



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460**

**OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION**

May 1, 2023

Thomas A. Lennan
Sr. Regulatory Affairs Specialist
MGK
7325 Aspen Ln. N.
Minneapolis, MN 55428

Subject: Notification per PRN 98-10 – Addition of a referral statement.
Product Name: PYROCIDE Fogging Concentrate 7446
EPA Registration Number: 1021-1785
Application Date: October 13, 2022
Decision Number: 588457

Dear Mr. Lennan:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “NOTIFICATION” and placed in our records.

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 the Federal Insecticide, Fungicide, and Rodenticide Act (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.

If you have any questions, please contact Jennifer Gaines by phone at (202) 566-2685, or via email at gaines.jennifer@epa.gov.

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EPA Reg. No. 1021-1785
Decision No. 588457

Sincerely,

A handwritten signature in cursive script that reads "Jennifer Gained" followed by a small mark that appears to be "bn".

Autumn Metzger
Acting Product Manager 04
Invertebrate & Vertebrate Branch 1
Registration Division (7505P)
Office of Pesticide Programs

PYROCID[®] Fogging Concentrate 7446

[ABN: RIPTIDE[®] Waterbased Pyrethrin ULV]

Water-based ULV

[] indicates optional wording or language

[Graphic: MGK[®] Logo] [MGK[®] Insect Control Solutions]
[Kills Mosquitoes] [including those that may transmit West Nile virus and Chikungunya virus]
[Kills Mosquitoes that may transmit West Nile virus and Chikungunya virus]
[Kills mosquitoes that may transmit Chikungunya virus]
[Kills mosquitoes that may transmit Zika virus]
[Kills Aedes mosquitoes]

[Kills mosquitoes, including the Aedes mosquito that may carry and transmit Zika virus]
[Kills Biting Flies]
[Kills Fleas]
[Kills Ticks]
[Kills Spiders]
[Kills Stored Product Pests]
[Kills Flying Insects]
[Kills Crawling Insects]
[Kills Cockroaches]
[Kills Ants]
[Kills Crickets]
[For Use Indoors]

[For Use Outdoors]
[Area Spray]
[ULV Spray]
[Contact Spray]
[Space Spray]
[In Poultry Houses]
[On Poultry]
[On Livestock]
[Flushing Action]
[Fast Acting]
[Effective]
[Quick Knockdown]
[Hose-End Applications]

ACTIVE INGREDIENTS:

Pyrethrins	5.00%
* Piperonyl butoxide	25.00%
OTHER INGREDIENTS	70.00%
	<hr/> 100.00%

* (butylcarbityl) (6-propylpiperonyl) ether and related compounds
[Contains 0.422 lbs. Pyrethrins / Gallon and 2.11 lbs. PBO /Gallon]

PYROCID[®], MGK[®], RIPTIDE[®] - Registered trademarks of McLaughlin Gormley King Company

NOTIFICATION

1021-1785

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

05/01/2023

KEEP OUT OF REACH OF CHILDREN

CAUTION

[See inside booklet for \[First Aid.\] \[Precautionary Statements.\] Directions for Use and Storage and Disposal](#)

FIRST AID	
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.
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.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For information regarding medical emergencies or pesticide incidents, call 1-888-740-8712.	

Manufactured by:



7325 Aspen Lane North
Minneapolis MN 55428

EPA Reg. No. 1021-1785

EPA Est. No. 1021-MN-2

Net Contents _____ [Fl. Oz./ Gallons]

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. 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)

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

- long-sleeved shirt,
- long pants,
- chemical-resistant gloves made of barrier laminate, nitrile rubber, neoprene rubber, polyvinyl chloride or Viton, and
- shoes and socks.

In addition to the above PPE, applicators using a high-pressure hand wand in an enclosed area must wear at least a half-face NIOSH-approved respirator with:

- Any R or P filter with a NIOSH approval number prefix TC-84A.

In addition to the above PPE, applicators using handheld foggers in an enclosed area must wear a half-face, full-face, or hood-style NIOSH-approved respirator with:

- A NIOSH-approved particulate filter with any R or P filter with NIOSH approval number prefix TC-84A;
- A NIOSH-approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C.

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

USER SAFETY REQUIREMENTS

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

ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms, including fish and invertebrates. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. This product may contaminate water through runoff. This product has a potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product.

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 foraging in the treatment area.

Do not apply directly 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 washwaters or rinsate.

INDOOR AREAS for use in and around:

Animal Areas and Quarters, Animal Control Centers, Animal Shelters, Arcades, Auditoriums, Bakeries, Bars, Bathrooms, Beverage Plants, Boats, Bottling Plants, Breweries, Brewery Warehouses, Buildings, Buses, Cabinets, Cafeterias, Canneries, Cattle Barns, Churches, Circus Tents, City Missions, Closets, Club Houses, Commercial Buildings, Communication Centers, Concession Stands, Court Houses, Crawl Spaces, Crematoriums, Dairy and Livestock Barns, Day Care Centers, Delicatessens, Department Stores, Diners, Drugstores, Dumpsters, Egg Processing Plants, Factories, False Ceilings, Freight Containers, Fruit Packing Sheds, Funeral Parlors, Garages, Garbage Bins, Garbage Cans, Garbage Compactors, Garbage Trucks, Gas Stations, Grain Elevators, Grain Harvesting and Handling Equipment, Grain Mills, Granaries, Grocery Stores, Horse Stables and Barns, Horse Trailers, Hospices, Hospitals, Hotels, Indoor Eating Establishments, Industrial Installations, Institution Dining Areas, Institutions, Jails, Kennels, Laboratories, Laundromats, Lavatories, Libraries, Liquor Stores, Livestock Barns, Livestock Hauling Equipment, Loafing Sheds, Locker Rooms, Mausoleums, Meat Packing Plants, Mess Halls, Milk Rooms, Mills, Mini Storages, Mobile Canteens, Morgues, Mortuaries, Motels, Movie Theaters, Museums, Mushroom Processing Areas, Office Buildings, Other Public Buildings, Parking Garages, Passenger Railroad Cars, Peanut Warehouses, Pool Halls, Poultry Houses, Poultry Plants, Pounds, Prisons, Public Storages, Rabbit Processing Plants, Railroad Cars, Research Animal Quarters, Restaurants, Retail Stores, Rice Mills, Schools, Ship Holds, Ships, Smoke Shops, Sports Stadiums, Stables, Storage Areas for Food in multi-walled paper or cloth bags, Storage Bins (areas), Storage or Processing Areas that contain Dried Fruit Products, Stores, Supermarkets, Swine Houses, Taverns, Textile Mills and Warehouses, Theaters, Tobacco Factories, Tobacco Warehouses, Tool Sheds, Trains, Transportation Equipment, Truck Trailers, Trucks, Tunnels, Utilities, Utility Rooms, Vending Machines, Veterinary Hospitals, Wall and Equipment Voids, Warehouses, Washrooms, Wholesale Stores, Wine Cellars, Wineries, Zoos and other similar areas.

OUTDOOR AREAS for use in and around:

Alleys, Amphitheaters, Amusement Parks, Athletic Fields, (baseball, football, soccer), Back Yards, Balconies, Baseball Fields, Bleachers, Bridges, Car Washes, Campgrounds, Circuses, Construction Sites, Corrals, Courtyards, Curbs, Drive-In Restaurants, Drive-In Theaters, Dumpsters, Fair Grounds, Feedlots, Front Yards, Game Fields, Garbage Dumps, Gazebos, Golf Courses, Grandstands, Junkyards, Kennels, Levees, Manure Piles, Outdoor Eating Establishments, Parking Lots, Parks, Patios, Playgrounds, Ranges, Recreational Areas around Residential areas, Rest Areas, Roadsides, Rooftops, Sanitary Sewers (Manholes), Side Yards, Sidewalks, Stadiums, Tennis Courts, Truck Stops, Underpasses, Utility Rooms Outdoors, Weigh Stations, Wild Animal Parks, Wood Piles, Zoos, and other similar areas.

FOR USE ON: Beefalo, Birds, Buffalo, Calves, Cattle [beef] [milking], Chickens, Donkeys, Ducks, Emus, European Red Deer, Exotics, Geese, Horses, Lambs, Llamas, Mules, Ostrich, Oxen, Pheasants, Pigs, Ponies, Pullets, Quail, Ratites, Roosters, Sheep, Swine, and Turkeys.

FOR THE CONTROL OF INSECTS including:

Almond Moths, Angoumois Grain Moths, Ants, Black Flies, Blood Sucking Lice, Boxelder Bugs, Brown Dog Ticks, Cadelles, Carpet Beetles, Cereal Beetles, Cheese Mites, Cheese Skippers, Chocolate Moths, Cigarette Beetles, Clothes Moths, Clover Mites, Cockroaches, Coffee Bean Weevils, Confused Flour Beetles, Crickets, Dark Mealworms, Darkling Beetles, Deer Flies, Deer Ticks, Dermestid Beetles, Driedfruit Beetles, Drugstore Beetles, Earwigs, Face Flies, Firebrats, Flat Grain Beetles, Fleas, Flies, Fruit Flies, Gnats, Grain Mites, Granary Weevils, Horn Flies, Hornets, Horse Flies, House Flies, Indian Meal Moths, Khapra Beetles, Lesser Grain Borers, Lesser House Flies, Mediterranean Flour Moths, Merchant Grain Beetles, Midges, Millers, Millipedes, Mosquitoes [including those that may transmit West Nile virus], Flying Moths, Palmetto Bugs, Pillbugs, Red Flour Beetles, Rice Flour Beetles, Rusty Grain Beetles, Sawtoothed Grain Beetles, Silverfish, Skipper Flies, Spider Beetles, Spiders, Stable Flies, Sowbugs, Ticks, Ticks that may carry and transmit Lyme disease, Tobacco Moths, Trogoderma Beetles, Warehouse Beetles, Wasps, Waterbugs, Yellow Mealworms, and Yellowjackets.

DIRECTIONS FOR USE

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

USE RESTRICTIONS:

- Do not contaminate food or feedstuffs.
- Not for Indoor Residential Use [Note to reviewer: This is a voluntary restriction by the registrant]
- Remove or cover exposed food and drinking water before application.
- Remove or cover dishes, utensils, food processing equipment, and food preparation surfaces, or wash them before use.
- Remove pets and birds and cover fish aquariums before spraying. Avoid exposing reptiles to this product.

ENTRY RESTRICTIONS

For Surface Spray Use:

- Except when applying to livestock, do not enter or allow others to enter treated area until sprays have dried.

For Space Spray Use:

- Do not enter or allow others to enter until vapors, mists, and aerosols have dispersed, and the treated area has been thoroughly ventilated.

APPLICATION RESTRICTIONS:

- Do not apply space spray while food processing is in operation. Prior to space spray application, cover or remove food. Prior to space spray application, cover or remove all food processing surfaces or clean after treatment and before use. Thoroughly wash all food processing surfaces before reuse. After spraying in bakeries, meat packing plants, food processing plants, etc., all benches, shelving, equipment, etc. where exposed food will be handled must be washed with an effective cleaning compound followed by a potable water rinse to remove all traces of contamination.
- Do not apply directly to food, water or feed supplements. Do not contaminate milk or milk handling equipment. Wash udder and teats of dairy animals before milking.
- Except when applying to livestock, do not apply this product in a way that will contact worker or other persons, either directly or through drift.
- Except when applying to livestock, 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 aerosols, vapors, and/or mists have dispersed.
- When used in dairy barns or facilities: Close milk bulk lids to prevent contamination from spray and from dead or falling insects. Remove or cover milking utensils before application. Wash teats of animals before milking.
 - Do not make space applications when facility is in operation.
 - Prior to space spray applications, cover or remove food.
 - Prior to space applications, cover food processing surfaces or clean after treatment and before use.
- All outdoor applications must be limited to spot or crack and crevice treatments only, except for the following permitted uses:
 - Treatment to soil or vegetation around structures;
 - Applications to lawns, turf, and other vegetation;
 - 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.
- Do not make applications during the rain.
- Do not wet plants to the point of runoff or drip.
- Do not water the treated area to the point of runoff.
- Except when applying to sewers or drains as instructed on this label, do not apply directly to 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 use in aircraft cabins.
- When applying in dried fruit product storage areas, do not apply to fruit directly.

READ ALL DIRECTIONS COMPLETELY BEFORE USE AND FOLLOW ALL DIRECTIONS AND PRECAUTIONS WHEN USING PRODUCT.

Follow directions for specific use areas.

INDOOR USES:

Not for Indoor Residential Use. [Note to reviewer: this is a voluntary restriction by registrant]

INDOOR USE - UNDILUTED

ULV AND SPACE SPRAY: Use in aerosol generators to kill exposed accessible stages of: Flies (including Fruit Flies), Mosquitoes, Small Flying Moths, Fleas, Gnats, Wasps, Hornets, Clover Mites, Cheese Mites, Cheese Skippers, Boxelder Bugs, Earwigs, Ants and the following common Stored Product Pests: Granary Weevils, Rice Weevils, Confused Flour Beetles, Sawtoothed Grain Beetles, Spider Beetles, Cigarette Beetles, Drugstore Beetles, Angoumois Grain Moths, Mediterranean Flour Moths, Indian Meal Moths, Tobacco Moths, Yellow Mealworms, Dark Mealworms, Grain Mites, Cadelles, and Red Flour Beetles. Close room and shut off all air conditioning or ventilating equipment. Apply at the rate of ½ to 1 fl. oz. concentrate per 1,000 cu. ft. of space (0.52 ml to 1.04 ml/m³). Direct spray towards ceiling and upper corners of room. Leave room closed for ½ hour and ventilate thoroughly before re-entry.

CONTACT AND SPACE SPRAY: To kill Cockroaches, Silverfish, Earwigs, Ants and Spiders: Use a mechanical aerosol generator or a fogger adjusted to deliver aerosol droplets. To provide maximum penetration and impingement on the insects, first, using no more than 17 fl. oz. of concentrate per 1,000 sq. ft., direct the spray into all cracks and crevices, behind all equipment, cupboards, obstructions or dark harborage areas, on walls and floors, underneath sinks, behind pipes, and in all places that harbor insects. Contact as many insects as possible. Do not allow spray to contact stored food. Then treat as a space spray, directing the spray towards the ceiling and upper corners of room, apply at a rate of one (1) fl. oz. of concentrate per 1,000 cu. ft. of space (1.04 ml/m³). Vacate treated area and leave the room closed for 1 hour. Ventilate thoroughly before re-entry. Facilities and equipment in federally inspected meat and poultry plants must be washed with an effective cleaning compound and rinsed with potable water after spraying.

DRIED FRUIT PRODUCT STORAGE AREAS: In storage or [being processed] [in processing] for control of Almond Moths, Ants, Cereal Beetles, Chocolate Moths, Cigarette Beetles, Cockroaches, Confused Flour Beetles, Crickets, Earwigs, Flies, Fruit Flies, Fungus Gnats, Indian Meal Moths, Mediterranean Flour Moths, Red Flour Beetles, Sawtoothed Grain Beetles, Silverfish, Driedfruit Beetles, Warehouse Beetles and Khapra Beetles. **Do not apply to fruit directly.** Apply as a fine mist or fog in the air above and around the trays, bins, and shelves at the rate of 1 fl. oz. of concentrate per 1,000 cu. ft. of space (1.04 ml/m³). Repeat application at this dosage as required.

TREATMENT OF STORED FOOD AREAS: Foods in multi-walled bags, cloth bags or other packaging stored in such listed areas for the control of accessible adult stages of: Almond Moths, Angoumois Grain Moths, Ants, Cadelles, Cereal Beetles, Cheese Mites, Cheese Skippers, Chocolate Moths, Cigarette Beetles, Cockroaches, Confused Flour Beetles, Crickets, Dark Mealworms, Drugstore Beetles, Earwigs, Firebrats, Flies, Fruit Flies, Fungus Gnats, Grain Mites, Granary Weevils, Hide Beetles, Indian Meal Moths, Mediterranean Flour Moths, Mosquitoes, Red Flour Beetles, Rice Weevils, Sawtoothed Grain Beetles, Silverfish, Small Flying Moths, Spiders, Spider Beetles, Yellow Mealworms, Driedfruit Beetles, Warehouse Beetles, Rusty Grain Beetles, Lesser Grain Beetles, Coffee Bean Weevils and Khapra Beetles. Destroy, fumigate, or treat infested stored products by other effective methods using an approved product intended for this purpose. Using no more than 17 fl. oz. of concentrate per 1,000 sq. ft., disperse by directing spray into cracks and crevices, corners, pallets and around stacks of packaged goods hitting as many insects as possible and then apply as a space spray at a dosage of one (1) fl. oz. of concentrate per 1,000 cu. ft. of room space (1.04 ml/m³). Vacate treated area and ventilate before re-entry.

ON PEANUTS, NUTS (ALMONDS AND WALNUTS), BEANS (INCLUDING COCOA), SEEDS (BIRDSEED MIXTURES, COTTONSEED AND FLAXSEED) AND COPRA IN BULK, BAGS OR OTHER PACKAGING: For the control of accessible stages of: Almond Moths, Angoumois Grain Moths, Ants, Cadelles, Cereal Beetles, Cheese Mites, Cheese Skippers, Chocolate Moths, Cigarette Beetles, Cockroaches, Confused Flour Beetles, Crickets, Dark Mealworms, Drugstore Beetles, Earwigs, Firebrats, Flies, Fruit Flies, Fungus Gnats, Grain Mites, Granary Weevils, Hide Beetles, Indian Meal Moths, Mediterranean Flour Moths, Mosquitoes, Red Flour Beetles, Rice Weevils, Sawtoothed Grain Beetles, Silverfish, Small Flying Moths, Spiders, Spider Beetles, Yellow Mealworms, Driedfruit Beetles, Warehouse Beetles, Rusty Grain Beetles, Lesser Grain Beetles, Coffee Bean Weevils, Khapra Beetles and other listed insects, apply to the surface of stored or bagged products at the rate of ¼ fl. oz. of concentrate per 1,000 sq. ft. (0.08 ml/m²). Also spray walls, floors and surfaces of bins, storage and handling areas thoroughly, being especially careful to treat cracks, crevices and similar hiding places. Then apply as a space spray by directing the spray toward the ceiling and upper corners of the area and behind any obstructions. Apply at the rate of 0.33 or 1/3 fl. oz. of concentrate per 1,000 cu. ft. of room space. Vacate treated area and ventilate before re-entry. Do not apply more than 1 time per day. Do not reapply within 7 days. Do not apply more than 10 times to sweet potatoes.

INDOOR USE - DILUTED

SPACE SPRAY: For use in mechanical fogging or spraying equipment to control accessible stages of Almond Moths, Angoumois Grain Moths, Ants, Cadelles, Cereal Beetles, Cheese Mites, Cheese Skippers, Chocolate Moths, Cigarette Beetles, Cockroaches, Confused Flour Beetles, Crickets, Dark Mealworms, Drugstore Beetles, Earwigs, Firebrats, Flies, Fruit Flies, Fungus Gnats, Grain Mites, Granary Weevils, Hide Beetles, Indian Meal Moths, Mediterranean Flour Moths, Mosquitoes, Red Flour Beetles, Rice Weevils, Sawtoothed Grain Beetles, Silverfish, Small Flying Moths, Spiders, Spider Beetles, Yellow Mealworms, Driedfruit Beetles, Warehouse Beetles, Rusty Grain Beetles, Lesser Grain Beetles, Coffee Bean Weevils and Khapra Beetles. Remove or cover exposed food and cover food-handling surfaces in edible product areas of food handling establishments. Close room and shut off all air conditioning or ventilating equipment. Dilute at the rate of 1 part concentrate into 1 to 10 parts water and mix well. Apply at the rate of 1 to 2 fl. oz. of diluted product per 1,000 cu. ft. of space (1.04 to 2.08 ml/m³), filling the room with mist. Vacate treated area and ventilate before re-entry.

Dilution Table for ULV Foggers

Dilution Ratio:					
Concentrate	Water	Fl. oz. of concentrate per ounce of solution volume	Fl. oz. of water per ounce of solution volume	Pounds of Pyrethrum per 1,000 cu. ft. (28.32 m ³) when applied at 1 fl. oz. per 1,000 cu. ft. (1.04 ml/m ³) (gm Pyrethrins/ m ³).	Percent Pyrethrins in solution
Undiluted		1.00 (29.57 ml)	0.00	0.00330 (0.0528 gm/m ³)	5.060%
1	1	0.50 (14.78 ml)	0.50 (14.78 ml)	0.00165 (0.0264 gm/m ³)	2.530%
1	2	0.33 (9.68 ml)	0.67 (19.81 ml)	0.00110 (0.0176 gm/m ³)	1.687%
1	2.25	0.31 (9.17 ml)	0.69 (20.40 ml)	0.00101 (0.0162 gm/m ³)	1.557%
1	2.5	0.29 (8.57 ml)	0.71 (20.99 ml)	0.00094 (0.0151 gm/m ³)	1.446%
1	3	0.25 (7.39 ml)	0.75 (22.18 ml)	0.00082 (0.0131 gm/m ³)	1.265%
1	4	0.20 (5.91 ml)	0.80 (23.66 ml)	0.00066 (0.0106 gm/m ³)	1.012%
1	5	0.17 (5.03 ml)	0.83 (24.54 ml)	0.00055 (0.0088 gm/m ³)	0.843%
1	6	0.14 (4.14 ml)	0.86 (25.43 ml)	0.00047 (0.0075 gm/m ³)	0.723%
1	7	0.13 (3.84 ml)	0.88 (26.02 ml)	0.00041 (0.0066 gm/m ³)	0.632%
1	8	0.11 (3.25 ml)	0.89 (26.32 ml)	0.00037 (0.0059 gm/m ³)	0.562%
1	9	0.10 (2.96 ml)	0.90 (26.61 ml)	0.00033 (0.0053 gm/m ³)	0.506%
1	10	0.09 (2.66 ml)	0.91 (26.91 ml)	0.00030 (0.0048 gm/m ³)	0.460%

EXAMPLE: To determine how much concentrate to put into a 44 fl. oz. (1,301 ml) fogger tank to achieve a mix of 1 part concentrate with 5 parts water, multiply 0.17 (from chart above) times 44 (fl. oz. of solution needed) = 7.48 fl. oz. (221 ml) of concentrate (7.5 fl. oz. (221 ml) with rounding). Fill remainder of tank volume with 36.52 fl. oz. (1,079.8 ml) of water (36.5 (1,080 ml) with rounding) – to a total of 44 fl. oz. (1,301 ml).

FOR USE IN FEDERALLY INSPECTED MEAT AND POULTRY PLANTS: Dilute one part concentrate with 4 parts water and use with a ULV spraying device at the rate of one fl. oz. of diluted product per 1,000 cu. ft. (1.04 ml/m³) of room space. Apply the spray into all cracks and crevices in woodwork, walls, and floors, underneath sinks, behind pipes and in all places that shelter insects. Contact as many insects as possible. Before use, exposed food products and packaging materials must be covered or removed. After use, equipment and utensils must be washed with an effective cleaning compound and rinsed with potable water. Use as a space spray only when plant is not in operation. Repeat as necessary, but not more than once per day. Do not reapply within one (1) day.

SURFACE SPRAY: To control accessible stages of Cockroaches, Silverfish, Beetles, and Crickets: Dilute 3 fl. oz. of concentrate with one gallon of water, mix well and apply as a coarse wetting spray using 1 gallon of spray mixture per 1,000 sq. ft. of surface. To ensure maximum control of listed crawling insects, spray thoroughly into all cracks, molding, crevices, walls, floors, and other surfaces of bins and storage and handling areas. [Pay] particular attention [should be paid] to areas where moisture collects such as around drains, sinks, and water pipes, around the base of heavy machinery and equipment, contacting as many insects as possible.

ANTS: Spray directly into nests, along trails, and directly on all ants observed.

FOR IN TRANSIT PROTECTION: To control accessible stages of listed insects, clean and spray truck beds, boxcars, ship holds and other listed transit equipment before loading. Thoroughly treat walls and floors and spray each layer of cartons or containers lightly as stacked. Dilute 3 fl. oz. of concentrate with 1 gallon of water for each 1,000 sq. ft. of area to be treated.

TREATMENT OF STORED GRAIN: To control accessible stages of Indian Meal Moths and Angoumois Grain Moths: Dilute 3 fl. oz. of product with 1 gallon for each 1,000 bushels of grain to be treated. Apply diluted spray to the surface of binned grain. Apply at monthly intervals with the first appearance of infestation. In severe infestation of flying moths, break up webbing with a rake before spraying and make a second application in two weeks. Do not reapply within 30 days.

STORAGE AREAS FOR DRIED FRUIT PRODUCTS for control of Confused Flour Beetles, Driedfruit Beetles, Indian Meal Moths and Sawtoothed Grain Beetles. Remove and destroy infested products. Apply diluted spray as a fine mist in the air above the trays and shelves. Do not apply to fruit directly. Dilute at the rate of 1 part concentrate into 1 to 10 parts water and mix well. Use one (1) fl. oz. of diluted product per 1,000 cu. ft. (1.04 ml/m³) of space. Repeat application at this dosage in any given month. Leave the room closed for one (1) hour. Vacate treated areas and ventilate the area before re-entry. Sweep up and destroy fallen insects.

FOOD STORAGE AREAS containing multi-walled bags, cloth bags, and other packaging in warehouses, storage rooms, flour mills, grain elevators, granaries and other listed areas for the control of Angoumois Grain Moths, Cadelles, Confused Flour Beetles, Indian Meal Moths, Mediterranean Flour Moths, Rice Weevils, Sawtoothed Grain Beetles, Yellow Mealworms, Cheese Mites, Cheese Skippers, Cigarette Beetles, Grain Mites, Granary Weevils, Dark Mealworms and Red Flour Beetles: Remove and destroy infested products. First disperse diluted spray by directing spray into corners, under pallets, and around stacks of packaged foods hitting as many insects as possible and then treat as a space spray. Infested stored products should be fumigated or treated by other effective methods using an approved product intended for this purpose. Dilute at the rate of 1 part concentrate into 1 to 10 parts water and mix well. Use at a rate of one to two (1 to 2) fl. oz. of diluted product per 1,000 cu. ft. (1.04 ml to 2.08 ml/m³) of space. [Do not remain in] [Vacate] treated areas and ventilate area before re-entry. This application will kill exposed stages of those stored product pests listed. Sweep up and destroy fallen insects.

FOR USE ON ANIMALS: To protect: beef and dairy cattle and horses from Horn Flies, House Flies, Mosquitoes, and Gnats, dilute 1 part concentrate with 49 parts water, mix well and apply a light mist sufficient to wet the tips of the hair. To control Stable Flies, Horse Flies and Deer Flies on animals apply two (2) fl. oz. of diluted product (60 ml) per adult animal in an amount sufficient to wet the hair but not to soak the hide. Repeat treatment once or twice daily or at intervals to give continued protection. To control the motile stages of Blood Sucking Lice on beef and dairy cattle and other listed animals, apply the spray to thoroughly wet the hair. Use two (2) fl. oz. of diluted product (60 ml) or less per animal and repeat every 2 to 3 weeks as required. Do not apply more than 1 time per day.

To control Poultry Lice, spray roosts, walls and nests or cages thoroughly with a dilution of one (1) part concentrate with 25 parts water, followed by spraying over the birds with a fine mist. Do not apply more than 1 time per day.

ANIMAL QUARTER USE - DAIRY AND BEEF BARN, POULTRY HOUSES, SWINE HOUSING AND OTHER LISTED AREAS: For use in and around listed use areas to control accessible stages of Brown Dog Ticks, Clover Mites, Cockroaches, Crickets, Deer Flies, Earwigs, Face Flies, Firebrats, Fleas, Flies, Horn Flies, Hornets, Mosquitoes, Silverfish, Small Flying Moths, Spiders, Stable Flies, Ticks, Wasps, Yellowjackets, Fannia Flies and Darkling Beetles. Apply as a space spray in conventional ULV cold aerosol generator or fogger adjusted to deliver aerosol size droplets. Whenever possible, perform space spray application in the late evening when insects are at rest. Apply undiluted at the rate of 0.25 to 1.0 fl. oz. per 1,000 cu. ft. (0.26 ml to 1.04 ml/m³) of space above the animals. This concentrate may also be diluted with water at the rate of one (1) part concentrate to 10 parts water and applied at the rate of 1 to 2 fl. oz. of diluted product per 1,000 cu. ft. (1.04 ml to 2.08 ml/m³) of space above the animals. Direct spray toward the upper portions of the enclosure, above the animals, filling the room with mist or fog. Vacate treated area and ventilate before re-occupying. Do not apply more than 1 time per day.

To control Bed Bugs and Mites in poultry houses, prepare a dilution of one (1) part concentrate to 25 parts water and spray crevices of roost poles and cracks in walls and nests where the Bed Bugs and Mites hide. Do not apply more than 1 time per day.

FOR USE IN AUTOMATIC ULV SPRAYING SYSTEMS, IN THE FOLLOWING AREAS: ANIMAL QUARTERS, DAIRY AND BEEF BARN, POULTRY HOUSES, SWINE HOUSING, WAREHOUSES, RESIDENTIAL BACK YARDS AND OTHER LISTED INDOOR AND OUTDOOR AREAS.

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 a 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.

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

Do not use in an evaporative cooling system.

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 a dilution statement to the system reservoir tank in a weather protected area or plastic sleeve. The dilution statement must be phrased as follows: this container holds ___ parts [product name] 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 1 to 2 fl. oz. of concentrate per 1,000 cu. ft. (1.04 ml to 2.08 ml/m³) of space above the animals.

NOT REGISTERED for use in Automatic ULV Spraying Systems in the state of New York.

Use to kill, or temporarily reduce annoyance from accessible stages of Brown Dog Ticks, Clover Mites, Cockroaches, Crickets, Deer Flies, Earwigs, Face Flies, Firebrats, Fleas, Flies, Gnats, Horn Flies, Hornets, Horse Flies, House Flies, Mosquitoes [including those that may transmit West Nile virus], Silverfish, Small Flying Moths, Spiders, Stable Flies, Ticks, Wasps, Yellowjackets, Fannia Flies, Darkling Beetles and other nuisance insects.

Mix ½ gallon (64 fl. oz. (1,892 ml)) of concentrate in 55 gallons (208 L) of water to yield a solution of 0.046% Pyrethrins and 0.23% Piperonyl Butoxide. For high populations of insects, or when treating species that are difficult to control, mix up to one (1) gallon (3.78 L) of concentrate in 55 gallons (208 L) of water to yield a solution of .093% Pyrethrins and 0.46% Piperonyl Butoxide. When filling tank, partially fill the system reservoir tank with water, add concentrate, and then fill rest of tank with water. System nozzles should deliver fine particle size droplets (aerosol or mist). Nozzles should have a delivery rate not to exceed 1.25 fl. oz. (1.3 ml) of solution per minute, with one (1) nozzle covering 100 sq. ft. (9.29 m²). Set system timer to operate in accordance with equipment directions.

Automatic Spraying System Dilution Table

A. System Tank size (in gallons)	B. Conversion Factor (Fl. oz. of concentrate per gallon of water)	A. x B. = fl. oz. of concentrate for specific tank size, to be mixed with water to achieve 0.046% pyrethrin solution.
1 (3.78 L)	1.16 (34.34 ml)	1.16 (9 ml/L)
15 (56.7 L)	1.16 (34.34 ml)	17 (0.60 ml/L)
20 (75.6 L)	1.16 (34.34 ml)	23 (0.45 ml/L)
30 (113.4 L)	1.16 (34.34 ml)	35 (0.30 ml/L)
55 (208 L)	1.16 (34.34 ml)	64 (0.16 ml/L)

Since high water temperatures can degrade pyrethrins, it is recommended that system tanks be sheltered or insulated from direct exposure to the sun. Use of an EPA approved antimicrobial agent is also recommended. For best performance, the spray solution should be in the pH range from 5.5 to 7.0. Do not set up system nozzles in a manner that delivers spray solution into swimming pools, or pools containing fish and other organisms that may be sensitive to Pyrethrins. Automatic systems must be programmed so as not to activate and/or release pesticides when people, pets and food or feed are present. Install a rain sensor and a wind sensor on the system to control drift and runoff. Lock the system reservoir tank and securely attach a legible copy of the label to the system reservoir tank, or on the outside of the system timer. Never use concentrate in an evaporative cooling system.

This product will control insects directly contacted by its spray solution. Since many of the targeted insects can migrate in and out of treatment areas, it is recommended that this concentrate be used as part of an Integrated Pest Management (IPM) program. Control practices such as (but not limited to) eliminating breeding and harborage sites, combined with appropriate use of contact insecticides, Insect Growth Regulators (IGRs) and/or residual insecticides will provide the most effective control of target insects.

OUTDOOR USE:

To kill accessible stages of listed flying insects in listed outdoor areas. If possible, [perform] space spray application [should be made] in the evening or early morning when mosquitoes are typically most active. With a ULV spraying device, spray at a dosage rate of five (5) fl. oz. of undiluted concentrate per minute up-wind of the area to be controlled. If the equipment is truck mounted, keep the speed to approximately 10 mph with a swath width of 300 feet (91.44 m).

TEMPORARY REDUCTION OF ANNOYANCE from Flies, Mosquitoes, and Small Flying Moths. The aforementioned outdoor ground application will give temporary relief of annoyance from these pests in listed outdoor areas. Direct application into tall grass, shrubbery and around lawns where these pests may hover or rest. Apply while air is still. In areas such as zoos, cover water, drinking fountains, and animal feed before use.

TO CONTROL PESTS ON SHRUBS, FRUIT AND SHADE TREES:

Pests: Aphids, Apple and Thorn Skeletonizers, Bagworms, Bean Beetles, Cabbageworms, Codling Moths, Cutworms, European Pine Shoot Moths, Flea Beetles, Hemlock Woolly Adelgids, Holly Bud Moths, Lace Bugs, Leafhoppers, Leafminers, Leafrollers, Mealybugs, Oak Loopers, Obscure Root Weevils, Omnivorous Leaf-tiers, Pear Slugs, Scale Crawlers, Spider Mites, Tent Caterpillars, Thrips, Webworms and Whiteflies.

Plants: Birch, Crab Apple, Dogwood, Douglas-fir, Elm, Euonymus, Hawthorn, Hemlock, Holly, Juniper, Lilac, Locust, Maple, Oak, Plum, Pine, Poplar, Spruce, Sycamore, Willow and Yew.

Mixing instructions: For Shrubs and Shade Trees, follow directions on applicator to obtain four (4) Tbs. (2 fl. oz. (60 ml)) concentrate per gallon (3.78 L) of water.

1 Tablespoon (Tbs.) = 3 teaspoons (tsp.)

1 fl. oz. (30 ml) = 2 Tbs.

How to apply: Spray to wet plant leaves and branches until dripping. Do not apply more than 1 time per day. Do not apply more than 10 times per season.

AROUND HOUSE FOUNDATION:

Nuisance pests outdoors: Ants, Boxelder Bugs, Brown Dog Ticks, Chiggers, Clover Mites, Cockroaches, Crickets, Earwigs, Fleas, Flies, Millipedes, Scorpions, Sowbugs, Spiders and Springtails.

Mixing instructions: For around house foundation follow directions on applicator to obtain four (4) Tbs. (2 fl. oz. (60 ml)) concentrate per gallon (3.78 L) of water.

1 Tablespoon (Tbs.) = 3 teaspoons (tsp.)

1 fl. oz. (60 ml) = 2 Tbs.

How to apply: To keep insects from entering the house, spray a five (5) foot (1.52 m) band of soil around the house next to the foundation. Also spray the foundation of the house to a height of two (2) feet (0.61 m). Also spray walks, firewood piles, garbage cans, tree trunks, into cracks and other places where insects can hide.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE:

Store in a cool, dry place. Always store pesticides in the original container. Store away from food and pet food.

PESTICIDE DISPOSAL:

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING AND DISPOSAL:

Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill.

Triple rinse as follows [for containers of 5 gallons (18.9 L) or less]: 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.

Triple rinse as follows [for containers greater than 5 gallons (18.9 L)]: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. 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 it back and forth several times. Turn the container over onto 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.

[Or for Refillable containers]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing 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.

[For totes/55 gal. containers]

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.



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