

73049-463

07/06/2011

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460-0001

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Wednesday, July 6, 2011

CERTIFIED MAIL: (Article Number 7005 3110 0001 4053 8563)

Mr. Nasser Assaf, Ph.D.,
Regulatory Manager, ESD
Valent BioSciences Corporation
870 Technology Way
Libertyville, IL 60048-5350

**Subject: Pre-Reregistration Labeling Review for PRAMEX® 10-10
EPA Registration No. 73049-463**

Dear Mr. Assaf:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the reregistration of the referenced product in connection with the **REDs for PERMETHRIN and PIPERONYL BUTOXIDE**, and have concluded that your submission is acceptable with the following label revision provision(s):

General Comment(s):

1. Delete all text throughout the label marked with "~~striethrough~~."

Ingredient Statement section comment(s):

2. In order to incorporate required label changes from the acute toxicology review completed in support of this product, make the following changes within this section:
 - Revise the listing of "Piperonyl butoxide, Technical**" to read "Piperonyl butoxide**"
 - Revise the 2nd footnote to read "**(butylcarbityl) (6-propylpiperonyl) ether and related compounds"

First Aid Statement section comment(s):

3. In order to incorporate required label changes from the acute toxicology review completed in support of this product, make the following changes within this section:
 - Insert the following text (new row) immediately following the existing "**If swallowed:**" to read as follows:

If on skin or clothing:	<ul style="list-style-type: none">• 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.
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- Revise the 2nd sentence within the "**HOT LINE NUMBER**" subsection to read "For additional information on this product (including health concerns, medical emergencies, or pesticide incidents), you may call 1-877-315-9819, twenty-four (24) hours per day, seven (7) days per week."

Precautionary Statements, Hazards to Humans and Domestic Animals subsection comment(s):

4. In order to incorporate required label changes from the acute toxicology review completed in support of this product, make the following changes within this subsection:
 - Insert the following text immediately preceding the 5th sentence: "Avoid contact with skin."
 - Within the 6th sentence, insert the word "hands" immediately preceding the word "thoroughly."

Precautionary Statements, PERSONAL PROTECTIVE EQUIPMENT (PPE) subsection comment(s):

5. In order to incorporate required label changes from the REDs for permethrin and piperonyl butoxide, make the following changes within this section:
- Revise the 2nd bulleted statement to read "Chemical-resistant gloves made of any waterproof material."
 - Insert the following new text immediately following the existing/revised 2nd bulleted statement as follows: "Goggles or face shield."
 - Revise the existing statement starting with "In addition to the above PPE, applicators using hand-held foggers in an enclosed area ..." to read "Applicators using hand-held foggers or fog/mist generators in indoor spaces must wear coveralls over long-sleeved shirt and long pants, chemical-resistant gloves made of any waterproof material, chemical-resistant footwear plus socks, goggles or face shield, chemical-resistant headgear, if overhead exposure, and a half-face, full-face, or hood-style NIOIS-approved respirator with a dust/mist filtering cartridge (MSHA/NIOSH approval number prefix TC-21C), or a cartridge or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a cartridge or canister with any N, R, P, or HE filter."
 - Insert the following new text immediately preceding the existing "**User Safety Recommendations:**" subsection as follows: "In addition to the above PPE, mixers, loaders, applicators, and other persons exposed to this product's concentrate, or handlers performing animal dip applications, must wear a chemical-resistant apron."

Precautionary Statements, Users Safety Recommendations text box subsection comment(s):

6. Revise the 2nd sentence of the 4th bulleted statement to read "If no such instructions for washables exist, use detergent and hot water."

Precautionary Statements, Environmental Hazards subsection comment(s):

7. In order to incorporate required label changes from the REDs for permethrin and piperonyl butoxide, revise the first 2 paragraphs within this subsection to read as follows:

"This pesticide is extremely toxic to aquatic organisms, including fish and invertebrates. Do not apply directly to or near water, or to areas where surface water is present or to intertidal areas below the mean water mark. Do not apply when weather conditions favor drift from treated areas. Drift and run-off from treated areas may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment wash waters. See Directions for Use for additional precautions and use restrictions.

Under some conditions, this product may also have a potential for transport into surface water in run-off (primarily adsorbed to suspended soil particles), for several months or more after application. These include poorly draining or wet soils with readily visible slopes toward adjacent surface waters, frequently flooded areas, and areas overlying extremely shallow groundwater, areas with in-field canals or ditches that drain to surface water, areas not separated from adjacent surface waters with vegetated filter strips, and areas over-lying tile drainage systems that drain to surface waters.

This pesticide 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 treatment area."

Directions for Use section comment(s):

8. In order to incorporate required label changes from the REDs for permethrin and piperonyl butoxide, revise the general statement "**FOR PET USE – USE ONLY ON DOGS.**" to read "**FOR PET USE – USE ONLY ON DOGS OR PUPPIES OVER 12 WEEKS OF AGE.**"

Directions for Use, GENERAL PRECAUTIONS AND USE RESTRICTIONS subsection comment(s):

9. Revise the existing subsection heading "GENERAL PRECAUTIONS AND USE RESTRICTIONS" to read "USE RESTRICTIONS"
10. In order to incorporate required label changes from the REDs for permethrin and piperonyl butoxide, make the following changes within this subsection:
- Insert the following text immediately preceding the existing 2nd bulleted statement as follows: "Not for use in metered release systems."
 - Insert the following text immediately following the newly inserted bulleted statement added above as follows: "**DO NOT USE ON CATS OR KITTENS. Do not treat cats or their bedding. This product may be toxic or potentially fatal if applied to or ingested by cats or kittens.**"

Directions for Use, GENERAL PRECAUTIONS AND USE RESTRICTIONS subsection comment(s), continued:

- Insert the following text immediately following the newly inserted bulleted statement added above as follows: "Do not apply this product to puppies less than 12 weeks old."
- Insert the following text immediately following the newly inserted bulleted statement added above as follows: "Application with aerial or motorized ground equipment is prohibited."
- Revise the 2nd and 3rd sentences within the existing 3rd bulleted statement to read "Do not make space spray applications in serving areas while food is exposed or facility is in operation. Serving areas are areas where prepared foods are served such as dining rooms, but excluding areas where foods may be prepared or held."
- Insert the following text immediately preceding the existing 5th bulleted statement: "Except when applying to pets or livestock or through outdoor residential misting systems, do not apply ..." and insert the following text as a 2nd sentence as follows: "Do not breathe vapors or spray mist."
- Within the existing 6th bulleted statement, insert the word "treated" immediately preceding the word "area."
- Revise the existing 11th bulleted statement to read "Do not use in aircraft cabins."
- Revise the existing 12th bulleted statement to read "Application is prohibited directly into sewers or drains, or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur. Do not allow this product to enter any drain during or after application."
- Insert the following text immediately preceding the existing 13th bulleted statement: "Do not make applications during rain."
- Insert the following text immediately preceding the existing 14th bulleted statement: "Do not wet articles to the point of run-off or drip. Do not use treated article until spray has dried. Dry clean treated clothing before wearing."
- Insert the following text immediately preceding the existing 16th bulleted statement: "All outdoor applications must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses: (1) Treatment to soil or vegetation around structures; (2) Applications to lawns, turf, and other vegetation; (3) Applications to building foundations, up to a maximum height of 3 feet. Other than applications to building foundations, all outdoor applications to impervious surfaces such as sidewalks, driveways, patios, porches, and structural surfaces (such as windows, doors, and eaves) are limited to spot and crack-and-crevice applications, only."
- Within the 1st sentence within the existing 16th bulleted statement, replace the word "application" with the word "spraying."

Directions for Use, Agricultural Use Requirements section comment(s):

11. In order to incorporate required label changes from the REDs for permethrin and piperonyl butoxide, insert the following text in the form of a new "**Agricultural Use Requirements**" text box, immediately following the revised "USE RESTRICTIONS" subsection to read as follows:

Agricultural Use Requirements

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
- Shoes plus socks
- Chemical resistant gloves made of any waterproof material

DIRECTIONS FOR USE IN AUTOMATIC MISTING AND ULV SPRAYING SYSTEMS subsection comment(s):

12. Revise the existing subsection heading to read "**DIRECTIONS FOR USE IN COMMERCIAL ANIMAL PREMISE AUTOMATIC MISTING AND ULV SPRAYING SYSTEMS**"
13. In order to incorporate required label changes from the REDs for permethrin and piperonyl butoxide, make the following changes within this subsection:
 - Revise the existing statement "Do not apply when food or feed is present." to read "Do not apply when food, feed, or water is present. Do not apply directly to non-domestic/commercial (livestock) animals."
 - Insert the following new text immediately following the existing statement starting with "Direct nozzles to spray towards ..." as follows: "The pesticide container must be locked."
 - Insert the following new text immediately following the existing statement starting with "Do not use in misters located within ..." as follows: "Do not use in an evaporative cooling system."

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DIRECTIONS FOR USE IN OUTDOOR RESIDENTIAL MISTING SYSTEMS subsection comment(s):

14. In order to incorporate required label changes from the REDs for permethrin and piperonyl butoxide, make the following changes within this subsection:
- Within the existing statement starting with "Residential misting system installers ...," replace the words "Residential misting system installers" with the words "When using this product, installers and ..."
 - Within the existing statement starting with "When applying the end use dilution ...," revise the 1st sentence to read "If used in a system with a with a reservoir tank for the end use dilution, the reservoir tank must be locked."
 - Revise the existing statements starting with "If a direct injection system is used ..." to read "If used in a direct injection system, the pesticide container must be locked. Securely attach the end use label to the pesticide container in a weather protected area or plastic sleeve."

Storage and Disposal, Container Disposal subsection comment(s):

15. In order to be compliant with PR Notice 2007-4, revise the "**CONTAINER DISPOSAL:**" subsection to read:

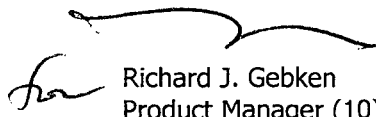
"CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water 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 or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities."

A copy of your label stamped "Accepted with Comments" is enclosed for your records. Within 10 working days of the date of this letter, you must submit an amended reregistration label incorporating all of the above changes. If we do not receive an amended label in response to this letter, this registration will be subject to cancellation in accordance with section 6(e) of FIFRA. Your release for shipment of the product bearing amended labeling constitutes accepting of these conditions.

PLEASE NOTE: This product is not being reregistered under sections 3(c)5 and 4(g) of FIFRA at this time.

If you have any questions about this letter, please contact Mr. Carmen Rodia at (703) 306-0327 or via e-mail at Rodia.Carmen@epa.gov. Copies of the acute toxicity and product chemistry reviews completed for the subject product are also enclosed for your records. When submitting the amended label in response to this letter, a copy of this letter should accompany the submission to facilitate processing.

Sincerely Yours,



Richard J. Gebken
Product Manager (10)
Insecticide Branch
Registration Division (7504P)

*Enclosures: Label stamped "Accepted with Comments"
Acute Toxicity Review, dated July 30, 2010
Product Chemistry Review, dated January 4, 2011
Product Chemistry Review, dated May 25, 2011*

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PRAMEX® 10-10

For Misting Systems

- [For use in automatic spray systems
- For use in automatic spray systems in residential backyards
- For use in automatic spray systems in [residential backyards] animal quarters, horse & cattle barns, dairy and beef barns, dairies, milking parlors, swine housing, poultry houses and warehouses
- Kills mosquitoes that may cause West Nile virus and [Eastern] [Western] [And] St. Louis Equine Encephalitis
- Will not harm most [common] ornamentals
- May also be used on animals and animal premises]

ACTIVE INGREDIENTS:

Permethrin*..... 10.0%

Piperonyl butoxide, ~~Technical~~**..... 10.0%

OTHER INGREDIENTS:..... 80.0%

100.0%

* Cis-trans isomers ratio: Min. 35% (+ or -) cis and Max. 65% (+ or -) trans

** Equivalent to 8.00% (butylcarbityl) (6-propylpiperonyl) ether and ~~2.00%~~ related compounds

Contains 0.856 lbs. of Permethrin per gallon.

EPA Reg. No. 73049-463

EPA Est. No.

KEEP OUT OF REACH OF CHILDREN WARNING

See Side/Back panel for additional first aid and precautionary statements.

FIRST AID	
If in eyes:	<ul style="list-style-type: none"> • 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. • Call a poison control center or doctor for treatment advice.
If swallowed:	<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 the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this product (including health concerns, medical emergencies or pesticide incidents), you may call 1-877-315-9819.	

Net Contents:

Lot Number:

**ACCEPTED
With COMMENTS
In EPA Letter Dated:**

July 6, 2011

**Under the Federal Insecticide, Fungicide
and Rodenticide Act, As amended, for the
pesticide Registered under EPA Reg. No:**

73049-463

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

WARNING: Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear such as goggles, face shield or safety glasses. Harmful if swallowed. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below. Mixers, loaders, applicators and other handlers, (including during mixing/loading, repair and cleaning of equipment and disposal of pesticide) must wear the following:

- Long-sleeved shirt and long pants
- Chemical resistant gloves such as barrier laminate, viton, neoprene rubber or nitrile rubber
- Shoes plus socks

In addition to the above PPE, ~~mixers and loaders supporting aerial applications to forests and/or~~ applicators using high-pressure handwand in an enclosed area must wear at least a NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval prefix TC-21C or any N, R, P, or HE filter.

In addition to the above PPE, applicators using hand-held foggers in an enclosed area must wear a half-face or full face or hood style NIOSH approved respirator with a dust/mist filtering cartridge with MSHA/NIOSH approval number prefix TC-21C, or a cartridge or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a cartridge or canister with any N, R, P, or HE filter.

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.
- 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.

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms, including fish and invertebrates. Drift and run-off may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through run-off. This water has a potential for run-off for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce run-off that contains this product. Do not apply direct to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment wash-waters or rinsate.

This pesticide 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 treatment area.

[Containers equal or greater than 5 gallons or 50 pounds:]

[Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other water unless in accordance with the requirement 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 into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. See Directions for Use for additional precautions and restrictions.]

PHYSICAL OR CHEMICAL HAZARDS

Do not use this product in or on electrical equipment due to possibility of shock hazard.

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DIRECTIONS FOR USE

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

READ THIS LABEL IN ITS ENTIRETY BEFORE USING.

FOR PET USE – USE ONLY ON DOGS.**GENERAL PRECAUTIONS AND USE RESTRICTIONS:**

- Apply this product only as specified on this label.
- 2 • Do not use spoons or measuring cups for food purposes after use with pesticides.
- 3 • Do not use in food areas of restaurants or food handling establishments or other areas where food is commercially prepared or processed. Do not use in a facility that is in operation or in serving areas while food is exposed. Serving areas are defined as areas where prepared foods are served such as dining rooms, but exclude areas where foods may be prepared or held. When used in the home, cover or remove all exposed food and cooking utensils and cover all food-processing surfaces or wash thoroughly after treatment and before re-use.
- Do not contaminate food or feedstuffs.
- 5 • Do not apply this product in a way that will contact workers or other persons, either directly or through drift.
- 6 • Except when applying to pets or livestock or through outdoor residential misting systems, do not enter or allow others to enter until vapors, mists and aerosols have dispersed and the area has been thoroughly ventilated.
- Except when applying to pets or livestock or through outdoor residential misting systems, do not apply this product in a way that will contact adults, children or pets, either directly or through drift.
- Except when applying to pets or livestock or through outdoor residential misting systems, only protected handlers may be in the area during application.
- Do not remain in treated area. Exit area immediately and remain outside the treated area until vapors, mists and aerosols have dispersed.
- Remove or cover exposed food and drinking water before application.
- 11 • Do not use in aircraft cabins ~~except in accordance with PR Notice 96-3.~~
- 12 • Do not apply directly to or near water, storm drains, gutters, sewers or drainage ditches. Do not apply when windy. To prevent product run-off, do not water the treated area(s) or apply when heavy rain is expected. Rinse application equipment over treated area only.
- 13 • Do not wet plants to the point of run-off or drip.
- 14 • When used in dairy barns or facilities: Close milk bulk tank lids to prevent contamination from dead or falling insects. Remove or cover milking utensils before application. Wash teats of animals before milking.
- For direct application to non-domestic animals/livestock: Do not apply more than 1 time per day.
- 16 • Remove pets, birds and cover fish aquariums before application. Turn off aquarium filtering systems before spraying and wait approximately 15 minutes after application before turning the filter back on.
- This product is not for use on plants being grown for sale or other commercial use. This product should not be used for research purposes, for commercial seed production, for commercial nursery use or forestry use.

When diluting, add the correct [required] amount of Pramex 10-10 to water as directed and blend thoroughly.

For use both indoors (in homes) and outdoors. May be used in non-food areas of commercial buildings, warehouses, food/feed processing establishments, institutions, schools, office buildings, hotels, motels, restaurants, theaters, hospitals, horse barns, swine [houses] and poultry houses, milking parlors, dairies, cattle barns and kennels. Examples of non-food areas are: lavatories, offices, locker rooms, ~~floor drains (to sewers)~~, garbage rooms, entries and vestibules, machine rooms, boiler rooms, garages, mop closets and storage rooms/closets (after canning or bottling).

For maximum effectiveness, a combination of space treatment and localized application is recommended.

Note: In the chart below, the number in the 3rd column refers to the level of Permethrin in the final diluted product. The rates on this label make the ready-to-use products listed below.

DILUTION RATE	OUNCES OF PRAMEX 10-10 CONCENTRATE/GALLON	% PERMETHRIN IN DILUTED PRODUCT
1:19	6.40	0.50%
1:39	3.20	0.25%
1:100	1.28	0.10%
1:200	0.64	0.05%
1:400	0.32	0.025%

WHEN USING INDOORS:**SURFACE SPRAY APPLICATION METHODS:**

Insects Controlled	Directions for Use	Dilution Instructions
Cockroaches, Water bugs, Palmetto Bugs, Ants, Silverfish, Firebrats, Spiders, Crickets, Millipedes, Centipedes, Sowbugs, Pillbugs, Clover Mites, Cheese Mites, Granary Weevils, Rice Weevils, Confused Flour Beetles, Rust Red Flour Beetles, Saw-Toothed Grain Beetles, Spider Beetles, Cigarette Beetles, Drug Store Beetles, Darkling Beetles, Mealworms, Grain Mites, Cadelles, and Lesser Houseflies and other manure breeding flies	Adjust your sprayer to deliver a coarse wet spray. Direct the spray into cracks and crevices; insect hiding places, behind shelves and drawers, under pallets, around containers of stored foods, and around the base of machinery. Spray ant trails, nests and points of entry. Spray bookcases for silverfish. Only when used as a surface application, spray floors, walls and other surfaces applying at a rate of 1 gallon to 750 square feet of surface.	For initial clean up of severe infestation, dilute at a rate of 1 part <i>Pramex 10-10</i> concentrate in 19 parts water (6.4 fluid ounces per gallon). This makes a 0.5% permethrin ready to use product. For normal infestation, dilute 1 part <i>Pramex 10-10</i> concentrate in 39 parts water (3.2 ounces per gallon). This makes a 0.25% permethrin ready to use product.
Centipedes, Ground Beetles, Pillbugs, Sowbugs, Scorpions and Ticks	Apply around windows and doors as well as other places where these insect pests may enter premises. Treat storage areas, baseboards, and other places where these pests may hide.	For maintenance use, dilute 1 part <i>Pramex 10-10</i> concentrate in 100 parts water (1.28 ounces/gallon or 8 teaspoons/gallon). This makes a 0.1% permethrin ready to use product.
Carpet Beetles	Spray edges of and under carpeting and rugs. Make localized application to baseboards and floors. Spray directly into cracks and crevices, closets and infested areas of shelving.	Dilute at a rate of 1 part <i>Pramex 10-10</i> concentrate in 19 parts water (6.4 fluid ounces per gallon). This makes 0.5% permethrin ready-to-use product).
Flying Insect places where they rest or land (helps in controlling insects such as Gnats, Mosquitoes, Skippers, Boxelder Bugs, Asian Lady Beetles)	Treat walls, ceilings, moldings, screens, door and window frames and similar resting places.	For initial clean up of severe insect infestation, dilute at a rate of 1 part <i>Pramex 10-10</i> concentrate in 19 parts water (6.4 fluid ounces per gallon). Will make a 0.25% permethrin ready to use product.
Bed Bugs	Before treating, spray fabric in an inconspicuous area to test for possible staining or discoloration. Inspect again after drying. If no staining occurs, continue by spraying mattresses lightly, particularly around tufts and seams. Take beds apart and spray in all joints. Treat baseboards, moldings, and floors. Allow all treated articles to thoroughly dry before use	For normal infestations, dilute 1 part <i>Pramex 10-10</i> concentrate in 39 parts water (3.2 ounces per gallon). Will make a 0.25% permethrin ready to use product.
Clothes Moths	Remove infested items from storage, brush thoroughly and if possible, air for a few hours, preferably in sunlight. Liberally apply spray to empty closets, chests, dressers and other storage areas by directing the spray into cracks, crevices and joints. After airing, infested items may be treated lightly, keeping nozzle at least 3 feet from fabric to avoid staining.	Prior to using, spray in an inconspicuous area to test for possible staining or discoloration. Inspect again after drying. Spray from a distance of 8 to 10 inches. Treat only those garments and parts of bedding, including mattresses and furniture that cannot be either laundered or dry-cleaned.
Lice and Louse Eggs (on inanimate objects)	Allow all treated articles to dry thoroughly before use. Test delicate fabrics in an inconspicuous area prior to use. Thoroughly spray infested areas, pet beds, resting quarters, nearby cracks and crevices, along and behind baseboards, moldings, window and door frames and localized areas of floor and floor coverings (rugs and carpets). Fresh bedding should be placed in animal quarters once spray has dried. Adult fleas and larvae contacted by spray will be killed. Do not treat cat bedding.	For maintenance use, dilute 1 part <i>Pramex 10-10</i> concentrate in 100 parts water (1.28 ounces per gallon or 8 teaspoons per gallon). Makes a 0.1% permethrin ready to use product.
Fleas, Flies, Ticks, Lice and Mange Mites (adults and larvae) in kennels, shelters, doghouses, runs and yards		

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SPACE SPRAY APPLICATION METHODS:

Insects Controlled	Directions for Use	Dilution Rate
Houseflies, Fruit Flies, Gnats, Mosquitoes, Skipper Flies, Wasps, Hornets, Bees, Black Flies, Asian Lady Beetles, Boxelder Bugs, Angoumois Grain Moths, and Tobacco Moths	<p>Apply with non thermal mechanical or compressed air equipment that is adjusted to deliver a fine mist. Close doors and windows and shut off ventilating systems, including air conditioners. Direct spray at an upward angle distributing it uniformly through the entire area at a rate of 1 ounce per 1,000 cubic feet of space. Vacate after treatment and keep area closed for at least 10 minutes then ventilate and sweep up dead insects before occupying.</p> <p>For quick kill of accessible or exposed stages of other insects named on this label. Apply using conventional non thermal mechanical or compressed air equipment. Follow space spraying directions. Apply dilutions at a rate of 1 ounce per 1,000 cubic feet of space.</p>	<p>For initial clean up of severe insect infestation, dilute at a rate of 1 part <i>Pramex 10-10</i> concentrate in 19 parts water (6.4 fluid ounces per gallon). Makes a 0.5% permethrin ready to use product.</p> <p>For normal infestations, dilute 1 part <i>Pramex 10-10</i> concentrate in 39 parts water (3.2 ounces per gallon). Will makes a 0.25% permethrin ready to use product.</p> <p>For maintenance use, dilute 1 part <i>Pramex 10-10</i> concentrate in 100 parts water (1.28 ounces per gallon or 8 teaspoons/gallon). Makes a 0.1% permethrin ready to use product.</p>

OUTDOOR USE AREAS

Drive-In Theaters, Drive-In Restaurants, Gardens, Homes, Parks, Playgrounds, Recreational Areas, Golf Courses, Feed Lots Corrals, Swine Lots, Zoos and Urban Areas.

PREMISE SPRAY APPLICATION METHODS:

Insects Controlled	Directions for Use	Dilution Rate
Mosquitoes, Wasps, Hornets, Yellow Jackets Annoyance Flies and Skippers	Treat walls, ceilings, moldings, screens, door and window frames, and similar resting places. Application should be made prior to occupancy. Cover any exposed food, water, drinking fountains and animal feed before application. In zoos, prevent reptiles from exposure to this product.	Dilute 1 part <i>Pramex 10-10</i> concentrate in 39 parts water (3.2 fluid ounces per gallon of water). This will make a 0.25% permethrin ready to use product.
Gypsy Moth Caterpillars and Adults, Adult Japanese Beetles, Eastern and Forest Tent Caterpillars, Mole Crickets and Grasshoppers	<p>Apply to insure thorough coverage of upper and lower leaf surfaces. Thoroughly wet down grass a few hours before applying. Lawns should not be higher than 3 inches at time of treatment. Wet lawns with 1/4 inch of water immediately after application. For heavy infestations, repeat application after 2 weeks.</p> <p>Treat trees and shrubs as soon as insects emerge (usually late spring). Spray leaves, branches, and tree trunks evenly. Make sure to penetrate dense foliage. Repeat application every 7 days as necessary for control.</p> <p>On roses and in flower gardens: Treat plants and flowers as soon as insects appear. Spray flowers and plants making sure to penetrate dense foliage. Repeat application every 7 days or as necessary for control.</p>	<p>Dilute 1 part concentrate in 39 parts water (3.2 fluid ounces per gallon of water). Makes a 0.25% permethrin ready to use product.</p> <p>Mix 1.28 fl. oz. per gallon of water and treat 1,000 sq. ft. Slightly more water may be used provided the amount of product per area is the same.</p>
Fire Ants	Using equipment such as a garden sprinkling can, gently apply at the rate of one gallon per mound. Thoroughly wet the mound and surrounding area to a diameter of 4 feet. For best results, apply in cool weather, 65° to 80°F, or in early morning or late evening hours. Treat new mounds as they appear. Do not disturb the mound prior to treatment. Treat all mounds in the vicinity and treat all colonies, which have not yet built mounds. Do not use equipment that produces a pressurized spray since this will disturb Fire Ants and cause migration, reducing the effectiveness of this product.	Mix 6.4 fl. oz. in 1 gallon of water.

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Ants, Crickets, Earwigs, Fleas and Ticks	For localized infestations where there are weeds or bushy non-crop areas, spray infested areas thoroughly. For Ants, thoroughly wet hills and runways.	For severe infestation, dilute 1 part <i>Pramex 10-10</i> concentrate in 19 parts water (6.4 oz. per gallon of water). Will make a 0.5% permethrin ready to use product. <i>Also</i> treat 400 linear feet with a 6-inch spray band.
Clover Mites, Millipedes, Sowbugs (Pillbugs)	To help prevent infestation of buildings, treat the building foundation to a height of 2 to 3 feet where insects are active and may find entry. Apply also as a residual spray to outside surfaces of buildings, garages, patios, and other areas where these pests may be found.	For normal infestations, dilute 1 part <i>Pramex 10-10</i> concentrate in 39 parts water (3.2 oz. per gallon). Makes a 0.25% permethrin ready to use product.
Armyworms, Cutworms, Chinch Bugs, Sod Webworms	Thoroughly wet down grass a few hours before applying. Lawns should be no higher than 3 inches at time of application. Delay watering or mowing for 24 hours after treatment. For heavy infestation, repeat application after 2 weeks.	Mix 3.2 fluid ounces per gallon of water and treat 1,000 sq. ft. Slightly more water may be used as long as the amount of product per area is the same.

ANIMALS AND ANIMAL PREMISE USE AREAS

Cattle Barns, Milk Rooms & Parlors, Dairies, Horse Barns, Poultry Houses, Swine Houses, and Kennels.

This product may be used on Dairy and Beef Cattle, Sheep, Goats, Swine, Horses, Poultry and Dogs.

Insects Controlled	Directions for Use	Dilution Rate
Horn Flies, Houseflies, Mosquitoes and Gnats	Wet the hair thoroughly, paying particular attention to topline, underline, flanks, withers and other infested areas. Repeat treatment at intervals of 5 to 12 days for small insect populations or as needed when flies are emerging in large numbers.	For clean up of severe insect infestation, dilute at a rate of 1 part <i>Pramex 10-10</i> concentrate in 100 parts water (1.28 ounces per gallon or 8 teaspoons/gallon). Makes a 0.1% permethrin ready-to-use product.
Stable Flies, Horse Flies and Deer Flies	Apply a quart per adult animal to wet the hair thoroughly with special attention to the legs, flanks, barrel, topline and other body areas commonly attacked by those flies. Repeat daily as needed.	
Face Flies	Apply using spray that produces large wetting droplets. Apply to the face of the animal in the morning before moving it to pasture. Apply sufficiently to wet the face, but not more than 1.5 ounces per animal. Do not get into eyes, nose or mouth. Repeat daily as needed.	
Poultry Lice	Spray roosts, nests, walls and cages thoroughly, followed by spraying over the birds with a fine mist.	For normal infestations, dilute 1 part <i>Pramex 10-10</i> concentrate in 200 parts water (0.64 ounces per gallon or 4 teaspoons per gallon) Makes a 0.05% permethrin ready-to-use product.
Bed Bugs and Mites(including Northern fowl mite) in poultry houses	Spray crevices of roost poles, cracks in nests and walls where the Mites & Bed Bugs hide. Spray birds with a fine mist paying particular attention to vents. Use at the rate of 1 gallon of spray per 100 birds.	For maintenance use, dilute 1 part <i>Pramex 10-10</i> concentrate in 400 parts water (0.32 ounce per gallon or 2 teaspoon per gallon). Makes a 0.025% permethrin ready-to-use product.
Sheep "Tick" or Ked	Thoroughly wet all parts of the animal's body by dipping or spraying with sufficient pressure to penetrate the wool. Treat at a rate sufficient to wet the animal.	
Meal Worms, Darkling Beetles	Apply as a fine mist or fog, directing the spray toward the upper corners and ceiling until the area is filled with mist. Use about 2 ounces per 1,000 cubic feet of space. For best results, close windows and doors before spraying. Vacate after treatment and keep area closed for 10 to 15 minutes. Ventilate area before reentering the area.	

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Horn Flies, Face Flies, Horseflies, Ear Ticks	Back rubber— make sure the back rubber stays filled.	Dilute 8 oz. in 5 gallons oil.
Ticks (including deer ticks, which carry Lyme disease) Blowflies, Hog Lice	Spray, dip, or sponge to apply 1 pint per animal, especially around ears.	Dilute 1.28 oz. per gallon of water (1 part <i>Pramex 10-10</i> concentrate to 100 parts water). This makes a 0.10% permethrin ready-to-use product.
Poultry Mites, Northern Fowl Mites and Lice	At the rate of 1 gallon per 100 birds, spray with a fine mist. Spray walls, roosts, cages and nests.	
Fleas, Flies, Ticks, Lice and Mange Mites (adults and larvae) in doghouses, kennels, shelters, yards and runs	Before treating, spray fabric in an inconspicuous area to test for possible staining or discoloration. Inspect again after drying. If no staining occurs, thoroughly spray infested areas, pet beds, resting quarters, nearby cracks and crevices, along and behind baseboards, moldings, window and doorframes and localized areas of floor and floor coverings (rugs and carpets). Fresh bedding should be placed in animal quarters once spray has dried. Adult fleas and larvae contacted by spray will be killed. Do not treat cat bedding.	For initial clean up of severe insect infestation, dilute at a rate of 1 part <i>Pramex 10-10</i> concentrate in 19 parts water (6.4 fluid ounces/gallon). This makes a 0.5% permethrin ready-to-use product. For normal infestations, dilute 1 part <i>Pramex 10-10</i> concentrate in 39 parts water (3.2 ounces per gallon). Makes a 0.25% permethrin ready-to-use product. For maintenance use, dilute 1 part concentrate in 100 parts water (1.28 ounces/ gallon or 8 teaspoons/gallon). Makes a 0.1% permethrin ready-to-use product.
Fleas, Ticks, Lice and Mange Mites (adults and larvae) on dogs and livestock	Thoroughly wet the animal by spraying, dipping or sponging. Do not rinse or towel dry; allow animal to air dry in a warm place. Gives long lasting protection against re infestation. Repeat applications at intervals of 2 to 3 weeks. Do not treat cats or their bedding. Do not treat puppies less than twelve weeks old. Pet sensitivities may occur after using ANY pesticide product. If you see signs of sensitivity bathe your pet with mild soap and rinse with large quantities of water. If signs continue, consult a veterinarian immediately. If you have a debilitated, aged, medicated, pregnant or nursing animal, consult a veterinarian before using this product.	For clean up of severe insect infestation, dilute at a rate of 1 part concentrate in 100 parts water (1.28 ounces per gallon or 8 teaspoons/gallon). Makes a 0.1% permethrin ready-to-use product. For normal infestations, dilute 1 part concentrate in 200 parts water (0.64 ounces per gallon or 4 teaspoons/ gallon). Makes a 0.05% ready-to-use product. For maintenance use, dilute 1 part concentrate in 400 parts water (0.32 ounces per gallon or 2 teaspoons/gallon). This will make a 0.25% permethrin ready-to-use product.

FOR DAIRY CATTLE: Spray lactating dairy cows only after milking is complete.

FOR SWINE: Do not ship animals for slaughter within 5 days of last treatment.

DIRECTIONS FOR USE IN AUTOMATIC MISTING AND ULV SPRAYING SYSTEMS:

In animal quarters, poultry houses, swine housing, warehouses, dairy barns, beef barns, stables, zoos and other listed livestock or animal housing areas.

TO KILL Flies, including Houseflies, Deer Flies, Horn Flies, Stable Flies, Horse Flies, Mosquitoes, including the *Culex* species that may carry and transmit the West Nile virus and [Eastern] [Western] [And] St. Louis Equine Encephalitis, Hornets, Wasps, Yellow Jackets, Gnats, Small Flying Moths, Earwigs, Fleas, Ticks, Fire Brats Crickets, Cockroaches, Silverfish, Spiders and other listed insects.

Do not apply when food or feed is present.

When using this product, installers and service technicians must comply with the license, certification, or registration requirements of the state(s), tribe(s) or local authority(ies) where they are installed.

When applying via remote activation device, do not apply when people and pets are present. If possible, when applying via automatic timer, set the timing for application when people and pets are unlikely to be present.

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Direct nozzles to spray towards the target area and away from areas where people are typically present.

Do not use in misters located within 3 feet of air vents, air conditioner units or windows.

If used in a system with a reservoir tank for the end use dilution, the system reservoir tank must be locked. Securely attach the end use pesticide label and dilution statement to the system reservoir tank in a weather protected area or plastic sleeve. The dilution statement use be phrased as follows: this container holds ___ parts Pramex 10-10 to ___ parts water.

If used in a direct injection system, the pesticide container must be locked. Securely attach the end use label to the pesticide container in a weather protected area or plastic sleeve.

This product must only be used in systems that have been calibrated to apply no more than the maximum application rate of 0.008 lbs piperonyl butoxide per 1000 cu. ft. per day. This represents 1/2 gallon of Pramex 10-10 (diluted to 0.18% permethrin and 0.18% piperonyl butoxide) per 1000 cubic feet per day or 1 gallon of Pramex 10-10 (diluted to 0.09% permethrin and 0.09% piperonyl butoxide per 1000 cubic feet per day.

Mix 1/2 gallon (64 fluid ounces) of *Pramex 10-10* concentrate in 55 gallons of water to yield a solution of 0.09% Permethrin and 0.09% Piperonyl Butoxide. When treating areas with high insect populations or insects that are difficult to control, mix up to 1 gallon of concentrate in 55 gallons of water to yield a solution of 0.18% Permethrin and 0.18% Piperonyl Butoxide.

For Tanks: To obtain the desired solution, partially fill the system reservoir tank with water, add concentrate to tank, and then add water to obtain desired dilution.

System nozzles should be set to deliver a rate of 1.25 fluid ounces of solution per minute, with one nozzle covering 100 square feet. The nozzles should deliver fine particle size droplets like those of a mist or an aerosol. Set the system timer to operate in accordance with equipment directions.

DIRECTIONS FOR USE IN OUTDOOR RESIDENTIAL MISTING SYSTEMS:

[NOTE: NOT REGISTERED for use in Automatic ULV Spraying Systems in the State of New York.]

Use *Pramex 10-10* to control or temporarily reduce annoyance from accessible stages of: Mosquitoes including the Culex species that may carry and transmit the West Nile virus and [Eastern] [Western] [And] St. Louis Equine Encephalitis, Flies, House Flies, Gnats, Deer Flies, Horse Flies, Hornets, Wasps, Yellow Jackets, Fire Brats, Small Flying Moths, Earwigs, Fleas, Ticks including species that may carry or transmit Lyme Disease, Cockroaches, Crickets, Spiders, Silverfish, Asian Lady Beetles, and other nuisance insects.

Residential misting system installers and service technicians must comply with the license, certification, or registration requirements of the state(s), tribe(s), or local authority(ies) where they are installed.

Do not apply this product when people, pets and food or drink are present.

Do not use in an evaporative cooling system.

Direct nozzles to spray towards the target area and away from swimming pools, water bodies or eating and cooking areas.

Do not set nozzles to direct mist near outside air condition systems or other home air intakes.

When applying the end use dilution using a system with a reservoir tank, the tank must be locked. The end use pesticide label and the dilution statement must be securely attached to the system reservoir tank in a weather protected area or plastic sleeve. The dilution statement must be written as follows: "This container holds ___ parts Pramex® 10-10 Concentrate for Misting Systems to ___ parts water."

If a direct injection system is used, the pesticide container must be locked. The end use label must be securely attached to the pesticide container in a weather protected area or plastic sleeve.

If the system works on an automatic timer, set the timing for application when people, pets and/or food are unlikely to be present.

If the system works when a person operates a remote activation device, then application of this pesticide when people, pets and/or food are present is prohibited.

Contact the system manufacturer for guidance or assistance to ensure compliance with the following requirement:

This product may only be used in systems that have been calibrated to apply no more than the maximum application rate of 9.5 fl. oz. of 0.09% synergized permethrin solution per 1,000 cubic feet per day.

Mix 1/2 gallon (64 fluid ounces) of *Pramex 10-10* concentrate in 55 gallons of water to yield a solution of 0.09% Permethrin and 0.09% Piperonyl Butoxide. When treating areas with high insect populations or insects that are difficult to control, mix up to 1 gallon of concentrate in 55 gallons of water to yield a solution of 0.18% Permethrin and 0.18% Piperonyl Butoxide.

For Tanks: To obtain the desired solution, partially fill the system reservoir tank with water, add concentrate to tank, and then add water to obtain desired dilution.

The system nozzles should deliver fine particle size droplets like those of a mist or an aerosol.

Automatic spraying system dilution table

"X" Tank Size (in gallons)	"Y" Conversion Factor (Fluid ozs. of Pramex 10-10 Concentrate/Gallon of water)	"X" times "Y"= How many fluid ozs. of concentrate should be mixed with water for the tank size specified** (Ex.: a 15 gallon tank x 1.16. needs 17.4 ozs. of Pramex 10-10 per 15 gallons of water)
1	1.16	1.16
15	1.16	17.4
20	1.16	23.2
30	1.16	34.8
55	1.16	63.8

****will make a 0.09% synergized permethrin solution**

INSTRUCTIONS FOR REFILLING A PARTIALLY FILLED TANK: When refilling a partially filled tank: calculate the amount of additional solution (in gallons) required to fill the tank to the desired level. Multiply the number of gallons required to refill tank times 1.16 to determine the amount of this concentrate to add when refilling (to achieve 0.09% synergized permethrin solution).

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store upright at room temperature. Avoid exposure to extreme temperatures.

CONTAINER DISPOSAL: If empty: Non-refillable container. Do not reuse or refill this container. Offer for recycling if available. Clean container promptly after emptying. Triple rinse as follows: 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 water 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.

IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following conditions, disclaimer of warranties and limitations of liability.

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Valent BioSciences Corporation. All such risks shall be assumed by the user or buyer.

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