya (Florida Only) (7 day phi)

Insects Controlled	Rate of Application	Method of Application
Aphids Brown Soft Scale Mealybug Papaya Fruit Fly Papaya Webworm Papaya Whitefly Scale Crawlers	8 ounces (0.2 pound active) per acre	Apply with ground equipment in 25-400 gallons of finished spray per acre. Apply when insects first appear and repeat at 7 to 10 day intervals as needed to provide control.
Do not apply more than 1.2 pounds active per acre per season. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Peaches, Nectarine (14 day phi)

Insects Controlled	Rate of Application	Method of Application
Green Fruitworm Lesser Peach Tree Borer Oriental Fruit Moth Peach Twig Borer Plum Curculio Rose Chafer Tarnished Plant Bug	4 to 12 ounces (0.1 to 0.3 pound active) per acre	Apply by ground equipment using 25-400 gallons of spray per acre with ground equipment or a minimum of 10 gallons per acre by air. Spray to wet all foliage.
Do not apply more than 1.5 pounds active ingredient per acre per season. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Pears (Dormant through Delayed Dormant)

Insects Controlled	Rate of Application	Method of Application
Pear Psylla	8 to 16 ounces (0.2 to 0.4 pound active) per acre	Permethrin 3.2 AG may be combined with 2 to 8 gallons of spray oil per acre. Apply during the dormant through delayed dormant growth periods only. Apply in a minimum of 10 gallons of finished spray per acre by aircraft and 25-400 gallons per acre by ground equipment.
Do not apply more than 0.8 pound active per acre per season. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Pears (Pre-Bloom)

Insects Controlled	Rate of Application	Method of Application
Codling Moth Green Fruitworm Pear Psylla	8 to 16 ounces (0.2 to 0.4 pound active) per acre	Apply with ground equipment using 25-400 gallons of finished spray per acre or a minimum of 10 gallons per acre by aircraft. Pre-bloom sprays can be applied from dormant through bud burst stages.
Do not apply more than 0.8 pound active ingredient per acre per season. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Peppers (Bell) (3 day phi)

Insects Controlled	Rate of Application	Method of Application
Cabbage Looper Corn Earworm Cutworms Flea Beetle Pepper Weevil Vegetable Leafminer	4 to 8 ounces (0.1 to 0.2 pound active) per acre	Apply using sufficient water to obtain uniform coverage. Apply as needed. Apply with ground equipment using a minimum of 10 gallons of finished spray per acre or a minimum of 2 gallons per acre by aircraft.
European Corn Borer	8 ounces (0.2 pound active) per acre	
Do not apply more than 1.6 pounds active ingredient per acre per season.		

Pine Seed Orchards

Insects Controlled	Rate of Application	Method of Application
Coneworms Seed Bugs	8 ounces in 100 gallons of water (0.025% dilution by weight)	For high volume sprayers, apply 5 to 10 gallons of finished spray per tree.
	42 ounces in 100 gallons of water (0.125% dilution by weight)	For low volume sprayers, apply 100 gallons per acre.
	30 ounces per acre	For aerial application, use in not less than 10 gallons of water.
To control Webbing Coneworm—make first application within 1 week of female flower closure or peak pollen flight. To control other coneworms and seed bugs—make first application within 30 days following female flower closure. Repeat applications at 4 week intervals, but do not apply more than 6 applications.		
Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock. Avoid contact with open water.		

Pistachios (0 day phi)

Insects Controlled	Rate of Application	Method of Application
Leaffooted Bugs Navel Orangeworm Peach Twig Borer Plant Bugs Stink Bugs	8 to 16 ounces (0.2 to 0.4 pound active) per acre	Use sufficient water to obtain full coverage of foliage. Apply Permethrin 3.2 AG in a minimum of 10 gallons of finished spray per acre by aircraft or by ground equipment in 25-400 gallons of finished spray per acre.
Ants	16 ounces (0.4 pound active) per acre	Application should follow mowing of weed growth to insure maximum coverage of the soil surface. Overhead moisture following application will enhance activity.
Do not apply more than 1.6 pound active per acre per crop season. Do not apply after 10% hull split. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Potatoes (14 day phi)

Insects Controlled	Rate of Application	Method of Application
Aster Leafhopper Beet Armyworm Cabbage Looper Colorado Potato Beetle Cutworms European Corn Borer	Potato Aphid Potato Flea Beetle Potato Leafhopper Potato Psyllid Potato Tuberworm Tarnished Plant Bug	4 to 8 ounces (0.1 to 0.2 pound active) per acre
		Apply with ground equipment in a minimum of 10 gallons of finished spray per acre or in a minimum of 2 gallons per acre by aircraft. Permethrin 3.2 AG may also be applied using refined non-volatile vegetable oil for control of listed pests. Permethrin 3.2 AG should be diluted with oil and applied in a minimum of one quart total volume per acre using equipment calibrated to give adequate coverage. Use sufficient spray volume to obtain full coverage.
Do not apply more than 1.6 pounds active ingredient per acre per season.		

Pumpkins: For general use directions refer to the **Cucurbit Vegetables** crop grouping.

Range Grass (New Mexico Only)

Insects Controlled	Rate of Application	Method of Application
Range Caterpillar	0.4 ounces (0.01 pound active) per acre	Apply using sufficient spray volume to obtain uniform coverage. Apply with ground equipment in a minimum of 10 gallons of finished spray per acre or in a minimum of 2 gallons per acre by aircraft.
Do not apply more than once per year. Cattle may be present during application. Do not harvest or feed hay to livestock.		

Roses (Field Grown)

Insects Controlled	Rate of Application	Method of Application
<i>Heliothis spp.</i>	4 to 8 fluid ounces (0.1 to 0.2 pound active) per acre	Permethrin 3.2 AG may be applied with ground equipment in a minimum of 10 gallons of finished spray per acre or in a minimum of 2 gallons of finished spray per acre by aircraft.

Roses (Greenhouse)

Insects Controlled	Rate of Application	Method of Application
Beet Armyworm Cabbage Looper Omnivorous Leafroller	8 fluid ounces (0.2 pound active) per 100 gallons of water	Caution: Permethrin is not phytotoxic to the following varieties of greenhouse roses: Ballena, Bettina, Cara Mia, Coquette, Excitement, Forever Yours, G. Wave, Jack Frost, Jr. Bridesmaid, Matador, Paul's Pink, Samantha, Seventeen, Sonia, Town Crier, Tropicana and Visa. Other varieties may vary in their sensitivity to Permethrin 3.2 AG, and a small number of plants should be treated under local conditions to determine plant safety prior to commercial use.

Soybeans (60 day phi)

Insects Controlled	Rate of Application	Method of Application
Bean Leaf Beetle Cabbage Looper Corn Rootworm Beetles Cutworms Flea Beetle Green Cloverworm Japanese Beetle Mexican Bean Beetle Potato Leafhopper Saltmarsh Caterpillar (Woollybear Caterpillar) Thistle Caterpillar Velvetbean Caterpillar	2 to 4 ounces (0.05 to 0.1 pound active) per acre	Apply with ground equipment in a minimum of 10 gallons of finished spray per acre or in a minimum of 2 gallons per acre by aircraft. Permethrin 3.2 AG may also be applied using refined non-volatile vegetable oil for control of listed pests. Permethrin 3.2 AG should be diluted with oil and applied in a minimum of 1 quart total volume per acre using equipment calibrated to give adequate coverage. When applying in water by aircraft, 1 quart of oil may be substituted for 1 quart of water per gallon of finished spray.
Beet Armyworm Corn Earworm Soybean Looper Webworms	4 to 8 ounces (0.1 to 0.2 pound active) per acre	
Do not apply more than 0.4 pound active ingredient per acre per season. Do not graze or feed soybean forage or hay.		

Spinach: Refer to **Leafy Vegetable** crop grouping for general use directions. Do not apply more than 1.0 pound active ingredient per acre per season.

Tomatoes, Tomatillos (0 day phi)

Insects Controlled	Rate of Application	Method of Application
Beet Armyworm Cabbage Looper Colorado Potato Beetle Granulate Cutworm Hornworms Southern Armyworm Tomato Fruitworm Tomato Pinworm Vegetable Leafminers	2 to 8 ounces (0.05 to 0.2 pound active) per acre	Apply with ground equipment in a minimum of 10 gallons finished spray per acre or in a minimum of 2 gallons per acre by aircraft.
Do not apply more than 1.2 pounds active ingredient per acre per season. Do not apply to cherry tomatoes or other varieties which produce fruit less than one inch in diameter.		

Walnuts (1 day phi)

Insects Controlled	Rate of Application	Method of Application
Codling Moth Navel Orangeworm Walnut Husk Fly	8 to 16 ounces (0.2 to 0.4 pound active) per acre	For full coverage application apply 0.05 to 0.1 pound active per 100 gallons (based on 400 gallons finished spray per acre), spray to run-off; OR, for low volume application apply 0.2 to 0.4 pound active per acre (25-200 gallons finished spray per acre). For aerial application apply 0.2 to 0.4 pound active in a minimum of 10 gallons of finished spray per acre. Apply when insects appear.
Do not apply more than 1.6 pounds active ingredient per acre per season. Do not graze livestock in treated areas. Do not feed cover crops from treated areas to livestock.		

Premises Spray

For agricultural use only.

Spray directly to walls and ceiling as residual surface treatment only. Do not treat manure or litter. Avoid contamination of feed and water. Do not apply directly to livestock or poultry.

For Application in	Target Insects	Method of Applic.	Dilute	Applic. Rate
Dairies, Barns, Feedlots, Stables, Poultry Houses, Swine and Livestock Houses	House Flies, Stable Flies and other Manure Breeding Flies. Also aids in the reduction of Cockroaches, Mosquitoes and Spiders.	Sprayer	4 ounces to 12.5 gallons water	1 gallon per 750 square feet of surface

Re-treat as necessary, but not more often than once every 2 weeks.

The use of any residual fly spray should be supplemental with proper manure management and general sanitation to reduce or eliminate fly breeding site.

Rate Conversion Chart

Pounds Active per Acre	Formulation Ounces per Acre
0.05	2.0
0.10	4.0
0.15	6.0
0.20	8.0
0.25	10.0
0.30	12.0
0.40	16.0

Dealers Should Sell in Original Packages Only.

Terms of Sale or Use: On purchase of this product buyer and user agree to the following conditions:

Warranty: Helena makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Except as so warranted, the product is sold as is. Buyer and user assume all risk of use and/or handling and/or storage of this material when such use and/or handling and/or storage is contrary to label instructions.

Directions and Recommendations: Follow directions carefully. Timing and method of application, weather and crop conditions, mixture with other chemicals not specifically recommended and other influencing factors in the use of this product are beyond the control of the seller and are assumed by the buyer at his own risk.

Use of Product: Helena's recommendations for the use of this product are based upon tests believed to be reliable. The use of this product being beyond the control of the manufacturer, no guarantee, expressed or implied, is made as to the effects of such or the results to be obtained if not used in accordance with directions or established safe practice.

Damages: Buyer's or user's exclusive remedy for damages for breach of warranty or negligence shall be limited to direct damages not exceeding the purchase price paid and shall not include incidental or consequential damages.

2001 (3510-12/11/2000-A)





RESTRICTED USE PESTICIDE

Toxic to fish and aquatic organisms

For retail sale to and use only by certified applicators, or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

Permethrin 3.2EC

Insecticide

BASE LABEL

ACTIVE INGREDIENTS:

*Permethrin**	38.4%
INERT INGREDIENTS:***	<u>61.6%</u>
	100.0%

*(3-Phenoxyphenyl)methyl (±) cis-trans 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropanecarboxylate
**cis/trans ratio: Max. 55% (±) cis and min. 45% (±) trans
***Contains xylene range aromatic solvents.

Contains 3.2 pounds permethrin per gallon.
U.S. Patent No. 4,024,163

EPA REG. NO. 279-3014-5905

EPA Est. 279-FL-1

KEEP OUT OF REACH OF CHILDREN
CAUTION

See other panels for additional precautionary information.

Distributed by:

Helena Chemical Company
6075 Poplar Avenue, Suite 500
Memphis, TN 38119-4702

Net Content: 1 Gallon

1505xxxx