



**OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION**

WASHINGTON, D.C. 20460

January 26, 2026

Leah Strayer  
Agent  
Precision Control Technology, LLC  
c/o Pyxis Regulatory Consulting Inc.  
535 Dock St, Ste 211  
Tacoma, WA 98402

Subject: Label Amendment – Added personal protective equipment (PPE), updated directions for use, updated applications instructions, added application uses, updated storage and disposal statements, updated trademark, updated crops, and fixed punctuation.  
Registration Review Label Amendment – Incorporating Mitigation Measures from the Registration Review Interim Decision for Permethrin.  
Product Name: PermaSease 4-4  
EPA Registration Number: 86291-3  
Application Date(s): 07/09/2020, 04/02/2021  
Case Number/Decision Number: 478299, 477904

Dear Leah Strayer:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

The Agency, in accordance with FIFRA, as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Permethrin Interim Decision. The Agency has concluded that your submission is acceptable.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. *The next label printing of this product must use this labeling unless subsequent changes have been approved.* You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved

labeling for 12 months from the date of this letter. After *12 months*, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling.

“To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Eric Ingram at [ingram.eric@epa.gov](mailto:ingram.eric@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Elizabeth Fertich".

Elizabeth Fertich, Product Manager 04  
Invertebrate & Vertebrate Branch 1  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure

{Note to reviewer: [Text] in brackets denotes optional text. In instances where a word or phrase has multiple optional text options, at least one will be used to ensure that the entire statement is clear and understandable. {Text} in braces denotes where in the final label text will appear and notes to reviewer and will not be included on the final printed label.}

PERMETHRIN	GROUP	3A	INSECTICIDE
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## PERMASEASE™ 4-4

For use only by federal, state, tribal, or local governmental officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

A Synergized Permethrin Formulation that Provides Quick Knockdown and Effective Control of Mosquitoes, Black Flies, Gnats, Biting and Non-Biting Midges as well as Other Biting Flies in Residential, Recreational, Urban, Rural, and Agricultural Areas where mosquitoes and flies are found.

[For Use as a ULV non-thermal aerosol using ground or aerial equipment in areas including: residential, recreational areas, parks, campsites, woodlands, athletic fields, golf courses, municipalities, gardens, playgrounds, overgrown waste areas and over listed crops and range grasses within or adjacent to listed crops and range grasses]

For use as a Spray by Air and Ground Application to Control Adult Mosquitoes, biting and non-biting midges, Gnats and black flies.

ULV application provides excellent control at Rates from 0.001 Up to 0.007 Pounds Permethrin per Acre per application.

May be Applied Undiluted or Diluted

### ACTIVE INGREDIENTS:

Permethrin .....4.6%

Piperonyl Butoxide\* .....4.6%

OTHER INGREDIENTS\*\*: .....90.8%

TOTAL: .....100.0%

\*(butylcarbityl)(6-propylpiperonyl) ether and related compounds

\*\*Contains a Petroleum Distillate Solvent.

Contains 0.3344 lb. A.I. Permethrin and 0.3344 lb. A.I. Piperonyl Butoxide per gallon.

## KEEP OUT OF REACH OF CHILDREN CAUTION

[See [Back][Side] [Panel] [Label Booklet] for [First Aid Instructions] [and] for Complete Precautionary Statements and Directions for Use.] {Note to reviewer: Location of additional precautionary statements, directions for use will vary between those listed, depending on container type/size.}

**PRECAUCION AL USUARIO:** Si usted no lee inglés, no use este producto hasta que la etiqueta haya sido explicado ampliamente. (TO THE USER: If you cannot read English, do not use this product until the label has been fully explained to you.)

EPA Reg. No 86291-3

EPA Est. No. [XXXXX-XX-XXX]

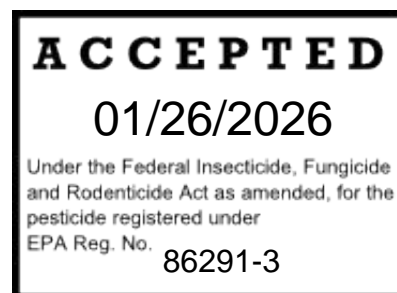
Lot/Batch No:

Product Code:

Net Contents: \_\_\_\_\_ gallon[s]

**Manufactured [For][By]:**  
Precision Control Technology, LLC  
100 Colonial Center Pkwy, Suite 170  
Lake Mary, FL 32746

[1]



## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if swallowed, inhaled or absorbed through the skin. Causes moderate eye irritation. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Remove contaminated clothing and wash clothing before reuse.

FIRST AID	
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to mouth, if possible.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. <b>Hotline Number:</b> You may also contact SafetyCall® International (866) 897-8050 for emergency medical treatment information.	
<b>Note to Physician:</b> Contains petroleum distillate-vomiting may cause aspiration hazard.	

### Personal Protective Equipment (PPE)

Mixers, loaders, applicators, and other handlers must wear:

- Long-sleeve shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves made of barrier laminate, nitrile rubber ≥14 mils. or neoprene rubber ≥14 mils; and
- Chemical-resistant apron for mixers/loaders, persons cleaning equipment, and persons exposed to the concentrate.

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

See Engineering Controls for additional requirements.

### User Safety Recommendations:

- Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Users should 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.

### Engineering Controls

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of Global Positioning System (GPS) or mechanical flaggers.

### ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates.

Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or washwaters.

Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort. Applications should be timed to provide the maximum possible interval between treatment and the next period of bee activity.

### PHYSICAL AND CHEMICAL HAZARDS

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

### DIRECTIONS FOR USE

It is a violation Federal law to use this product in a manner inconsistent with its labeling.

#### Use Restrictions:

- Do not retreat the same site more than once in 3 days.
- Do not make applications during rain.
- Do not use in outdoor residential misting systems.
- Do not use in metered release systems.
- Do not allow spray treatments to drift on cropland (other than crops listed in this label), or into water supplies.
- In the treatment of corrals, feedlots, animal confinement houses, swine lots, poultry ranges and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.

### RESISTANCE MANAGEMENT

For resistance management, **PERMASEASE™ 4-4** contains a Group 3A insecticide. Any insect population may contain individuals naturally resistant to **PERMASEASE™ 4-4** and other Group 3A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of **PERMASEASE™ 4-4** or other Group 3A insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological, and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.

- For further information or to report suspected resistance contact Precision Control Technology, LLC at (800) 367-0659 or at myadapco.com.

## **MANDATORY SPRAY DRIFT MANAGEMENT**

### **ULTRA LOW VOLUME APPLICATIONS**

- Apply when ground wind speeds are equal to or greater than 1 mph.
- All types of applications should be conducted when temperatures at ground level are at or above 50°F.

#### **For Ground Applications:**

- Create an optimum swath when possible. An optimum swath width can be achieved when **PERMASEASE™ 4-4** is applied from a truck that is being driven perpendicular to the wind direction. Direct the spray head of equipment to ensure even distribution of the spray cloud throughout the area.
- FOR BEST RESULTS treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the spray cloud in the air column close to the ground.
- An inversion of air temperatures and a light breeze is preferable. Application during the cooler hours of the night or early morning is recommended.

#### **For Aerial Applications:**

- Do not apply by fixed wing aircraft at a nozzle height less than 100 feet (30.5 m) above ground or canopy, or by helicopter at a height less than 75 feet (22.9 m) above the ground or canopy, unless specifically approved by the state or tribe based on public health needs.

#### **Adult mosquito control applications should be limited to trained personnel.**

- For use only by federal, state, tribal or local government officials responsible for public health or vector control or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their supervision, or as allowed by state regulations for persons treating private property.
- This pesticide is extremely toxic to aquatic organisms. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to aquatic organisms.
- Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes, or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material beyond the body of water to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.
- Before making the first application in a season, it is advisable to consult with the state or tribal Agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.
- Do not treat a site with more than 0.007 lbs. of each a.i. per acre in a single application or in any 24-hour period. Do not exceed 0.18 lbs. of each a.i. per acre in any site in one year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease-causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

### **APPLICATION INSTRUCTIONS**

**PERMASEASE™ 4-4** is recommended for application as an Ultra Low Volume (ULV) Thermal or Non-thermal aerosol (cold fog) to control adult mosquitoes, and flies of nuisance, public health or disease vector importance in residential areas, industrial areas, urban areas, commercial areas, woodlands, roadsides, parks, campsites, athletic fields, golf courses, municipalities, gardens, playgrounds, recreational areas,

overgrown waste areas, and other areas where adult mosquitoes and flies may be found, such as, in animal quarters, barns, corrals, feedlots, animal confinement houses, swine lots, poultry ranges, zoos, range land, and pastures and also over crops listed on this label. **PERMASEASE™ 4-4** may also be applied to treat outdoor aggregation and harborage sites including storm drains, underground drainage pipes and pipe chases.

**PERMASEASE™ 4-4** can be applied with ULV cold aerosol generators, thermal aerosol generators, mist-blowers, backpack sprayers, or handheld sprayers. Mist-blowers, backpack sprayers, handheld sprayers and low-pressure hand sprayers may only be used for barrier or surface applications.

**PERMASEASE™ 4-4** provides effective control of adult mosquitoes, black flies, gnats, biting and non-biting midges, stable flies, horse flies, deer flies, sheep flies, horn and heel flies, and nuisance flying insects such as houseflies. For best results treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the fog near the ground e.g. cool temperatures, and consistent wind speeds are not greater than 10 mph. Applications during the cool hours of night or early morning are preferred.

**PERMASEASE™ 4-4** can be applied to the air column over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas. Application can only be made where the following crops are present:

Alfalfa	Corn (field and pop)	Mushrooms
Almonds	Corn, sweet	Onion, dry bulb only
Apples	Eggplant	Papayas (Florida only)
Artichoke	Filbert, (Hazelnut)	Peaches/Nectarines
Asparagus	Garlic	Pears
Avocado	Range Grasses	Pepper, bell
Broccoli	Horseradish	Pistachio
Brussel Sprouts	Lettuce	Potato
Cabbage		Soybeans
Cantaloupe		Spinach
Cauliflower		Tomatoes
Celery		Walnuts
Cherries		

**Cucurbit Vegetables**, including Chayote (fruit), Chinese wax gourd (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica* spp. (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon and Winter melon), Pumpkin, Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable marrow and zucchini, and winter squash types such as acorn squash and spaghetti squash), Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*).

**Leafy Vegetables**, including Leafy vegetables (except *brassica*) (Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (roquette), Chervil, Chrysanthemum (edible leaved and garland), Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Radicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach)).

Do not retreat site more than once in 3 days. Apply at a rate not to exceed 0.007 lbs. of permethrin per acre in any given 24-hour period. Do not exceed 25 applications at 0.007 lbs. permethrin per acre. Do not exceed 0.18 lbs. of permethrin per acre in any site in one year. More frequent treatments may be made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control

agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne diseases in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

### SPRAY DROPLET SIZE DETERMINATION

**Ground Application Equipment:** Spray equipment must be adjusted so that the volume median diameter is less than 30 microns ( $D_v 0.5 < 30 \mu\text{m}$ ) and that 90% of the spray is contained in droplets smaller than 50 microns ( $D_v 0.9 < 50 \mu\text{m}$ ). Directions from the equipment manufacturer or vendor, or pesticide registrant, or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

**For Aerial applications made at or below 200 ft above ground elevation:** Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ( $D_v 0.5 < 60 \mu\text{m}$ ) and that 90% of the spray is contained in droplets smaller than 100 microns ( $D_v 0.9 < 100 \mu\text{m}$ ). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, or pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

**For Aerial applications made at greater than 200 ft above ground elevation:** Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns ( $D_v 0.5 < 70 \mu\text{m}$ ) and that 90% of the spray is contained in droplets smaller than 145 microns ( $D_v 0.9 < 145 \mu\text{m}$ ). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, or pesticide registrant or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

### GROUND APPLICATION INSTRUCTIONS

#### ULV NON-THERMAL AEROSOL (COLD FOG)

To control adult mosquitoes, midges, gnats, and black-flies apply **PERMASEASE™ 4-4** undiluted or diluted with mineral oil or another suitable solvent using any standard ULV ground applicator capable of producing the required droplet spectrum. Apply at a rate not to exceed 0.007 lbs. of permethrin per acre in any given 24-hour period. Do not exceed 0.18 lbs. permethrin per acre in any site in one year. Under normal conditions a 300 ft swath width is recommended but in dense vegetation, high mosquito populations or open areas the swath width can be adjusted accordingly to establish the proper flow rates. Direct the spray head of equipment to ensure even distribution of the spray cloud throughout the area. For best results, apply when insects are most active and meteorological conditions are conducive to keeping the spray cloud close to the ground. An inversion of air temperatures and a light breeze is preferable. Apply when ground wind speed is equal to or greater than 1 mph. See **Ground Application Rate Chart** below for some suggested application rates for ground ULV applications based on a 300 ft swath width. Ground applications should be made when the wind is less than 10 mph.

When applying this product undiluted, apply at a flow rate of 2.3-16.2 ounces per minute at an average vehicle speed of 10 mph. These rates are equivalent to 0.001 to 0.007 lb. of permethrin per acre with an assumed 300 ft swath width. If a different vehicle speed or swath width is used, adjust the rate accordingly to achieve a rate between 0.001 and 0.007 lbs. of permethrin per acre in any given 24-hour period. Do not exceed 0.18 lbs. permethrin per acre in any site in one year. Vary flow rates according to vegetation density and mosquito population. Use of the maximum flow rates and application rates listed on this label is recommended to treat heavy vegetation or when target insect populations are high. An accurate flow rate control system must be used to ensure proper flow rate. For optimum ground application performance, apply at speeds of 5 to 20 mph.



## FLOW RATE CHART FOR PERMASEASE™ 4-4 .

**PERMASEASE™ 4-4** may also be applied by diluting, 1 part to 1 part of a light mineral oil or suitable solvent, applied so as not to exceed 0.007 lbs. of permethrin per acre in any given 24-hour period. Do not exceed 0.18 lbs. permethrin per acre in any site in one year. If an alternate dilution rate is required, adjust the flow rate, accordingly, provided the droplet size and spectrum remain within label specifications.

**Dilution Instructions:** Fill tank with appropriate amount of water for the desired dilution, then add **PERMASEASE™ 4-4** and mix well. The use of metering pumps, injector systems or other mixing systems is optional. Note: When using oil as a diluent thoroughly agitate well before use. Where dense vegetation is present, use higher rates of application and/or a slower speed for best results.

## GROUND APPLICATION RATE CHART - FOR PERMASEASE™ 4-4

CONDITIONS AND RATES TO USE PERMASEASE™ 4-4 UNDILUTED for MOSQUITO CONTROL						
lbs. A.I. acre		Application Rates Fluid Ounces per Minute				Fluid Ounces and (milliliters) per acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.001	0.001	1.2	2.3	3.5	4.6	0.38 (11.32 mL)
0.00175	0.00175	2.0	4.1	6.1	8.1	0.67 (19.81 mL)
0.0025	0.0025	2.9	5.8	8.7	11.6	0.96 (28.39 mL)
0.0035	0.0035	4.1	8.1	12.2	16.2	1.34 (39.63 mL)
0.005	0.005	5.8	11.6	17.4	23.2	1.91 (56.60 mL)
0.007	0.007	8.1	16.2	24.4	32.5	2.68 (79.26 mL)

AMOUNTS TO USE AFTER DILUTING 1 PART PERMASEASE™ 4-4 WITH 1 PARTS MINERAL OIL						
lbs. A.I. acre		Application Rates Fluid Ounces per Minute				Fluid Ounces and (milliliters) per acre
Permethrin	PBO	5 mph	10 mph	15 mph	20 mph	
0.001	0.001	2.3	4.6	7	9.3	0.77 (22.77 mL)
0.00175	0.00175	4.1	8.1	12.2	16.2	1.34 (39.63 mL)
0.0025	0.0025	5.8	11.6	17.4	23.2	1.91 (56.49 mL)
0.0035	0.0035	8.1	16.2	24.4	32.5	2.68 (79.26 mL)
0.005	0.005	11.6	23.2	34.8	46.4	3.83 (113.27 mL)
0.007	0.007	16.2	32.5	48.7	65.0	5.36 (158.52 mL)

## THERMAL AEROSOL FOGGING

Apply **PERMASEASE™ 4-4** diluted or undiluted with suitable thermal fogging equipment such as vehicle mounted or handheld thermal fog generators capable of making thermal fog applications. Use only well maintained and properly calibrated thermal fogging equipment to ensure optimum performance and effectiveness. If diluted, use mineral oil, or another suitable non-phytotoxic refined base oil diluent, to reduce oil requirement and sludge buildup in equipment. Do not exceed the maximum rate of 0.007 lbs. of permethrin per acre in any given 24-hour period. Do not exceed 0.18 lbs. permethrin per acre in any site in one year. Apply **PERMASEASE™ 4-4** to deliver 0.001 to 0.007 lb. a.i. per acre. Droplet size of thermal fog will be very small usually in the 0.5 to 1.0 micron range. For best results, fog downwind by directing thermal fog into the air and allowing it to drift through areas with active mosquitoes or where mosquitoes find harborage. Apply when ground wind speeds are equal to or greater than 1 mph. Use a well-maintained and properly calibrated fogger. Do not thermal fog when winds exceed 10 mph. Do not fog wet foliage. May be applied with **Vehicle Mounted Sprayers** at speeds of 5 to 20 mph using a treatment swath width of 300 ft. For use with **Hand Carried and/or Portable Thermal Foggers** Use a walking speed of 2 mph (3.2 kph) and a swath width of 50 ft for calculations. Do not thermal fog when winds exceed 10 mph.

## INSECT BARRIER TREATMENT

For use in Non-Thermal ULV, motorized, portable, backpack, handheld or vehicle mounted fogging equipment or fog type mist blower equipment, apply **PERMASEASE™ 4-4** with equipment adjusted to deliver ULV particles of 50 to 120 microns volume median diameter. **PERMASEASE™ 4-4** may be applied undiluted or diluted. If diluted, use a light mineral oil, or another suitable non-phytotoxic diluent. Do not exceed the maximum rate of 0.007 lbs. of permethrin per acre in any given 24-hour period. Do not exceed 0.18 lbs. permethrin per acre in any site in one year. For **Truck-Mounted** applications, do not apply more than 0.007 lbs. of permethrin per acre in any given 24-hour period. Do not exceed 0.18 lbs. permethrin per acre in any site in one year. Use a 300 ft swath width (see Ground Application Rates Chart on this label) for calculations. For **Backpack or Handheld** applications, do not use more than 0.007 lbs. of permethrin per acre in any given 24-hour period. Do not exceed 0.18 lbs. permethrin per acre in any site in one year. Use a 50 ft (15.2 m) swath width and a walking speed of 2 mph (3.2 kph) for calculations.

Direct spray onto foliage at the perimeter of areas from which mosquitoes or flies are to be excluded or direct spray into harborage areas where adult mosquitoes or flies may be found. May be used to treat aggregation and harborage sites such as abandoned buildings, residential buildings, warehouses, storm drains, and underground drainage pipes where adult mosquitoes find harborage. When this product is applied as a barrier treatment, do not apply within 100 ft (30 m) of lakes and streams.

## URBAN ULV MOSQUITO CONTROL APPLICATIONS

For control of resting or flying adult mosquitoes, biting flies and biting midges in harborage areas in utility tunnels, sewers, storm drains and catch basins, pipe tunnels, basements, under-ground passages, parking decks, crawl spaces under buildings, abandoned buildings or uninhabited buildings. Apply **PERMASEASE™ 4-4** diluted or undiluted using mechanical foggers, handheld or truck mounted ULV equipment thermal foggers or other spray equipment suitable for this type of application. **PERMASEASE™ 4-4** may be applied at rates up to but not exceeding 0.007 lbs. permethrin per acre in any given 24-hour period. Do not exceed 0.18 lbs. permethrin in any site in one year.

## AERIAL APPLICATION INSTRUCTIONS

**PERMASEASE™ 4-4** may be applied undiluted or diluted with mineral oil or another suitable non-phytotoxic ULV oil according to the rate chart on this label by fixed wing or rotary aircraft that are capable of making a Ultra Low Volume (ULV) application not to exceed 0.007 lbs. permethrin per acre in any given 24-hour period or 0.18 lbs. permethrin per acre in any site in one year. Apply at a sufficient airspeed to deliver the appropriate amount of a.i./acre and to achieve the appropriate droplet range as prescribed by this label. Treat when insects are most active and meteorological conditions are conducive to keeping the spray cloud close to the ground. Apply when wind speed is equal to or greater than 1 mph. In order to compensate for windy and meteorological conditions and ensure drift into the target area, aerial applications with aircraft equipped with Global Positioning Systems (GPS) and/or spray cloud drift optimization software is recommended. Do not apply by fixed wing aircraft at a height less than 100 ft, or by helicopter at a height less than 75 ft unless specifically approved by the state or tribe based on public health needs.

**For Florida:** Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

## STORAGE AND DISPOSAL

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

**Pesticide Storage:** Store product in its original labeled container in a cool, dry, locked place designated for such insecticides and out of reach of children. In case of spillage, soak up with absorbent material such as sawdust, or fullers earth; sweep up and place in a labeled container and dispose of as follows.

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

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows:

**For Containers equal to or less than 5 Gallons:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full

with mineral oil and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling if available. If recycling is not available then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**For Containers greater than 5 Gallons:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with mineral oil. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip back and forth several times. Turn the container over on its other end and tip back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available. If recycling is not available then dispose of container in a sanitary landfill or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**For Bulk Containers: (Refillable Container)** Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

To clean the container before final disposal, empty the remaining contents from the container into application equipment or mix tank. Fill the container about 10 percent full with mineral oil. Agitate vigorously or recirculate mineral oil with pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing process two more times.

#### WARRANTY NOTICE

Read the entire Directions for Use and Warranty before using this product. By using this product, User or Buyer accepts the following warranty.

The Directions for Use of this product are believed to be adequate and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Unintended consequences may result because of unknown factors. All such risks shall be assumed by the User or Buyer.

Precision Control Technology LLC is committed to providing high quality products. To the extent consistent with applicable law, Precision Control Technology LLC makes no warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise that extend beyond statements on this label. To the extent consistent with applicable law, Precision Control Technology LLC, the Manufacturer, or the Seller shall not be liable for indirect, special, incidental or consequential damages. To the extent consistent with applicable law, the exclusive remedy of the User or Buyer shall not exceed the purchase price paid.