228-451 1/18/2014 1/28

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

OFFICE OF
CHEMICAL SAFETY
AND POLLUTION PREVENTION

JAN 18 2014

Ms. Carrie M. Tackema
Nufarm Americas Inc.
11901 S. Austin Avenue
Alsip, IL 60803

Subject: Label Notification(s) for Pesticide Registration 98-10

Dear Ms. Tackema:

Subject: Notification to Make Label Changes/Add paragraph to letter
EPA Registration Number: 228-451
Date of Submission: October 17, 2013
Decision: 484293

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated October 17, 2013 for the product Menace Flowable. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action(s) requested fall within the scope of PRN 98-10. The Confidential Statement of Formula (CSF) and/or label submitted with the application has (have been stamped "Notification" and will be placed in our records.

In Addition, Please note that a typographical error on the product label was discovered during our review for this action. The error must be corrected on the final printed label. The error is on page 9 in the MOSQUITO CONTROL section. The term "sever" must be replaced with "seven" as is seen on the stamped approved product label dated March 29, 2013. Per the previously approved label, the sentence must read "For the lower rates, repeat application must limited to no more than once per seven days." Per Product Registration (PR) Notice 98-10, you may make this change via Non-Notification as permitted by 40 CFR 152.46(b), since it is clearly a typographical error.

If you have any questions, please contact Melody Banks on 703 305-5413 or banks.melody@epa.gov.

Sincerely,

Michael Walsh
Acting, Product Manager
Insecticide Branch
Registration Division (7504P)

MENACE®
FLOWABLE

NOTIFICATION
JAN 18 2014

To control listed pests indoors and outdoors around residential, institutional, public, commercial, and industrial buildings, greenhouses, animal confinement facilities/livestock premises, kennels, food handling establishments, and lawns, ornamentals, parks, recreational areas and athletic fields.

When used as a termiticide, Individuals/Firms must be licensed by the State to apply termiticide products. States may have more restrictive requirements regarding qualifications of persons using this product. Consult the pest control regulatory agency of your State prior to use of this product.

Provides up to 1 month residual control of house flies.

Kills fleas for up to 3 months.

ACTIVE INGREDIENT:	
Bifenthrin*	7.9%
OTHER INGREDIENTS:	92.1%
TOTAL	100.0%

**Cis isomers 97% minimum, trans isomers 3% maximum.*

This product contains 2/3 pound active ingredient per gallon. [This product contains 1/6 pound active ingredient per quart.]

KEEP OUT OF REACH OF CHILDREN

CAUTION

SEE [INSIDE BOOKLET] [BACK PANE] [BELOW] FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300
For Medical Emergencies Only, Call (877) 325-1840

EPA REG. NO. 228-451
EPA EST. NO.

MANUFACTURED FOR
NUFARM AMERICAS INC.
11901 SOUTH AUSTIN AVENUE
ALSIP, IL 60803

NET CONTENTS _____ GALS. (____ liters)
[Designation as "NONREFILLABLE" or "REFILLABLE" for containers ≥ 5 GAL]
000228-00451.~~20120329~~20131122.~~MASTER~~NOTIF

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION

Harmful if swallowed, inhaled or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

All pesticide handlers (mixers, loaders and applicators) must wear:

- Long-sleeved shirt and long pants.
- Chemical-resistant gloves.
- Shoes plus socks.

After the product is diluted in accordance with label directions for use, and/or when mixing and loading using a closed spray tank transfer system or an in-line injector system, all handlers must wear:

- Shirt and pants.
- Shoes plus socks.
- Waterproof gloves

In addition, all pesticide handlers must wear a respiratory protection device[1] when working in a non-ventilated space. All pesticide handlers must wear protective eyewear when working in non-ventilated space.

[1] Use one of the following NIOSH approved respirator with any R. P or HE filter, or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P, or HE prefilter.

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

User Safety Recommendations:

User Should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash outside of gloves before removing, and as soon as possible, wash thoroughly and change into clean clothing.

FIRST AID	
IF SWALLOWED	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF INHALED	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth- to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
IF ON SKIN OR CLOTHING	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES	• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-877-325-1840 for emergency medical treatment information.	

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NOTE TO PHYSICIAN

This product is a pyrethroid. If large amounts have been ingested, the stomach and intestine should be evacuated. Treatment is symptomatic and supportive. Digestible fats, oils or alcohol may increase absorption and so should be avoided.

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. **DO NOT** apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Care should be used when spraying to avoid fish and reptile pets in/around ornamental ponds.

To protect the environment, **DO NOT** allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

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

PHYSICAL AND CHEMICAL HAZARDS

DO NOT apply water-based dilutions of this product to electrical conduits, motor housings, junction boxes, switch boxes or other electrical equipment because of the possible shock hazard.

DIRECTIONS FOR USE

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

DO NOT apply a broadcast application to interior surfaces of homes.
DO NOT apply by air.
DO NOT apply in plant nurseries.
DO NOT apply this product through any kind of irrigation system.
DO NOT use on sod farm turf, golf course turf, or grass grown for seed.
DO NOT water the treated area to the point of run-off.
DO NOT make applications during the rain.
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 the product to enter any drain during or after application.

Additional Application Restrictions for Residential Outdoor Surface and Space Sprays:

All outdoor applications must be limited to spot or crack and crevice treatments only, except for the following permitted uses:

1) Treatments 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.

AGRICULTURAL USE REQUIREMENTS*

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical Resistant Gloves such as butyl rubber, neoprene rubber, polyvinyl chloride, viton, or nitrile rubber

- Shoes plus socks

Do not apply this product in a way that it will contact workers or other persons either directly or through drift. Only protected handlers may be in the area during application. For any requirement specific to your State or Tribe, consult State/Tribal agency responsible for pesticide regulation.

FOR CALIFORNIA

Greenhouse Applicators Must Wear:

- Full body chemical-resistant protective suit (Such as barrier laminate, nitrile rubber, butyl rubber, polyvinyl chloride, or equivalent).

Reapplication Interval:

- Reapplications to greenhouses must occur at intervals of 30 Days or Longer.

Greenhouse Harvesters Must Wear:

- Regular length gloves plus a long sleeved shirt or elbow-length (gauntlet type) gloves during the 30 days following application.

* These requirements apply to only greenhouse uses on this label.

NON-AGRICULTURAL USE REQUIREMENTS**

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep people and pets off treated areas until spray solution has dried.

** These requirements apply to all other non-greenhouse uses on this label.

[Use Directions for Tip-N-Measure Container

1. Remove the measuring chamber cap and induction seal. Replace the cap and securely tighten. Tip container until liquid fills measuring chamber.
2. Return container to level position. No adjustment is needed.
3. Remove measuring chamber cap and dispense into proper application equipment.

For multiple dose measuring: Remove fill chamber cap and dispense according to markings on side of bottle.]

[Use Directions for Squeeze-N-Measure Container

1. Remove the measuring chamber cap and induction seal.
2. Replace cap loosely on measuring chamber to allow venting.
3. Squeeze container gently until liquid fills measuring chamber.
4. Remove measuring chamber cap and dispense into proper application equipment.
5. Replace cap onto measuring chamber and **Securely Tighten.]**

INFORMATION ON THE USE OF THIS PRODUCT

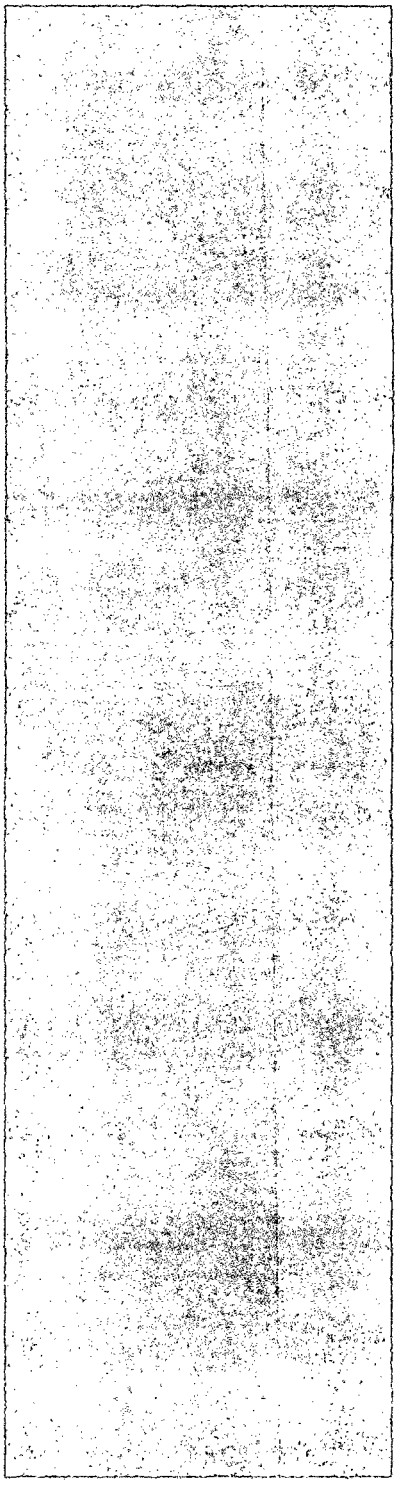
This product is for control of ~~a wide spectrum of~~ listed insect and mite pests on trees, shrubs, lawns, foliage plants, non-bearing fruit trees, and flowers in greenhouses, interiorscapes including hotels, shopping malls, office buildings etc., and outdoor plantscapes, such as around residential dwellings, institutional, public, commercial, and industrial buildings, parks, recreational areas, and athletic fields and home lawns. This product may be used to control listed pests of trees, shrubs, foliage plants, and flowers grown in interior plantscapes including hotels, shopping malls, office buildings. This product can be used on non-bearing fruit and nut trees. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

This product may also be used in feed and food handling establishments, animal confinement facilities, kennels, confined animal feeding operations, livestock premises, and in/around/under structures.

RESISTANCE MANAGEMENT

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

If resistance to this product develops in your area, this product, or other products with a similar mode of action, may not provide adequate control. If poor performance cannot be attributed to improper application or extreme weather conditions, a resistant strain of insect may be present. If you experience difficulty with control and suspect that



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resistance is a reasonable cause, immediately consult your local company representative or pest management advisor for the best alternative method of control for your area.

Comment [CT1]: Fix rates

DILUTION CHART			Fluid Ounces of This Product Diluted to These Volumes of Finished Spray			
Application Volume		Application Rate	1 Gallon	5 Gallons	10 Gallons	100 Gallons
% A.I.	Gallon/ 1,000 sq.ft.	Fluid Ounces/ 1,000 sq. ft	Fluid Ounces	Fluid Ounces	Fluid Ounces	Fluid Ounces
0.008	1.0	0.125	0.125	0.630	1.250	12.500
0.011	1.0	0.180	0.180	0.900	1.800	18.000
0.015	1.0	0.250	0.250	1.250	2.500	25.000
0.020	1.0	0.330	0.330	1.670	3.330	33.300
0.031	1.0	0.500	0.500	2.500	5.000	50.000
0.041	1.0	0.670	0.670	3.330	6.670	66.700
0.046	1.0	0.750	0.750	3.750	7.500	75.000
0.062	1.0	1.000	1.000	5.000	10.000	100.000
~~0.0020~~0.004	2.0	0.125	-	0.310	0.630	6.300
0.00~~64~~	2.0	0.180	-	0.450	0.900	9.000
0.00~~85~~	2.0	0.250	0.130	0.630	1.250	12.500
0.010~~07~~	2.0	0.330	0.170	0.830	1.650	16.500
0.01~~50~~	2.0	0.500	0.250	1.250	2.500	25.000
0.021~~14~~	2.0	0.670	0.330	1.670	3.350	33.500
0.023~~15~~	2.0	0.750	0.380	1.880	3.750	37.500
0.031~~21~~	2.0	1.000	0.500	2.500	5.000	50.000
0.003	3.0	0.125	-	0.210	0.420	4.200
0.004	3.0	0.180	-	0.300	0.600	6.000
0.005	3.0	0.250	-	0.420	0.830	8.300
0.007	3.0	0.330	0.110	0.550	1.100	11.000
0.010	3.0	0.500	0.170	0.830	1.670	16.700
0.014	3.0	0.670	0.220	1.110	2.230	22.300
0.015	3.0	0.750	0.250	1.250	2.500	25.000
0.021	3.0	1.000	0.330	1.670	3.330	33.300
0.002	4.0	0.125	-	0.160	0.310	3.100
0.003	4.0	0.180	-	0.230	0.450	4.500
0.004	4.0	0.250	-	0.310	0.630	6.300
0.005	4.0	0.330	-	0.410	0.830	8.300
0.008	4.0	0.500	0.130	0.630	1.250	12.500
0.010	4.0	0.670	0.170	0.840	1.670	16.700
0.012	4.0	0.750	0.190	0.940	1.880	18.800
0.015	4.0	1.000	0.250	1.250	2.500	25.000
0.002	5.0	0.125	-	0.125	0.250	2.500
0.002	5.0	0.180	-	0.180	0.360	3.600
0.003	5.0	0.250	-	0.250	0.500	5.000
0.004	5.0	0.330	-	0.330	0.670	6.700
0.006	5.0	0.500	0.100	0.500	1.000	10.000
0.008	5.0	0.670	0.130	0.670	1.330	13.300
0.009	5.0	0.750	0.150	0.750	1.500	15.000
0.012	5.0	1.000	0.200	1.000	2.000	20.000
0.001	10.0	0.125	-	-	0.130	1.300
0.001	10.0	0.180	-	-	0.180	1.800
0.002	10.0	0.250	-	0.130	0.250	2.500
0.002	10.0	0.330	-	0.170	0.330	3.300
0.003	10.0	0.500	-	0.250	0.500	5.000
0.004	10.0	0.670	-	0.330	0.670	6.700
0.005	10.0	0.750	-	0.380	0.750	7.500
0.006	10.0	1.000	0.100	0.500	1.000	10.000

1 fluid ounce = 29.57 ml = 2 tablespoons = 6 teaspoons

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DO NOT use household utensils to measure this product.

Note: Higher finished volume ~~should~~must be applied to penetrate thatch, mulch, brush, and porous surfaces. Lower finished volumes can be used indoors and for non-porous surfaces.

DO NOT apply more than 1 fluid oz. of this product per 1,000 square feet.

APPLICATION INSTRUCTIONS

This product formulation mixes readily with water and other aqueous carriers.

This product may be tank-mixed with adjuvants, and with other pesticides, including insect growth regulators. When tank mixing this product with other pesticides, observe all precautions and limitations on each product label. The physical compatibility of this product may vary with different sources of pesticide products, and local cultural practices. Any tank mixture which has not been previously tested ~~should~~must be prepared on a small scale (pint or quart jar), using the proper proportions of pesticides and water to ensure the physical compatibility of the mixture.

The following procedure is recommended for preparation of a new tank mix, unless specified otherwise in label directions:

1. Add wettable powders to tank water,
2. Agitate,
3. Add liquids and flowables,
4. Agitate,
5. Add emulsifiable concentrates and,
6. Agitate.

If a mixture is found to be incompatible following this order of addition, try reversing the order of addition, or increase the volume of water.

Note: If the tank-mixture is found to be compatible after increasing the amount of water, then the sprayer will need to be recalibrated for a higher volume application. **DO NOT** allow tank mix to stand overnight.

Formula for Determining the Active Ingredient Content of the Finished Spray Mixture: The following formula may be used to determine the percent active ingredient that is in the spray tank after mixing this product:

$$\frac{\textbf{(7.9)(Fluid oz. of this product added to tank}}{\textbf{(Gallons of Finished spray mix)(128)}} = \textbf{Percent Active Ingredient in spray mix}$$

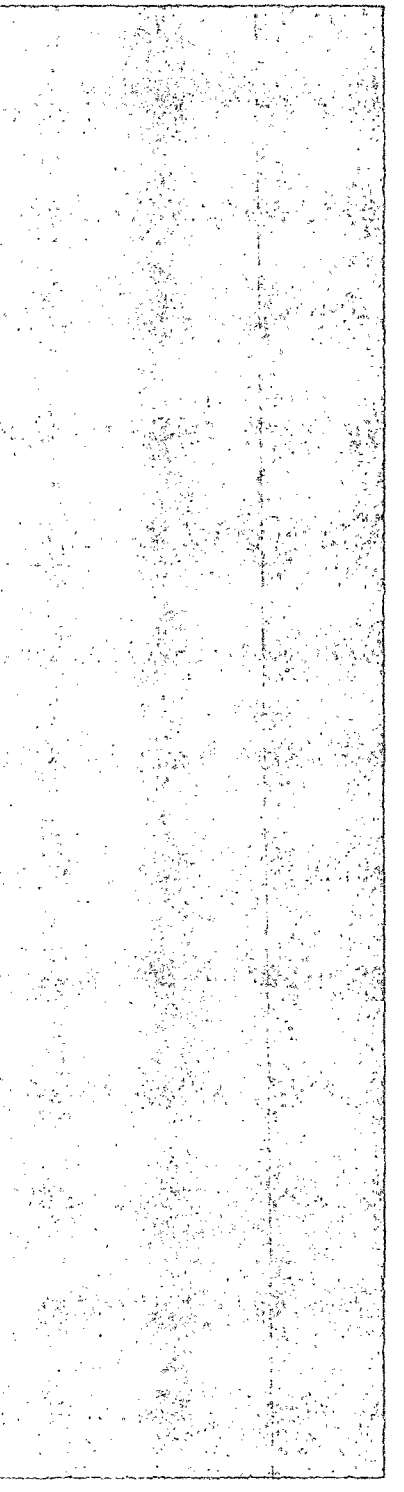
APPLICATION DIRECTIONS

ANT CONTROL

Nuisance Ants Indoors: For best results, locate and treat ant nests. Dilute 0.5 to 1.0 fluid oz. of this product per gallon of water and apply at the rate of one gallon of dilution per 1,000 square feet as a surface, crack and crevice or spot treatment to areas where ants have been observed or are expected to forage. These areas include, baseboards, in and behind cabinets, under and behind dishwashers, furnaces, refrigerators, sinks and stoves, around pipes, cracks and crevices and in corners. Particular attention ~~should~~must be given to treating entry points into the home or premises such as around doors and windows. When using this product in combination with baits, apply this product as instructed, and use baits in other areas that have not been treated with this product.

Nuisance Ants Outdoors: For best results, locate and treat ant nests. Apply this product to ant trails around doors and windows and other places where ants have been observed or are expected to forage. Apply a perimeter treatment using either low or high volume applications described in the "Pest Control on Outside Surfaces and Around Buildings" section of this label. The higher dilutions and/or application volumes, as well as more frequent applications, may be necessary when treating concrete surfaces for ant control. The following procedures must be followed to help achieve maximum control of the pest:

1. Treat non-porous surfaces only in areas protected from rainfall and spray from sprinklers with low volume applications using 0.5 to 1.0 fluid oz. of this product per gallon of water and applying this dilution at the rate of one gallon per 1,000 square feet.
2. Treat porous surfaces and vegetation with high volume applications (usually 5 to 10 finished gallons per 1,000 square feet) using dilutions that are calculated to deliver 0.5 to 1.0 fluid oz. of this product per 1,000 square feet (refer to the Dilution Chart).
3. For maximum residual control, dilute 1.0 fluid oz. of this product in up to 10 gallons of water and apply 1 to 10 gallons per 1,000 square feet.



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Carpenter Ants Indoors: Dilute 0.5 to 1.0 fluid oz. of this product per gallon of water and apply at the rate of one gallon of dilution per 1,000 square feet as a general surface, crack and crevice or spot treatment to areas where carpenter ants have been observed or are expected to forage. These areas include, but are not limited to, baseboards, in and behind cabinets, under and behind dishwashers, furnaces, refrigerators, sinks and stoves, around pipes, cracks and crevices and in corners. Particular attention ~~should~~must be given to treating entry points into the home or premises such as around doors and windows. Spray or foam into cracks and crevices or drill holes and spray, mist or foam into voids where carpenter ants or their nests are present. When using this product in combination with baits, apply this product as instructed, and use baits in other areas that have not been treated with this product.

Carpenter Ants Outdoors: Apply this product to carpenter ant trails around doors and windows and other places where carpenter ants have been observed or are expected to forage. For best results, locate and treat carpenter ant nests. Apply a perimeter treatment using either low or high volume applications described in the "Pest Control on Outside Surfaces and Around Buildings" section of this label. The higher dilutions and/or application volumes, as well as more frequent applications, may be necessary when treating concrete surfaces for carpenter ant control. The following procedures must be followed to help achieve maximum control of the pest:

1. Treat non-porous surfaces only in areas protected from rainfall and spray from sprinklers with low volume applications using 0.5 to 1.0 fluid oz. of this product per gallon of water and applying this dilution at the rate of one gallon per 1,000 square feet.
2. Treat the trunks of trees that have carpenter ant trails, or upon which carpenter ants are foraging, using 0.5 to 1.0 fluid oz. of this product per gallon of water and applying this dilution to thoroughly wet the bark from the base of the tree to as high as possible on the trunk.
3. Treat porous surfaces and vegetation with high volume applications (usually 5 to 10 finished gallons per 1,000 square feet) using dilutions that are calculated to deliver 0.5 to 1.0 fluid oz. of this product per 1,000 square feet (refer to the Dilution Chart).
4. For maximum residual control, dilute 1.0 fluid oz. of this product in up to 10 gallons of water and apply 1 to 10 gallons of dilution per 1,000 square feet.
   - To control carpenter ants inside trees, utility poles, fencing or deck materials and similar structural members, drill to locate the interior infested cavity and inject or foam a 0.06% dilution (1.0 fluid oz. of this product per gallon of water) into the cavity using a sufficient volume and an appropriate treatment tool with a splashback guard.
   - To control carpenter ants that are tunneling in the soil, dilute 0.5 to 1.0 fluid ounce of this product per gallon of water and apply as a drench or inject the dilution or foam at intervals of 8 to 12 inches. Establish a uniform vertical barrier at the edges of walls, driveways or other hard surfaces where ants are tunneling beneath the surfaces.
   - To protect firewood from carpenter ants (and termites), dilute 1.0 fluid oz. of this product per gallon of water and apply to the soil beneath where the firewood will be stacked at the rate of one gallon of dilution per 8 square feet.
   - For woodpiles and stored lumber apply a 0.06% dilution. Use a hose-end sprayer or sprinkling can to deliver a coarse drenching spray. Treated wood can be burned or used for lumber one month after treatment. **DO NOT** use in structures.

For Ant and Fire Ant Mounds: Control is optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will control existing colonies. If the soil is not moist, then irrigate before application or use a high volume application. Apply broadcast treatments of 0.5 to 1.0 fluid oz. per 1,000 square feet. Use enough finished volume to penetrate thatch or sod. Treat mounds by applying 1.0 fluid oz. of this product per mound in 1 .0 to 2.0 gallons water by sprinkling the mound until it is wet and treat 3 feet out around the mound. Use the higher volume for mounds larger than 12". Treat mounds with sufficient force to break their apex and allow the insecticide solution to flow into ant tunnels. For best results, apply in cool weather (65 - 80°F) or in early morning or late evening hours.

PEST CONTROL ON OUTSIDE SURFACES AND AROUND BUILDINGS

For control of Ants, Armyworms, Bees, Beetles[1], Biting Flies, Boxelder Bugs, Carpenter Ants, Centipedes, Chiggers, Chinch Bugs, Cicadas, Clover Mites, Crickets, Cutworms, Dichondra Flea Beetles, Earwigs, Elm Leaf Beetles, Fire Ants, Firebrats, Fleas, Flies, Gnats, Grasshoppers, Hornets, Japanese Beetles[1], Lady Beetles, Midges, Millipedes, Mosquitoes, Moths, Roaches (including Cockroaches), Scorpions, Silverfish, Sod Webworms, Sowbugs (Pillbugs), Spider Mites, Spiders (including Black Widow, Brown Recluse and Hobo Spiders), Springtails, Stink Bugs (including Brown Marmorated), Ticks (including Brown Dog Ticks), Vinegar (Fruit) Flies, Wasps, and Yellow Jackets.

[1] – Not for use in California.

Apply this product using a 0.02% to 0.06% dilution as a residual spray to outside surfaces of buildings including exterior siding, foundations, porches, window frames, eaves, patios, garages, refuse dumps, lawns such as grass areas adjacent or around private homes, duplexes, townhouses, condominiums, house trailers, apartment complexes, carports, garages,

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fence lines, storage sheds, barns, and other residential and non-commercial structures, soil, trunks of woody ornamentals and other areas where pests congregate or have been seen. **DO NOT** apply more than 1.0 fluid oz. of this product per 1,000 square feet. (Refer to the Dilution Chart.) Higher application volumes may be used to obtain the desired coverage of dense vegetation or landscaping materials.

Follow Additional Application Restrictions for Residential Outdoor Surface and Space Sprays under DIRECTIONS FOR USE.

Applications to vertical exterior surfaces (e.g., foundations) are permitted to a maximum height of 3 feet from ground level. Sections of vertical exterior surfaces that abut non-porous horizontal surfaces can only be treated if either 1) these sections are protected from rainfall and spray from sprinklers, or 2) they do not drain into a sewer, storm drain, or curbside gutter (e.g. not to sections that abut driveways or sidewalks that drain into streets).

Mixing Directions: For 0.02% dilution, mix 0.33 fluid oz. of this product per gallon of water. For 0.06% dilution, mix 1.0 fluid oz. of this product per gallon of water (1 fluid oz. = 2 tablespoons). **DO NOT** use household utensils to measure this product. Use the higher rate for heavy pest infestation, quicker knockdown or longer residual control. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed insect activity. Repeat application ~~should~~must be limited to no more than once per seven days.

Perimeter Treatment: Apply to a band of soil and vegetation 6 to 10 feet wide around and adjacent to the structure. Also, treat the foundation of the structure to a height of 2 to 3 feet. Apply 0.33 to 1.0 fluid oz. of this product per 1,000 square feet in sufficient water to provide adequate coverage (refer to Perimeter Application Dilution Chart).

For sections of foundation that abut non-porous horizontal surfaces, the treated areas must be protected from rainfall and spray from sprinklers or they do not drain into a sewer, storm drain, or curbside gutter (e.g. not to sections that abut driveways or sidewalks that drain into streets).

Broadcast Treatment of Wood for the Control of Wood-Infecting Insects and Nuisance Pests Outside of Structure: Apply 0.06% dilution with a fan spray using a maximum pressure of 25 p.s.i. Treatment ~~should~~must be made to thoroughly and uniformly cover the surface but limit excess runoff.

To control wood-infesting insects active inside trees, utility poles and/or fence posts, drill to find the interior infested cavity and inject a 0.06% dilution. To control Bees, Wasps, Hornets, and Yellow Jackets, apply in late evening when insects are at rest. Aim spray at nest opening in ground, bushes and in cracks and crevices which may harbor nests, saturating nest openings and contacting as many insects as possible.

Pests Under Slabs: Infestation of Arthropods, including Ants, Cockroaches and Scorpions inhabiting under slab area may be controlled by drilling and injecting or horizontal rodding and then injecting 1 gallon of a 0.06% 0.5 gallon of a 0.12% dilution per 10 square feet (or 2 gallons of a 0.06% dilution or a 1 gallon of a 0.12% dilution per 10 linear feet).

PERIMETER APPLICATION DILUTION CHART

Application Volume: Gallons per 1,000 sq. ft.	Application Rate: Fluid Ounces per 1,000 sq. ft.	Fluid Ounces* of This Product Diluted to these Volumes of Finished Spray			
		1 gallon	5 gallons	10 gallons	100 gallons
1	0.33	0.33	1.67	3.33	33.3
1	0.50	0.50	2.50	5.00	50.0
1	0.67	0.67	3.33	6.67	66.7
1	0.75	0.75	3.75	7.50	75.0
1	1.00	1.00	5.00	10.00	100.0
2	0.33	0.17	0.83	1.65	16.5
2	0.50	0.25	1.25	2.50	25.0
2	0.67	0.33	1.67	3.35	33.5
2	0.75	0.38	1.88	3.75	37.5
2	1.00	0.50	2.50	5.00	50.0
3	0.33	0.11	0.55	1.10	11.0
3	0.50	0.17	0.83	1.67	16.7
3	0.67	0.22	1.11	2.23	22.3
3	0.75	0.25	1.25	2.50	25.0
3	1.00	0.33	1.67	3.33	33.3
4	0.33	---	0.41	0.83	8.3
4	0.50	0.13	0.63	1.25	12.5
4	0.67	0.17	0.84	1.67	16.7
4	0.75	0.19	0.94	1.88	18.8
4	1.00	0.25	1.25	2.50	25.0
5	0.33	---	0.33	0.67	6.7

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5	0.50	0.10	0.50	1.00	10.0
5	0.67	0.13	0.67	1.33	13.3
5	0.75	0.15	0.75	1.50	15.0
5	1.00	0.20	1.00	2.00	20.0
10	0.33	---	0.17	0.33	3.3
10	0.50	---	0.25	0.50	5.0
10	0.67	---	0.33	0.67	6.7
10	0.75	---	0.38	0.75	7.5
10	1.00	0.10	0.50	1.00	10.0

*To convert to milliliters, multiply by 29.57.
1 fluid oz. = 29.57 ml = 2 tablespoons = 6 teaspoons.
DO NOT use household utensils to measure this product.

MOSQUITO CONTROL

To control adult mosquitoes on residential, institutional, public, commercial and industrial buildings, and lawns, ornamentals, parks, recreational areas and athletic fields.

Apply this product for mosquito control at an application rate of 0.33 to 1.0 fluid oz. of this product per gallon of water (0.07 to 0.22 lbs bifenthrin/acre), and apply at the rate of one gallon of dilution per 1,000 square feet as a general spray (refer to the Ornamental or Perimeter Application Dilution Chart).Use the high rate for residual control of mosquitoes. Use this product for control of urban mosquitoes that may potentially transmit malaria and arboviruses (West Nile fever, dengue fever, Eastern equine encephalitis, and St. Louis encephalitis).

Apply as a residual spray to outside surfaces of buildings including exterior siding, foundations, porches, window frames, eaves, patios, garages, refuse dumps, lawns such as grass areas adjacent to or around private homes, duplexes, townhouses, condominiums, house trailers, apartment complexes, carports, fence lines, storage sheds, barns, and other commercial, residential and non-commercial structures, soil, trunk of woody ornamentals, trees, shrubs, ground cover, bedding plants, foliage plants, flowers, non-bearing fruit and nut trees urban areas, parks, campsites, athletic fields, playgrounds, recreational and overgrown waste areas, roadsides and other areas where mosquitoes are found. This product may also be applied to non-bearing crops or perennial crops that will not produce harvestable raw agricultural commodities during the season of application.

Use the high rate for heavy pest infestation, quicker knockdown, or longer residual control. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure, or if there are signs of renewed insect activity. For the lower use rates, repeat application ~~should~~must be limited to no more than once per seven days. For the high use rate of 1.0 fluid oz. of this product per gallon of water. **DO NOT** apply more than once per four weeks.

Apply with a hand-held and back pack sprayers or mist blowers, ground sprayers, power sprayers, truck mounted hydraulic sprayers or mist blowers. **DO NOT** apply by air or with hand held or truck mounted cold aerosol ULV sprayers and thermal fogging devices. For best results apply when the mosquitoes are most active. Application during the cooler hours of the night or early mornings is recommended.

DO NOT apply more than 0.1 fluid oz. of this product per 1,000 square feet (equivalent to 0.22 lbs. bifenthrin/acre) per application.

DO NOT apply when wind speed exceed 10 MPH.

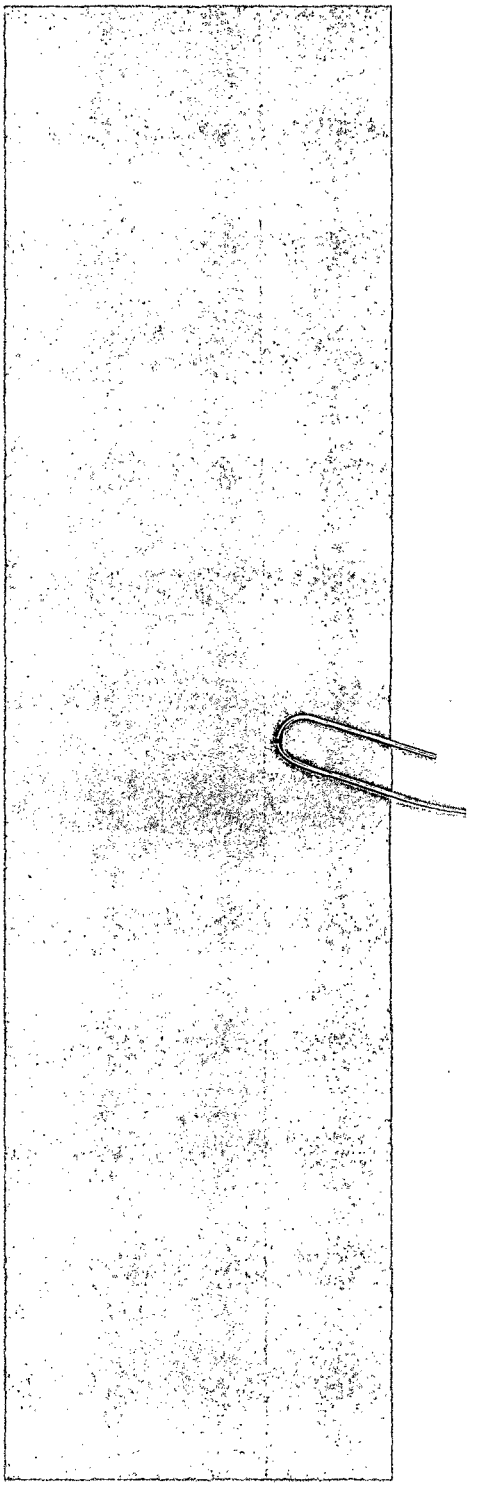
INDOOR USE

For control of Ants, Bees, Bedbugs, Beetles, Biting Flies, Boxelder Bugs, Carpenter Ants, Centipedes, Cicadas, Cockroaches, Crickets, Earwigs, Firebrats, Fleas, Flies, Gnats, Millipedes, Mosquitoes, Moths, Scorpions, Silverfish, Sowbugs (Pillbugs), Spider Mites, Spiders (including Black Widow, Brown Recluse and Hobo Spiders), Springtails, Stink Bugs (including Brown Marmorated), Ticks (including Brown Dog Ticks), Vinegar (Fruit) Flies, and Wasps.

In the home, all food processing surfaces and utensils ~~should~~must be covered during treatment or thoroughly washed before use. Exposed food ~~should~~must be covered or removed.

Use a 0.02% to 0.06% dilution (0.33 to 1.0 fluid oz. per gallon of water) for residual pest control in buildings and structures and on modes of transport. Apply either as a crack and crevice, pinstream, spot, coarse, low pressure spray (25 p.s.i. or less) or with a paint brush.

Apply as a coarse, low pressure, crack and crevice or spot spray to areas where pests hide, such as baseboards, comers, storage areas, closets, around water pipes, doors and windows, attics and eaves, behind and under refrigerators, cabinets, sinks, furnaces, stoves, the underside of shelves, drawers and similar areas. **DO NOT** use as a space spray. Pay particular attention to cracks and crevices.



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Mixing Directions: See mixing directions in "Pest Control on Outside Surfaces and Around Buildings" Section.

This product is to be diluted with water for spray or brush application. Fill sprayer with the desired volume of water and add this product. Close and shake before use in order to insure proper mixing. Mix only the amount of solution needed for the application. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed insect activity. Limit repeat application to no more than once per seven days.

Foam Applications: This product may be converted to a foam and used to treat void spaces, floor drains (to sewers) or as a spot treatment on vertical or horizontal surfaces where visual marking of application is desired. Use of a foaming agent like Upgared™ amplifying foam, increases a.i. surface contact time on challenging surfaces and provides visual marking of the application.

Bedbugs: Thorough application ~~should~~must be made to crack and crevices where evidence of bedbugs occur. This includes bed frames, box springs, inside empty dressers and clothes closets and carpet edges, high and low wall moldings and wallpaper edges. **DO NOT** use this product on bed liners, pillows, mattresses or clothes. Remove all clothes and other articles from dressers or clothes closets before application. Allow all treated areas to thoroughly dry before use. No recommended for use as sole protection against bedbugs. If evidence of bedbugs if found in/on mattresses, use products approved for this use.

Use a 0.06% dilution (1.0 fluid oz. per gallon of water) for residual pest control in buildings and structures and on modes of transport. Apply either as a crack and crevice, pinstream, spot, coarse, low pressure spray, (25 p.s.i. or less) or with a paint brush.

Cockroaches, Crickets, Firebrats, Flies, Gnats, Moths, Mosquitoes, Scorpions, Silverfish, Spiders and Ticks: Apply as a coarse, low pressure spray to areas where these pests hide, such as baseboards, corners, storage areas, closets, around water pipes, doors and windows, attics and eaves, behind and under refrigerators, cabinets, sinks, furnaces, and stoves, the underside of shelves, drawers and similar areas. Pay particular attention to cracks and crevices.

This product will provide up to 1 month residual control of house flies. Length of residual control is dependent upon rate and surface treated.

Ants: Apply to any trails, around doors and windows and other places where ants may be found.

Fleas: Apply as a course, low pressure spot or crack and crevice treatment to areas frequented by pets, such as under bedding, rugs, next to furniture. **DO NOT** apply dilutions of this product directly to pets. Treatment must be dry before pet re-entry. Vacuum prior to treatment.

This product will kill fleas for up to 3 months.

Boxelder Bugs, Centipedes, Cicadas, Earwigs, Beetles, Millipedes, Pillbugs (Sowbugs), Springtails, and Stink Bugs (including Brown Marmorated): Apply around doors and windows and other places where these pests may be found or where they may enter premises. Check damp areas and drains for pest access. Spray baseboards, storage areas and other locations.

Spider Mites: Treat houseplants thoroughly but **DO NOT** allow run off to occur. Make sure to treat underside of leaves.

Bees, Wasps, Hornets, and Yellow-Jackets: Apply a 0.06% dilution. Application ~~should~~must be made late in the evening when insects are at rest. Thoroughly spray nest and entrance and surrounding areas where insects alight. Spray liberally into hiding and breeding places, especially under attic rafters, contacting as many insects as possible. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed insect activity.

Important: DO NOT apply dilution until location of heat pipes, ducts, water and sewer lines and electrical conduits are known and identified. Caution must be taken to avoid puncturing and injection into these structural elements. **DO NOT** apply into electrical fixtures, switches, or sockets.

In the home, all food processing surfaces and utensils in the treatment area ~~should~~must be covered during treatment or thoroughly washed before re-use. Remove pets, birds, and cover aquariums before spraying. **DO NOT** allow humans or pets to contact treated surfaces until the spray has dried.

During any overhead applications to overhead interior areas structures, cover surfaces below with plastic sheeting, waterproof covering (such as polyethylene sheeting), or similar materials.

Wear protective clothing, unvented goggles, gloves and respirator, when applying to overhead areas or in poorly ventilated areas. Avoid touching sprayed surfaces until spray has completely dried.

CONTROL OF STORED PRODUCTS

This product may be used for control of stored products for pests including Indian Meal Moths, Rice Moths, Tobacco Moths, Flour Beetles, Lesser Grain Borers, Merchant Grain Beetles, Sawtoothed Grain Beetles, Grain Weevils, Warehouse Beetles, Cigarette Beetles, Dermestid Beetles, and Psocids. Inspect and locate and remove infested food sources, remove or cover any food items or food serving dishes or utensils prior to treatment. Apply this product using a 0.02 to 0.06% dilution. Apply as a course, low pressure spray to areas where these pests hide, such as baseboards, corners, storage areas, closets, around water pipes, doors and windows, attics and eaves, behind and under refrigerators, cabinets, sinks, furnaces, and stoves, the underside of shelves, drawers and similar areas. Pay particular attention to cracks and crevices. **DO NOT** apply directly to food.

Warehouses And Grocery/Pet Stores: Dilutions of this product may be applied as a general surface, spot or crack and crevice treatment in food and nonfood storage warehouses and stores. Apply to all areas that may harbor pests, including under and between pallets, bins, and shelves. **DO NOT** apply directly to food, grain bins (interior), or animals.

FOOD/FEED HANDLING ESTABLISHMENT APPLICATIONS

Applications of this product are permitted in both food/feed and nonfood areas of food/feed handling establishments as a general surface, spot, or crack and crevice treatment.

Food/feed handling establishments are defined as places other than private residences in which exposed food/feed is held, processed, prepared or served. Included also are areas for receiving, storing, packing (canning, bottling, wrapping, boxing), preparing, edible waste storage and enclosed processing systems (mills, dairies, edible oils, syrups) of food. Serving areas where food is exposed and the facility is in operation are also considered food areas.

Permitted non-food areas of use include, garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, garages, mop closets and storage (after canning or bottling).

Permitted use sites include, but are not limited to: aircraft (**DO NOT** use in aircraft cabins), apartment buildings, bakeries, bottling facilities, breweries, buses, cafeterias, candy plants, canneries, dairy product processing plants, food manufacturing plants, food processing plants, food service establishments, granaries, grain mills, hospitals, hotels, industrial buildings, laboratories, meat/poultry/egg processing plants, mobile/motor homes, nursing homes, offices, railcars, restaurants, schools, ships, trailers, trucks, vessels, warehouses, and wineries.

General Surface Application: DO NOT use this application method in food/feed handling establishments when the facility is in operation or foods/feeds are exposed. **DO NOT** apply directly to food products. Cover or remove all food processing and/or handling equipment during application. After application in food processing plants, bakeries, cafeterias, and similar facilities, wash all equipment, benches, shelving and other surfaces which food will contact. Clean food handling or processing equipment and thoroughly rinse with clean fresh water. **DO NOT** apply this product to any animal feed, water, or watering equipment. **DO NOT** contaminate any animal feed, food, or water in and around livestock, poultry, or pet housing when making applications.

Spot, Crack and Crevice Application: Spot or crack and crevice applications may be made while the facility is in operation; however, food ~~should~~must be covered or removed from area being treated. **DO NOT** apply directly to food. For this application a "spot" will not exceed 2 feet^2.

ANIMAL CONFINEMENT FACILITIES, LIVESTOCK PREMISES CONFINED ANIMAL FEEDING OPERATIONS AND KENNELS

Controls pests of poultry/livestock facilities and kennels, including biting flies, filth-breeding flies, fleas, litter beetles, hide beetles, bedbugs, mites, and ticks. Apply as a general surface (including directed spray) and/or crack and crevice treatment. Control is enhanced when interior and exterior perimeter applications are made in and around the livestock, poultry, or pet housing structures. Normal cleaning practices of the structure also must be followed along with applications of this product to effectively control crawling and flying insect pests.

For occupied areas of poultry/livestock facilities and kennels, apply to indoor crack and crevices only. Exterior applications to walls and foundation perimeters can help prevent interior infestations of flying and crawling insect pests. Apply this product as a rate equivalent to 0.33 to 1.0 fluid oz. per 1,000 square feet.

For unoccupied areas of poultry/livestock facilties and kennels, apply to floors, vertical and overhead surfaces where crawling or flying insect pests may be present. Feeders, waterers, and feed carts ~~should~~must be covered before application to prevent contamination. **DO NOT** apply to milk rooms. Pay attention to animal areas including stanchions, pipes, windows, doors, and areas where insect pests hide or congregate. Exterior applications to walls and foundation perimeters can help

prevent interior or infestations of flying and crawling insect pests. Apply this product at a rate equivalent to 0.33 to 1.0 fluid oz. per 1,000 square feet. Use sufficient finished volume to penetrate leaf litter, thatch, mulch or porous surfaces.

To control bedbugs, mites and ticks in animal facilities, treat cracks/crevices, walls, posts, nest boxes, and mobile side curtains. **DO NOT** apply this product directly to animals. To control bedbugs, use 0.5 to 1.0 fluid oz. per 1,000 square feet. *Use the higher rate of application on painted and non-porous surfaces.*

For adult fly control in and around animal facilities, spray application ~~should~~must target areas where flies will rest, such as ceiling, rafters, and trusses. Also treat windows, interior and exterior walls and supports, fences, and vegetation. Dilution of this product may be sprayed on manure in areas where fly larvae are abundant and the area cannot be cleaned.

For poultry houses, apply to floor area (birds grown on litter) or to walls, posts, and cage framing (birds grown in cages). Application ~~should~~must also be made into cracks and crevices around insulation. Reapply after each growout or sanitization procedure, but not more frequently than every eight weeks. Indoor control can be enhanced by making perimeter treatments around the outside of building foundations to prevent immigrating adult beetles. Apply in a uniform band 2 to 3 feet up and 6 to 10 feet out from the structure. Maintaining a year-round treatment program will prevent background populations from reaching problem levels.

To control beetles in houses containing birds grown on litter, apply this product as a rate equivalent to 0.33 to 1.0 fluid oz. per 1,000 square feet to litter after birds are removed and during tilling. If litter is removed and replaced with fresh litter, apply this product at a rate equivalent to 0.33 to 1.0 fluid oz. per 1,000 square feet to bare soil or concrete, and treat new litter after it is spread. Apply spray to inside walls, posts, and exterior perimeter. Reapply between each flock.

To control beetles in broiler-breeder houses, apply as directed above for litter and soil/floor treatment.

To control beetles in caged-layer houses, **DO NOT** treat accumulated manure, as it will likely disrupt natural enemies that control fly breeding. Instead, treat the perimeter of the manure at a rate equivalent to 0.33 to 1.0 fluid oz. of this product per 1,000 square feet. Pit walls, posts, and exterior of structure ~~should~~must also be sprayed. Reapply between each flock.

Allow treatment of this product to dry before applying disinfections.

DO NOT apply this product as a general surface spray when animals are present in the facility. Allow applications to dry before restocking the facility. Treatment may be made to cracks and crevices when animals are present.

DO NOT apply this product to any animal feed, water, or watering equipment.

DO NOT contaminate any animal feed, food, or water in and around livestock, poultry, or pet housing when making applications.

Foam Applications: This product may be converted to foam and used to treat void spaces, floor drains (to sewers) or as a spot spray on vertical or horizontal surfaces where visual marking of application is desired. Use of a foaming agent like Upgrade™ amplifying foam increases a.i. surface contact time on challenging surfaces and provides visual marking of the application. Ensure that the foaming agent is approved for food surface/area contact use..

SPECIFIC PEST CONTROL APPLICATIONS

Underground Services such as: wires, cables, utility lines, pipes, conduits, etc. Services may be within structures or located outside structures, in right-of-ways or to protect long range (miles) of installations of services.

Soil treatment may be made using 0.06% to 0.12% dilution to prevent attack by Termites and Ants.

Apply 2 gallons of dilution per 10 linear feet to the bottom of the trench and allow to soak into the soil. Lay services on the treated soil and cover with approximately 2 inches of fill soil. Apply another 2 gallons per 10 linear feet over the soil surface to complete the treatment barrier. In wide trenches, only treat the soil in the area near the services. It is important to establish a continuous barrier of treated soil surrounding the services.

Where soil will not accept the above labeled volume, 1 gallon of 0.12% dilution may be used per 10 linear feet of trench both to the bottom of the trench and over the soil on top of the services.

Finish filling the trench with treated fill soil. The soil where each service protrudes from the ground may be treated by trenching/rodding of no more than 1 to 2 gallons of dilution into the soil.

Precautions: DO NOT treat electrically active underground services.

Posts, Poles, and Other Constructions

Create an insecticidal barrier in the soil around wooden constructions such as signs, fences and landscape ornamentation by applying a 0.06% dilution.

Previously installed poles and posts may be treated by sub-surface injection or treated by gravity-flow through holes made from the bottom of a trench around the pole or post. Treat on all sides to create a continuous insecticidal barrier around the pole. Use 1 gallon of dilution per foot of depth for poles and posts less than 6 inches in diameter. For larger poles, use 1.5 gallons of dilution per foot of depth. Apply to a depth of 6 inches below the bottom of the wood. For larger constructions, use 4 gallons per 10 linear feet per foot of depth.

Treatment of Wood-in-Place for Control of Wood-Infesting Insects: (Localized Areas in Structure) For the control of insects such as Termites, Ants, Carpenter Ants, and wood-infesting beetles such as Old House Borer and Powder Post in localized areas of infested wood in and around structures, apply a 0.06% dilution to voids and galleries in damaged wood and in spaces between wooden members of a structure and between wood and foundation where wood is vulnerable. Paint on or fan spray application may also be used. Plastic sheeting must be placed immediately below overhead areas that are spot treated except for soil surfaces in crawl spaces. Application may be made to inaccessible areas by drilling, and then injecting dilution with a crack and crevice injector into the damaged wood or void spaces. This type of application is not intended to be a substitute for soil treatment, mechanical alteration or fumigation to control extensive infestation of wood-infesting insects.

Termite carton nests in trees or building voids may be injected with 0.06% dilution. Multiple injection points to varying depths may be necessary. It is desirable to physically remove carton nest material from building voids when such nests are found.

Pest Control in Crawl Spaces and Voids: Broadcast apply this product at 0.02% to 0.06% to all surfaces in crawl space and/or void to control ants, fleas, roaches, scorpions, or other arthropods. This treatment is not intended as a substitute for termite control. Treatment ~~should~~must be made to thoroughly and uniformly cover the surface but limit excess runoff. Keep children and pets off surface until dry.

SUBTERRANEAN TERMITE CONTROL

Directions for Use

All pesticide handlers (mixers, loaders and applicators) must wear long-sleeved shirt and long pants, socks, shoes and chemical resistant gloves. After the product is diluted in accordance with label directions for use, and/or when mixing and loading using a closed spray tank transfer system (such as an in-line injector system), sufficient PPE is as follows: shirt, pants, socks, shoes and waterproof gloves. In addition, all pesticide handlers must wear a respiratory protection device[1] when working in non-ventilated space. All pesticide handlers must wear protective eyewear when working in non-ventilated space or when applying termiticide by rodding or sub-slab injection.

[1] – Use one of the following NIOSH approved respirator with any ~~R~~R, P, or HE filter, or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P, or HE prefilter.

When treating adjacent to an existing structure, the applicator must check the area to be treated, and immediately adjacent areas of the structure, for visible and accessible cracks and holes to prevent any leaks or significant exposures to persons occupying the structure. People present or residing in the structure during application must be advised to remove their pets and themselves from the structure if they see any signs of leakage. After application, the applicator is required to check for leaks. All leaks resulting in the decomposition of termiticide in locations other than those prescribed on this label must be cleaned up prior to leaving the application site. **DO NOT** allow people or pets to contact contaminated areas or to reoccupy contaminated areas of the structure until the clean-up is completed.

The use of this product prevents and controls termite infestations in and around structures and constructions.

The insecticidal dilution must be adequately dispersed in the soil to establish a barrier between the wood and the termites in the soil. As a good practice: 1) all non-essential wood and cellulose containing materials, ~~should~~must be removed from around foundation walls, crawl spaces, and porches; 2) eliminate termite access to moisture by repairing faulty plumbing and/or construction grade. Soil around untreated structural wood in contact with soil ~~should~~must be treated as described below.

To establish an effective insecticidal barrier with this product the service technician must be familiar with current termite control practices such as: trenching, rodding, sub-slab injection, coarse fan spraying of soil surfaces, crack and crevice (void) injection, excavated soil treatment, and brush or spray applications to infested or susceptible wood. These techniques must be correctly employed to prevent or control infestations by subterranean termites such as: *Coptotermes. Heterotermes, Reticulitermes and Zootermopsis*. The biology and behavior of the species involved ~~should~~must be considered by the service technician in determining which control practices to use to control the termite infestation.

Choice of appropriate procedures ~~should~~must include consideration of such variable factors as the design of the structure, location of heating, ventilation, and air conditioning (HVAC) systems, water table, soil type, soil compaction, grade conditions, and location and type of domestic water supplies and utilities.

For advice concerning control practices with relation to specific local conditions, consult resources in structural pest control and state cooperative extension and regulatory agencies.

Important: Contamination of public and private water supplies must be avoided by following these precautions: Use anti-backflow equipment or procedures to prevent siphonage of insecticide into water supplies. **DO NOT** contaminate cisterns or wells. **DO NOT** treat soil that is water saturated or frozen or in any conditions where runoff or movement from the treatment area (site) is likely to occur. Consult state and local specifications for recommended distances of wells from treated areas, or if such regulations do not exist, refer to Federal Housing Administration Specifications (H.U.D.) for guidance.

Note: Crawl spaces are to be considered inside of the structure.

Critical Areas: Critical areas include areas where the foundation is penetrated by utility services, cracks and expansion joints, bath traps and areas where cement constructions have been poured adjacent to the foundation such as stairs, patios and slab additions.

Structures with Wells/Cisterns Inside Foundations
Structures that contain wells or cisterns within the foundation of a structure can only be treated using the following techniques:

1. **DO NOT** treat soil while it is beneath or within the foundation or along the exterior perimeter of a structure that contains a well or cistern. The treated backfill method must be used if soil is removed and treated outside/away from the foundation. The treated backfill technique is described as follows:
   a. Trench and remove soil to be treated onto heavy plastic sheeting or similar material or into a wheelbarrow.
   b. Treat the soil at the rate of 4 gallons of dilution per 10 linear feet per foot of depth of the trench, or 1 gallon per 1.0 cubic feet of soil. See "Mixing Directions" section of the label. Mix thoroughly into the soil taking care to contain the liquid and prevent runoff or spillage.
   c. After the treated soil has absorbed the dilution, replace the soil into the trench.
2. Treat infested and/or damaged wood in place using an injection technique such as described in the "Control of Wood Infesting Insects" section of this label.

Structures with Adjacent Wells/Cisterns and/or Other Water Bodies
Applicators must inspect all structures with nearby water sources such as wells, cisterns, surface ponds, streams, and other bodies of water and evaluate, at a minimum, the required treatment listed below prior to making an application.

1. Prior to treatment, if feasible, expose the water pipe(s) coming from the well to the structure, if the pipe(s) enter the structure within 3 feet of grade.
2. Prior to treatment, applicators are advised to take precautions to limit the risk of applying the termiticide into subsurface drains that could empty into any bodies of water. These precautions include evaluating whether application of the termiticide to the top of the footer may result in contamination of the subsurface drain. Factors such as depth to the drain system and soil type and degree of compaction ~~should~~must be taken into account in determining the depth of treatment.
3. When appropriate (i.e., on the water side of the structure), the treated backfill technique (described above) can also be used to minimize offsite movement of termiticide.

Prior to using this technique near wells or cisterns, consult state, local or federal agencies for information regarding approved treatment practices in your area.

Application Rate: Use a 0.06% dilution for subterranean termites. For other pests on the label use specific listed rates.

Mixing Directions: Mix the termiticide use dilution in the following manner: Fill tank 1/4 to 1/3 full. Start pump to begin by-pass agitation and place end of treating tool in tank to allow circulation through hose. Add appropriate amount of this product. Add remaining amount of water. Let pump run and allow recirculation through the hose for 2 to 3 minutes.

This product may also be mixed into full tanks of water, but requires substantial agitation to insure uniformity of the dilution. To prepare a 0.06% water dilution, ready to use, dilute 3 quarts of this product with 99.25 gallons of water.

Mixing: For the desired application rate, use the chart below to determine the amount of this product for a given volume of finished dilution:

AMOUNT OF THIS PRODUCT			
Dilution Concentration	**Amount of This Product**	**Amount of Water**	**Desired Gallons of Finished Dilution**
0.06%	1.00 oz.	127.00 oz.	1
	5.00 oz.	4.90 gal.	5
	10.00 oz.	9.90 gal.	10
	25.00 oz.	24.80 gal.	25
	1.50 qt.	49.60 gal.	50
	2.25 qt.	74.40 gal.	75
	3.00 qt.	99.25 gal.	100
	4.50 qt.	148.80 gal.	150
	6.00 qt.	198.50 gal.	200
0.12%*	2.00 oz.	126.00 oz.	1
	10.00 oz.	4.90 gal.	5
	19.50 oz.	9.80 gal.	10
	1.50 qt.	24.60 gal.	25
	3.00 qt.	49.20 gal.	50
	4.50 qt.	73.80 gal.	75
	6.00 qt.	98.50 gal.	100
	9.00 qt.	147.70 gal.	150
	3.00 gal.	197.00 gal.	200

Common units of measure:
1 pint = 16 fluid ounces (oz.)
1 quart = 2 pints = 4 cups = 32 fluid ounces (oz.)

*For Termite applications, only use this rate in conjunction with the application volume adjustments as listed in the section below or in the foam or underground service application sections.

Application Volume: To provide maximum control and protection against termite infestation apply the specified volume of the finished water dilution and active ingredient as set forth in the directions for use section of this label. If soil will not accept the labeled application volume, the volume may be reduced provided there is a corresponding increase in concentration so that the amount of active ingredient applied to the soil remains the same.

Note: Large reductions of application volume reduce the ability to obtain a continuous barrier. Variance is allowed when volume and concentration are consistent with label directed rates and a continuous barrier can still be achieved.

Where desirable for pre-construction and post-construction treatments, the volume of the 0.12% dilution may be reduced by 1/2 the labeled volume. See Volume Adjustment Chart below.

Note: When volume is reduced, the hole spacing for sub-slab injection and soil rodding may require similar adjustment to account for lower volume dispersal of the termiticide in the soil.

VOLUME ADJUSTMENT CHART		
Rate (% Dilution)	**0.06%**	**0.12%**
Volume allowed		
Horizontal (gallons dilution/10 sq. ft.)	1.0 gallons	0.5 gallons
Vertical (gallons dilution/10 lin. ft.)	4.0 gallons	2.0 gallons

After Treatment: All holes in commonly occupied areas into which this product has been applied, must be plugged. Plugs must be of a non-cellulose material or covered by an impervious, non-cellulose material.

PRE-CONSTRUCTION SUBTERRANEAN TERMITE TREATMENT

The applicator must either cover the soil him/herself or provide written notification of the above requirement to the contactor on site and to the person commissioning the application (if different than the contractor). If notice is provided to the contactor or the person commissioning the application, then they are responsible under FIFRA to ensure that:

1) If the concrete slab cannot be poured over the treated soil withing 24 hours of application the treated soil is covered with waterproof covering (such as polyethylene sheeting), and
2) The treated soil is covered if precipitation is predicted to occur before the concrete slab is scheduled to be poured.

DO NOT treat soil that is water-saturated or frozen.

DO NOT treat when raining.

DO NOT allow treatment to run-off from the target area.

DO NOT apply within 10 feet of storm drains. **DO NOT** apply within 25 feet of aquatic habitats (such as lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds).

Pre-Construction Treatment: Do not apply at a lower dosage and/or concentration than specified on this label for applications prior to the installation of the finished grade.

When treating foundations deeper than 4 feet, apply the termiticide as the backfill is being replaced, or if the construction contractor fails to notify the applicator to permit this, treat the foundation to a minimum depth of 4 feet after the backfill has been installed. The applicator must trench and rod into the trench or trench along the foundation walls and around pillars and other foundation elements, at the rate prescribed from grade to a minimum depth of 4 feet. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. However, in no case should a structure be treated below the footing.

DO NOT make on-grade applications when sustained wind speeds are above 10 mph (at application site) at nozzle end height.

Effective pre-construction subterranean Termite control is achieved by the establishment of vertical and/or horizontal insecticidal barriers using 0.06% dilution of this product. To meet Termite proofing requirements, follow the procedures in the latest edition of the Housing and Urban Development Minimum Property Standards.

Horizontal Barriers
Create a horizontal barrier wherever treated soil will be covered by a slab, such as footing trenches, slab floors, carports, and the soil beneath stairs and crawl spaces.

For a 0.06% rate apply 1 gallon of dilution per 10 square feet, or use 1.0 fluid ounce of this product per 10 square feet in sufficient water (no less than 1/2 gallon or more than 2 gallons) to provide thorough and continuous coverage of the area being treated.

If the fill is washed gravel or other coarse material, it is important that a sufficient amount of dilution be used to reach the soil substrate beneath the coarse fill.

Applications shall be made by a low pressure spray (less than 50 p.s.i.) using a coarse spray nozzle. If slab will not be poured the same day as treatment, cover treated soil with a water-proof barrier such as polyethylene sheeting. This is not necessary if foundation walls have been installed around the treated soil.

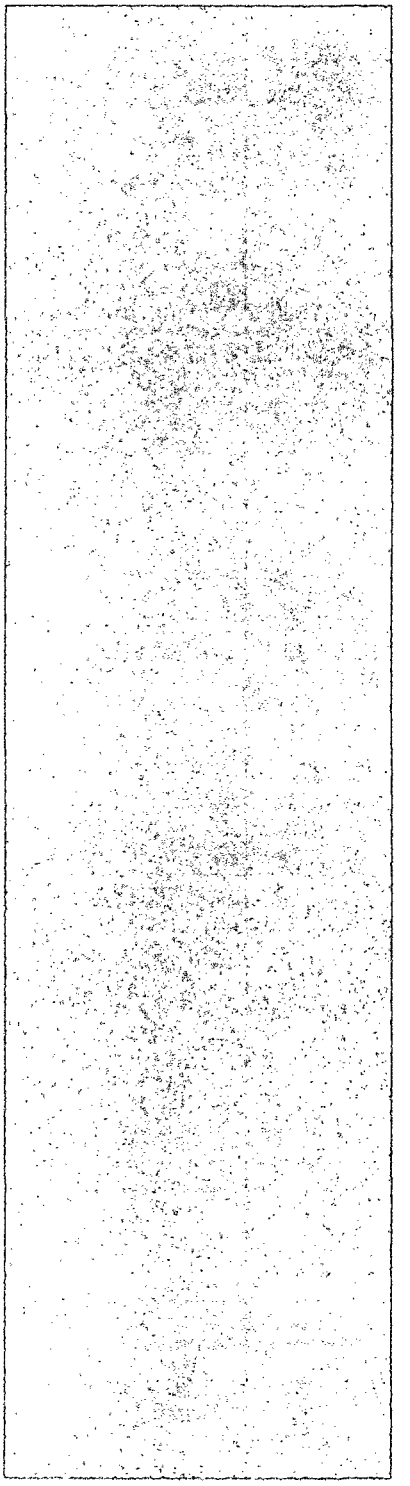
Vertical Barriers
Vertical barriers must be established in areas such as around the base of foundations, plumbing, utility entrances, back-filled soil against foundation walls and other critical areas.

For a 0.06% rate, apply 4 gallons of dilution per 10 linear feet per foot of depth or 4.0 fluid ounces of this product per 10 linear feet per foot of depth from grade to top of footing in sufficient water (not less than 2 gallons or more than 8 gallons) to ensure complete coverage.

a) When trenching and rodding into the trench, or trenching, it is important that dilution reaches the top of the footing. Rod holes must be spaced so as to achieve a continuous termiticide barrier, but in no case more than 12 inches apart.
b) Care ~~should~~must be taken to avoid soil wash-out around the footing.
c) Trenches need not be wider than 6 inches. Dilution ~~should~~must be mixed with the soil as it is being replaced in the trench.
d) For a monolithic slab, an inside vertical barrier may not be required.

Hollow block voids may be treated at a rate of 2 gallons of dilution per 10 linear feet so that the dilution will reach the top of the footing.

Prior to each application, applicators must notify the general contractor, construction superintendent, or similar responsible party of the intended termiticide application and intended sites of application and instruct the responsible person to notify construction workers and other individuals to leave the area to be treated during application and until the termiticide is absorbed into the soil.



POST-CONSTRUCTION SUBTERRANEAN TERMITE TREATMENT

Use a 0.06% dilution for post-construction treatment. Post-construction soil applications shall be made by injection, trenching and rodding into the trench or trenching of coarse fan spray with pressures not exceeding 25 p.s.i. at the nozzle. Care ~~should~~must be taken to avoid soil wash-out around the footing.

DO NOT apply dilution until location of wells, radiant heat pipes, water and sewer lines and electrical conduits are known and identified. Caution must be taken to avoid puncturing and injection into these elements.

Foundations: For applications made after the final grade is installed, the applicator must trench and rod into the trench or trench along the foundation walls and around pillars and other foundation elements, at the rate prescribed from grade to the top of the footing. When the footing is more than four (4) feet below grade, the applicator must trench and rod into the trench or trench along the foundation walls at the rate prescribed to a minimum depth of four feet. The actual depth of treatment will vary depending on soil type, degree of compaction, and location of termite activity. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. However, in no case should a structure be treated below the footing.

Slabs: Vertical barriers may be established by sub-slab injection within the structure and trenching and rodding into the trench or trenching outside at the rate of 4 gallons of dilution per 10 linear feet per foot of depth. Special care must be taken to distribute the treatment evenly. Treatment ~~should~~must not extend below the bottom of the footing.

Treat along the outside of the foundation and where necessary beneath the slab on the inside of foundation walls. Treatment may also be required beneath the slab along both sides of interior footing-supported walls, one side of interior partitions and along all cracks and expansion joints. Horizontal barriers may be established where necessary by long-rod ding or by grid pattern injection vertically through the slab.

a) Drill holes in the slab and/or foundation to allow for the application of a continuous insecticidal barrier.

b) For shallow foundations (1 foot or less) dig a narrow trench approximately 6 inches wide along the outside of the foundation walls. **DO NOT** dig below the bottom of the footing. Apply the dilution to the trench and soil at 4 gallons of dilution per 10 linear feet per foot of depth as the soil is replaced in the trench.

c) For foundations deeper than 1 foot follow rate for basement.

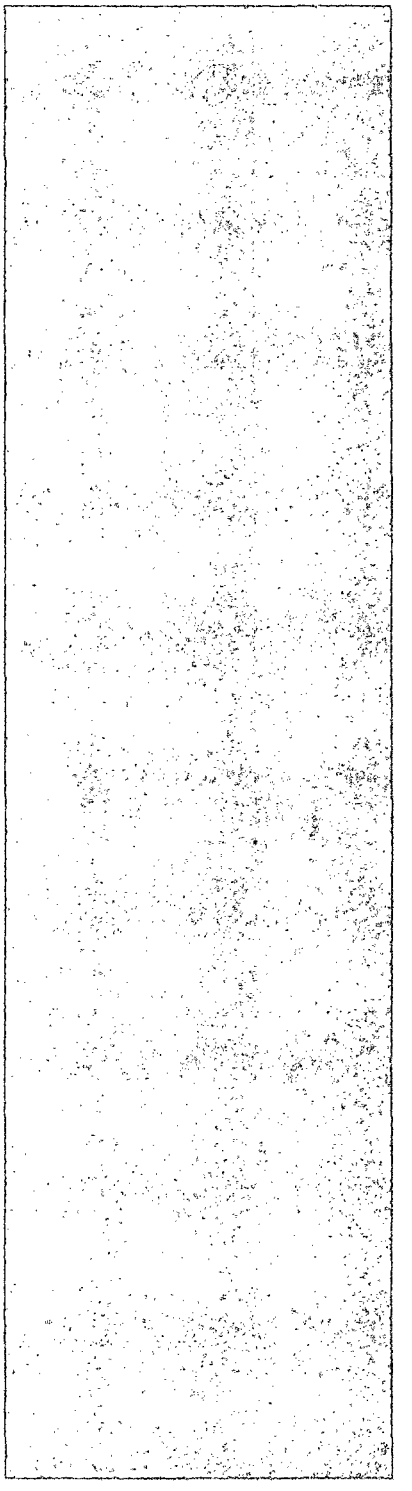
d) Exposed soil and wood in bath traps may be treated with a 0.06% dilution.

Basements: Where the footing is greater than 1 foot of depth from grade to the bottom of the foundation, application must be made by trenching and rodding into the trench, or trenching at the rate of 4 gallons of dilution per 10 linear feet per foot of depth. When the footer is more than four feet below grade, the applicator may trench and rod into the trench, or trench along foundation walls at the rate prescribed for four feet of depth. Rod holes must be spaced to provide a continuous insecticidal barrier, but in no case more than 12 inches apart. The actual depth of treatment will vary depending on soil type, degree of compaction, and location of termite activity. However, in no case should a structure be treated below the footer. Sub-slab injection may be necessary along the inside of foundation walls, along cracks and partition walls, around pipes, conduits, piers, and along both sides of interior footing-supported walls.

Accessible Crawl Spaces: For crawl spaces, apply vertical termiticide barriers at the rate of 4 gallons of dilution per 10 linear feet per foot of depth from grade to the top of the footing, or if the footing is more than 4 feet below grade, to a minimum depth of 4 feet. Apply by trenching and rodding into the trench, or trenching. Treat both sides of foundation and around all piers and pipes. Where physical obstructions such as concrete walkways adjacent to foundation elements prevent trenching, treatment may be made by rodding alone. When soil type and/or conditions make trenching prohibitive, rodding may be used. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing to a depth not to exceed the bottom of the footing. Read and follow the mixing and use direction section of the label if situations are encountered where the soil will not accept the full application volume.

1. Rod holes and trenches must not extend below the bottom of the footing.
2. Rod holes must be spaced so as to achieve a continuous termiticide barrier but in no case more than 12 inches apart.
3. Trenches must be a minimum of 6 inches deep or to the bottom of the footing, whichever is less, and need not be wider than 6 inches. When trenching in sloping (tiered) soil, the trench must be stepped to ensure adequate distribution and to prevent termiticide from running off. The dilution must be mixed with the soil as it is replaced in the trench.
4. When treating plenums or crawl spaces, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil.

Inaccessible Crawl Spaces: For inaccessible interior areas, such as areas where there is insufficient clearance between floor joists and ground surfaces to allow operator access, excavate if possible, and treat according to the instructions for accessible crawl spaces. Otherwise, apply one or a combination of the following two methods:



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1. To establish a horizontal barrier, apply to the soil surface, 1 gallon of dilution per 10 square feet overall using a nozzle pressure of less than 25 p.s.i. and a coarse application nozzle (e.g., Delavan type RD Raindrop, RD-7 or larger, or Spraying Systems Co. 8010LP TeeJet or comparable nozzle). For an area that cannot be reached with the application wand, use one or more extension rods to make the application to the soil. **DO NOT** broadcast or powerspray with higher pressures.
2. To establish a horizontal barrier, drill through the foundation wall or through the floor above and treat the soil perimeter at a rate of 1 gallon of dilution per 10 square feet. Drill spacing must be at intervals not to exceed 16 inches. Many States have smaller intervals, so check State regulations which may apply.

When treating plenums and crawl spaces, turn off the air circulation system of the structure until application has been completed and all termiticide has been absorbed by the soil.

Masonry Voids: Drill and treat voids in multiple masonry elements of the structure extending from the structure to the soil in order to create a continuous treatment barrier in the area to be treated. Apply at the rate of 2 gallons of dilution per 10 linear feet of footing, using a nozzle pressure of less than 25 p.s.i. When using this treatment, access holes must be drilled below the sill plate and ~~should~~must be as close as possible to the footing as is practical. Treatment of voids in block or rubble foundation walls must be closely examined. Applicators must inspect areas of possible runoff as a precaution against application leakage in the treated areas. Some areas may not be treatable or may require mechanical alteration prior to treatment.

All leaks resulting in the deposition of termiticide in locations other than those prescribed on this label must be cleaned up prior to leaving the application site. **DO NOT** allow people or pets to contact contaminated areas or to reoccupy the contaminated areas of the structure until clean-up is completed.

Note: When treating behind veneer, care ~~should~~must be taken not to drill beyond the veneer. If concrete blocks are behind the veneer, both the blocks and the veneer may be drilled and treated at the same time.

Not for use in voids insulated with rigid foam insulation.

Excavation Technique: If treatment must be made in difficult situations, along fieldstone or rubble walls, along faulty foundation walls, and around pipes and utility lines which lead downward from the structure to a well or pond, application may be made in the following manner:

a) Trench and remove soil to be treated onto heavy plastic sheeting or similar material.
b) Treat the soil at the rate of 4 gallons of dilution per 10 linear feet per foot of depth of the trench. Mix the dilution thoroughly into the soil taking care to prevent liquid from running off the liner.
c) After the treated soil has absorbed the liquid dilution, replace the soil in the trench.

Attention: When applying this product in a confined area, the user ~~should~~must wear unvented goggles and a respirator approved by NIOSH during application.

Foam Applications: Dilutions of this product, from 0.06 to 0.12%, may be converted to a foam with expansion characteristics from 2 to 40 times.

Localized Application: The dilution may be converted to a foam and the foam used to control or prevent termite infestations.

Depending on the circumstances, foam applications may be used alone or in combination with liquid dilution applications. Applications may be made behind veneers, piers, chimney bases, into rubble foundations, into block voids or structural voids, under slabs, stoops, porches, or to the soil in crawl spaces, and other similar voids.

Foam and liquid application must be consistent with volume and active ingredient instructions in order to insure proper application has been made. The volume and amount of active ingredient are essential to an effective treatment. At least 75% of the labeled liquid dilution volume of product must be applied, with the remaining percent delivered to appropriate areas using foam application. Refer to label and use recommendations of the foam manufacturer and the foaming equipment manufacturer.

Foam applications are generally a good supplement to liquid treatments in difficult areas, but may be used alone in difficult spots.

Application Under Slabs or to Soil in Crawl Spaces to Prevent or Control Termites
Application may be made using foam of this product alone or in combination with liquid dilution. The equivalent of at least 4 gallons (4.0 ounces concentrate of this product) of 0.06% dilution per 10 linear feet (vertical barrier), or at least 1 gallon (1.0 ounce of this product concentrate) of 0.06% dilution per 10 square feet (horizontal barrier) must be applied either as dilution, foam, or a combination of both. For a foam only application, apply this product concentrate in sufficient foam concentration and foam volume to deposit 4.0 ounces of concentrate per 10 linear feet or 1.0 ounce of concentrate per 10 square feet. For example, 2 gallons of 0.12% dilution generated as foam to cover 10 linear feet is equal to the application of 4 gallons of 0.06% dilution per 10 linear feet.

Sand Barrier Installation and Treatment

Termites can build mud tubes over treated surfaces as long as they have access to untreated soil and do not have to move this product's treated soil. Susceptible cracks and spaces can be filled with builder's or play box sand and treat the sand with this product. The sand ~~should~~must be treated as soil following the termiticide rate listed on this label.

Retreatment for subterranean termites can only be performed if there is clear evidence of reinfestation or disruption of the barrier due to construction, excavation, or landscaping and/or evidence of the breakdown of the termiticide barrier in the soil. These vulnerable or reinfested areas may be retreated in accordance with application techniques described in this product's labeling. The timing and type of these retreatments will vary depending on factors such as termite pressure, soil types, soil conditions and other factors which may reduce the effectiveness of the barrier.

Annual retreatment of the structure is prohibited unless there is clear evidence that reinfestation or barrier disruption has occurred.

APPLICATION IN CONJUNCTION WITH THE USE OF TERMITE BAITS

As part of the integrated pest management (IPM) program for termite control, this product may be applied to critical areas of the structure including plumbing and utility entry sites, bath traps, expansion joints, foundation cracks and areas with known or suspected infestations at a rate of 0.06% as a spot treatment or complete barrier treatment. Applications may be made as described in the Post-Construction treatment section of this label.

TERMITE CONTROL (ABOVE GROUND ONLY)

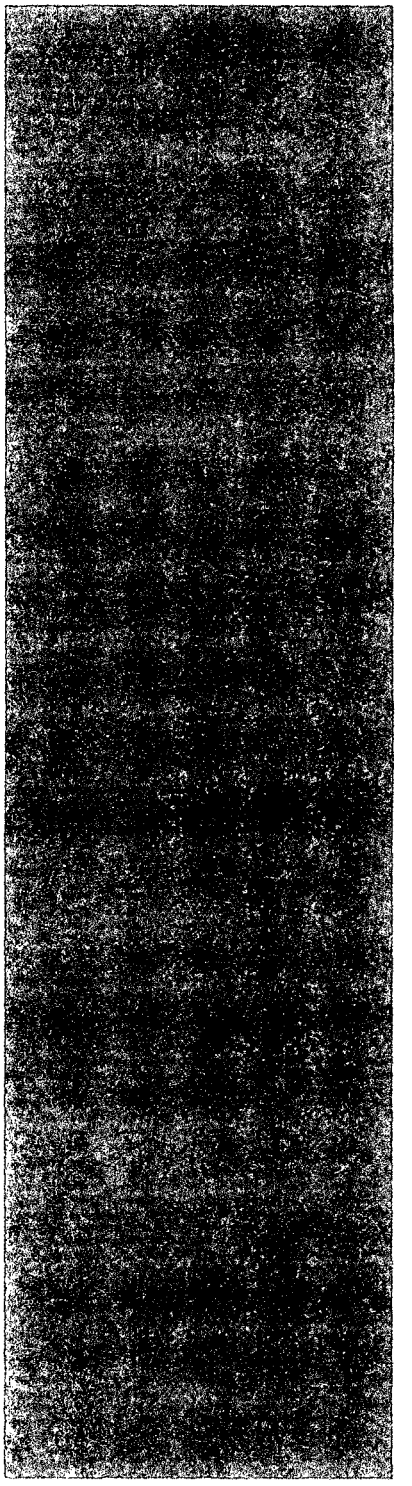
The purpose of the applications described below are to kill termite workers or winged reproductives that may be present at the time of treatment. These applications are intended as supplements to, and not substitutes for, mechanical alteration, soil treatment or foundation treatment.

To control exposed workers and winged reproductive termites in localized areas, dilute 1.0 fluid oz. of this product per gallon of water and apply as a coarse fan spray at the rate of one gallon per 1,000 square feet to attics, crawl spaces, unfinished basements and other void areas. Treat swarming termites as well as the areas in which they congregate.

To control above-ground termites in localized areas of infested wood, dilute 1.0 fluid oz. of this product per gallon of water and apply as a liquid or foam to voids and galleries in damaged wood as well as to spaces between wooden structural members and between the sill plate and foundation where wood is vulnerable to attack.

Applications may be made to inaccessible areas by drilling and then injecting the dilution or foam, with a suitable directional injector, into damaged wood or wall voids. All treatment holes drilled in construction elements in commonly occupied areas of structures ~~should~~must be securely plugged after treatment.

To control termite carton nests in building voids, dilute 1.0 fluid oz. of this product per gallon of water and apply as a liquid or foam using a pointed injection tool. Multiple injection points and varying depths of injection may be necessary to achieve control. When possible, the carton nest material ~~should~~must be removed from the building void after treatment.



LAWNS

Apply this product as a broadcast treatment. Use application volumes of up to 10 gallons per 1,000 square feet to get uniform coverage when treating dense grass foliage.

For low volume applications, less than 2 gallons per 1,000 square feet, immediate irrigation of treated area with at least 0.25 inch of water following application to ensure efficacy of sub-surface pests such as Mole Crickets, is recommended.

LAWN APPLICATION RATES

The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, this product may be applied at up to 1.0 fl. oz. per 1,000 square feet to control each of the pests listed in this table. The higher application rates ~~should~~must be used when maximum residual control is desired or heavy pest populations occur.

PEST	APPLICATION RATE OF THIS PRODUCT
Armyworms[1] Cutworms[1] Sod Webworm[1]	0.18 to 0.25 fluid oz. per 1,000 sq. ft.
Annual Bluegrass Weevil (Hyperodes)(Adult)[2] Banks Grass Mite[2] Billbugs (Adult)[4] Black Turfgrass Ataenius (Adult)[5] Centipedes Crickets Earwigs Fleas (Adult) Grasshoppers Leafhoppers Mealybugs Millipedes Mites[3] Pillbugs Sowbugs	0.25 to 0.50 fluid oz. per 1,000 sq. ft.
Crane Flies[6]	0.50 fluid oz. per 1,000 sq. ft.
Ants Chinch Bugs[7] Fleas (Larvae)[8] Imported Fire Ants[9] Japanese Beetle (Adult) Mole Cricket (Adult)[10] Mole Cricket (Nymph)[11] Stink Bugs (including Brown Marmorated) Ticks[12]	0.50 to 1.00 fluid oz. per 1,000 sq. ft.

In New York State, this product may NOT be applied to any grass or turf area within 100 feet of a water body (lake, pond, river, stream, wetland, or drainage ditch).

In New York State, do make a single repeat application of this product if there are signs of renewed insect activity, but not sooner than two weeks after the first application.

Comments:

[1]**Armyworms, Cutworms and Sod Webworms:** To ensure optimum control, delay watering (irrigation) or mowing for 24 hours after application. If the grass area is being maintained at a mowing height of greater than 1 inch, then higher application rates (up to 1.0 fluid oz. per 1,000 square feet) may be required during periods of high pest pressure.

[2]**Annual Bluegrass Weevil (*Hyperodes*) Adults:** Applications ~~should~~must be timed to control adult weevils as they leave their overwintering sites and move into grass areas. This movement generally begins when *Forsythia* is in full bloom

and concludes when flowering dogwood (*Comus Florida*) is in full bloom. Consult your State Cooperative Extension Service for more specific information regarding application timing.

[3]**Mites:** To ensure optimal control of eriophyid mites, apply in combination with the labeled application rate of a surfactant. A second application, five to seven days after the first, may be necessary to achieve acceptable control.

[4]**Billbug Adults:** Applications ~~should~~must be made when adult billbugs are first observed during April and May. Degree day models have been developed to optimize application timing. Consult your State Cooperative Extension Service for information specific to your region. In temperate regions, spring applications targeting billbug adults will also provide control of over-wintered chinch bugs.

[5]**Black Turfgrass Ataenius Adults:** Applications ~~should~~must be made during May and July to control the first and second generation of black turfgrass ataenius adults, respectively. The May application ~~should~~must be timed to coincide with the full bloom stage of Vanhoutte spiraea (*Spiraea vanhoutte*) and horse chestnut (*Aesculus hippocastanum*). The July application ~~should~~must be timed to coincide with the blooming of Rose of Sharon (*Hibiscus syriacus*).

[6] **Crane Flies:** Treatment can be made to control early to mid-season larvae (approximately August – February) as they feed on plant crowns. Treatments made to late-season larvae (approximately March, April) may only provide suppression.

[7]**Chinch Bugs:** Chinch bugs infest the base of grass plants and are often found in the thatch layer. Irrigation of the grass area before treatment will optimize the penetration of the insecticide to the area where the chinch bugs are located. Use higher volume applications if the thatch layer is excessive or if a relatively long mowing height is being maintained. Chinch bugs can be one of the most difficult pests to control in grasses and the higher application rates (up to 1.0 fluid oz. per 1,000 square feet) may be required to control populations that contain both nymphs and adults during the middle of summer.

[8]**Flea Larvae:** Flea larvae develop in the soil of shaded areas that are accessible to pets or other animals. Use a higher volume application when treating these areas to ensure penetration of the insecticide into the soil. Note: If the lawn area is being treated with this product at 0.25 fluid oz. per 1,000 square feet for adult flea control, then the larval application rate may be achieved by increasing the application volume two to four fold.

[9]**Imported Fire Ants:** Control will be optimized by combining broadcast applications that will control foraging workers and newly mated fly-in queens with mound drenches that will control existing colonies. If the soil is not moist, then it is important to irrigate before application or use a high volume application. Broadcast treatments ~~should~~must apply 1.0 fluid oz. per 1,000 square feet. Use enough finished volume to penetrate thatch or sod. Treat mounds by applying 1 oz. of this product per mound in 1 to 2 gallons water by sprinkling the mound until it is wet and treat 3 feet out around the mound. The mounds must be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. For best results, apply in cool weather (65 - 80˚F) or in early morning or late evening hours.

[10]**Mole Cricket Adults:** Achieving acceptable control of adult mole crickets is difficult because preferred grass areas are subject to continuous invasion during the early spring by this extremely active stage. Applications ~~should~~must be made as late in the day as possible and ~~should~~must be watered in with up to 0.5 inch of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized. Grass areas that receive pressure from adult mole crickets ~~should~~must be treated at peak egg hatch to ensure optimum control of subsequent nymph populations (see below).

[11]**Mole Cricket Nymphs:** Grass areas that received intense adult mole cricket pressure in the spring ~~should~~must be treated immediately prior to peak egg hatch. Optimal control is achieved at this time because young nymphs are more susceptible to insecticides and they are located near the soil surface where the insecticide is most concentrated. Control of larger, more damaging, nymphs later in the year may require both higher application rates and more frequent applications to maintain acceptable control. Applications ~~should~~must be made as late in the day as possible and ~~should~~must be watered in with up to 0.5 inch of water immediately after treatment. If the soil is not moist, then it is important to irrigate before application to bring the mole crickets closer to the soil surface where contact with the insecticide will be maximized.

[12]**Ticks (Including ticks that may transmit Lyme Disease and Rocky Mountain Spotted fever): DO NOT** make spot applications. Treat the entire area where exposure to ticks may occur. Use higher spray volumes when treating areas with dense ground cover or heavy leaf litter. Ticks may be reintroduced from surrounding areas on host animals. Retreatment may be necessary to achieve and/or maintain control during periods of high pest pressure. Repeat application is necessary only if there are signs of renewed activity. Repeat application ~~should~~must be limited to no more than once per seven days.

Deer Ticks (Ixodes sp.) have a complicated life cycle that ranges over a two-year period and involves four life stages. Applications ~~should~~must be made in the late fall and/or early spring to control adult ticks that are usually located on brush or grass above the soil surface and in mid to late spring to control larvae and nymphs that reside in the soil and leaf litter.

American dog ticks may be a considerable nuisance in suburban settings, particularly where homes are built on land that was previously field or forest. These ticks commonly congregate along paths or roadways where humans are likely to

be encountered. Applications ~~should~~must be made as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

LAWN DILUTION CHART

Application Volume: Gallons per 1,000 sq. ft.	Application Rate: Fluid Ounces per 1,000 sq. ft.	Fluid Ounces* of This Product Diluted to these Volumes of Finished Spray			
		1 gallon	5 gallons	10 gallons	100 gallons
1.0	0.18	0.18	0.90	1.80	18.00
1.0	0.25	0.25	1.25	2.50	25.00
1.0	0.50	0.50	2.50	5.00	50.00
1.0	1.00	1.00	5.00	10.00	100.00
2.0	0.18	---	0.45	0.90	9.00
2.0	0.25	0.13	0.63	1.25	12.50
2.0	0.50	0.25	1.25	2.50	25.00
2.0	1.00	0.50	2.50	5.00	50.00
3.0	0.18	---	0.30	0.60	6.00
3.0	0.25	---	0.42	0.83	8.30
3.0	0.50	0.17	0.83	1.67	16.70
3.0	1.00	0.33	1.67	3.33	33.30
4.0	0.18	---	0.23	0.45	4.50
4.0	0.25	---	0.31	0.63	6.30
4.0	0.50	0.13	0.64	1.25	12.50
4.0	1.00	0.25	1.25	2.50	25.00
5.0	0.18	---	0.18	0.36	3.60
5.0	0.25	---	0.25	0.50	5.00
5.0	0.50	0.10	0.50	1.00	10.00
5.0	1.00	0.20	1.00	2.00	20.00
10.0	0.18	---	---	0.18	1.80
10.0	0.25	---	0.13	0.25	2.50
10.0	0.50	---	0.25	0.50	5.00
10.0	1.00	0.10	0.50	1.00	10.00

*To convert to milliliters, multiply by 29.57.
1 fluid ounce = 29.57 ml = 2 tablespoons = 6 teaspoons

DO NOT use household utensils to measure this product.

ORNAMENTALS AND TREES

For ornamental applications (including trees, shrubs, ground cover, bedding plants, and foliage plants) apply 0.125 to 1.0 fluid oz. of this product per 1,000 square feet or 5.4 to 43.5 fl. oz. per 100 gallons. This product may be diluted and applied in various volumes of water providing that the maximum label rate (1.0 fluid oz. per 1,000 square feet or 43.5 fl. oz. per 100 gallons) is not exceeded. This product may be applied through low volume application equipment by dilution with water or other carriers and providing that the maximum label rate (1.0 fluid oz. per 1,000 square feet or 43.5 fl. oz. per 100 gallons) is not exceeded.

Apply the specified application rate as a full coverage foliar spray. Repeat treatment as necessary to achieve control using higher application rates as pest pressure and foliage area increases. Repeat application ~~should~~must be limited to no more than once per seven days.

Certain cultivars may be sensitive to the final spray solution. A small number of plants ~~should~~must be treated and observed for one week prior to application to the entire planting.

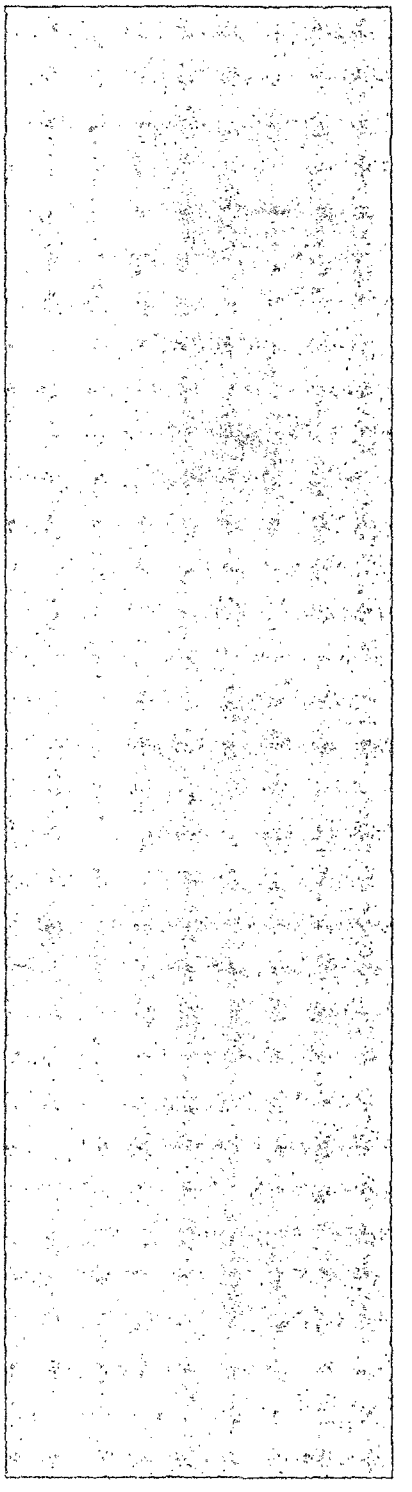
Use of an alternate class of chemistry in a treatment program is recommended to prevent or delay pest resistance.

GREENHOUSES AND INTERIORSCAPES

Use this product either alone or tank mixed with other products approved for this use, including insect growth regulators, to control a wide spectrum of insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in greenhouses and interiorscapes including hotels, shopping malls, office buildings, ect.

Calculating Dilution Rates Using the Ornamental Application Rates Table and the Ornamental and Trees Dilution Chart: Take the following steps to determine the appropriate dilution of this product that is required to control specific pests:

1. Identify the least susceptible target pest (the pest requiring the highest application rate for control).



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2. Select a specified application rate in terms of fluid oz. of this product.
3. Identify your application volume and how much spray mix you want to prepare.
4. Use the Ornamental Dilution Chart to determine the appropriate volume of this product that must be mixed in your desired volume of water.

For example, suppose you are trying to control black vine weevil adults on rhododendron. The Ornamental and Greenhouse Application Rates table shows that 0.25 to 0.5 fluid oz. of this product ~~should~~must be applied per 1,000 square feet. You select an application rate of 0.5 fluid oz. per 1,000 square feet because maximum residual control is desired. Your application volume is approximately 300 gallons per acre which is equivalent to 6.9 gallons per 1,000 square feet. Consulting the Ornamental and Trees Dilution Chart reveals that you ~~should~~must dilute 0.72 fluid oz. of this product in 10 gallons of water.

ORNAMENTAL AND TREES DILUTION CHART

Application Volume: Gallons per		Application Rate: Fluid Ounces per	Fluid Ounces* of This Product Diluted to these volumes of Finished Spray			
1,000 sq.ft.	Acre	1,000 sq. ft.	1 gallon	5 gallons	10 gallons	100 gallons
2.3	100	0.125	---	0.27	0.54	5.40
2.3	100	0.250	0.11	0.54	1.08	10.80
2.3	100	0.500	0.22	1.09	2.17	21.70
2.3	100	1.000	0.44	2.17	4.35	43.50
4.6	200	0.125	---	0.14	0.27	2.70
4.6	200	0.250	---	0.27	0.54	5.40
4.6	200	0.500	0.11	0.54	1.09	10.90
4.6	200	1.000	0.22	1.09	2.17	21.70
6.9	300	0.125	---	---	0.18	1.80
6.9	300	0.250	---	0.18	0.36	3.60
6.9	300	0.500	---	0.36	0.72	7.20
6.9	300	1.000	0.15	0.72	1.45	14.50

*To convert to milliliters, multiply by 29.57.

300 gallons per acre is a typical application volume for landscape ornamental applications.

1 fluid oz. = 29.57 ml = 2 tablespoons = 6 teaspoons

DO NOT use household utensils to measure this product.

ORNAMENTAL AND GREENHOUSE APPLICATION RATES

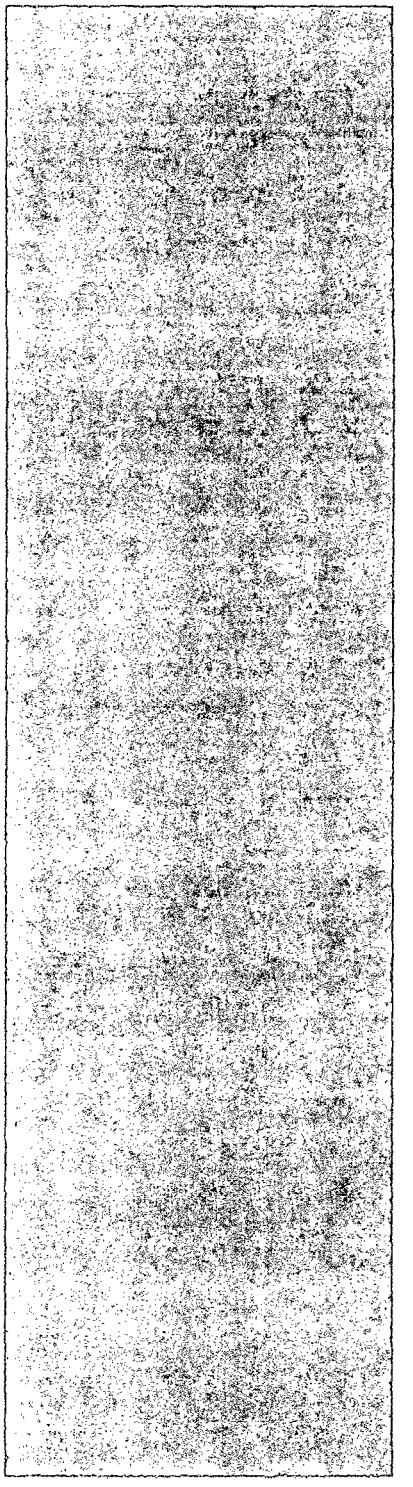
The application rates listed in the following table will provide excellent control of the respective pests under typical conditions. However, at the discretion of the applicator, this product may be applied at up to 1 fluid oz. per 1,000 square feet (43.5 fl. oz. per 100 gallons) to control each of the pests listed in this Table. Use higher application rates when maximum residual control is desired.

Apply the specified rate as a full coverage foliar spray. Repeat ~~an~~s necessary to achieve control using higher rates as pest pressure and foliage increases.

Certain cultivars may be sensitive to the final spray solution. A small number of plants ~~should~~must be~~r~~ tested prior to application of the entire planting.

Use an alternate class of chemistry in the treatment program is recommended to prevent or delay resistance.

PEST	APPLICATION RATE OF THIS PRODUCT	
	Fluid Ounces per 1,000 sq. ft.	Fluid Ounces per 100 gallons
Bagworms[13] Cutworms Elm Leaf Beetles Fall Webworms Gypsy Moth Caterpillars Lace Bugs Leaf Feeding Caterpillars Tent Caterpillars	0.125 to 0.250	5.40 to 10.80



[14]**Beetles*, Scale Crawlers, Twig Borers, and Weevils:** Treat trunks, stems and twigs in addition to plant foliage.

[15]**Spider Mites:** This product provides optimal twospotted spider mite control when applied during spring to mid-summer. Higher application rates and/or more frequent treatments may be required for acceptable twospotted spider mite control during mid to late summer. The addition of a surfactant or horticultural oil may increase the effectiveness of this product. Combinations of this product with other registered miticides have also proven effective. Alternately, applications of this product may be rotated with those of other products that have different modes of action in control programs that are designed to manage resistance by twospotted spider mites. Consult your local Cooperative Extension Service for resistance management recommendations in your region.

* Not for use in California.

**For foraging ants.

ATTENTION

DO NOT apply a broadcast application to interior surfaces of homes.

DO NOT apply to pets, crops, or sources of electricity.

Firewood is not to be burned for one month after treatment.

Use only in well ventilated areas.

DO NOT use on edible crops.

During any application to overhead areas of structure, cover surfaces below with plastic sheeting or similar material except for soil surfaces in crawlspaces.

DO NOT allow spray to contact food, foodstuffs, food contacting surfaces, food utensils or water supplies.

Thoroughly wash dishes and food handling utensils with soap and water if they become contaminated by application of this product.

DO NOT treat areas where food is exposed.

DO NOT allow dripping or runoff to occur during indoor surface applications.

DO NOT allow people or pets on treated surfaces until spray has dried.

Let surfaces dry before allowing people and pets to contact surfaces.

Prior to applying this product to wood siding, especially rough wood siding, be sure to thoroughly agitate the tank mixture. Prior to treating wood siding, test a small area and allow it to dry to be sure no deposits will form. Follow the same procedure when applying to wood surfaces in direct sunlight or the heat of the day.

DO NOT apply this product in patient rooms or in any rooms while occupied by the elderly or infirm.

DO NOT apply in classrooms when in use.

DO NOT apply when occupants are present in the immediate area in institutions such as libraries, sports facilities, etc.

Application equipment that delivers low volume treatments, such as the Micro-Injector or Actisol applicators, may also be used to make crack and crevice, deep harborage, spot and general surface treatments of this product.

STORAGE AND DISPOSAL

DO NOT contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE: Keep out of reach of children and animals, Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. **DO NOT** put concentrate or dilute material into food or drink container. **In case of spill, avoid contact, isolate area, and keep out animals and unprotected persons. Confine spills. Call CHEMTREC: 1-800-424-9300.**

To confine spill: If liquid, dike surrounding area or absorb with sand, cat litter or commercial clay. If dry material, cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. **DO NOT** contaminate water, food or feed by storage or disposal. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. Dispose of excess or waste pesticide by use according to label directions, or contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL [HANDLING]:
[Note to Reviewer: The following statement will be included on all Final Printed Labels bearing multiple Container Disposal (Container Handling) statements] **"NOTE:** This product is available in multiple containers. Refer to the Net Contents section of this products labeling for the applicable "Nonrefillable" or "Refillable" designation. Follow the container disposal [handling] instructions below that apply to your container type / size."

[Nonrefillable Containers 5 Gallons or Less:] Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling if available. Triple rinse container (or equivalent) 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. Then offer for recycling if available or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

[Nonrefillable containers larger than 5 gallons:] Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling if available. If recycling or reconditioning is not available, puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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 it 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. 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 p.s.i. for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

[Refillable containers larger than 5 gallons:] Refillable container. Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Refillable Container: Refill this container with pesticide only. **DO NOT** reuse this container for any other purpose. Close all openings and replace all caps. Contact Nufarm's Customer Service Department at 1-800-345-3330 to arrange for return of the empty refillable container.

WARRANTY DISCLAIMER

The directions for use of this product must be followed carefully. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, (1) THE GOODS DELIVERED TO YOU ARE FURNISHED "AS IS" BY MANUFACTURER OR SELLER AND (2) MANUFACTURER AND SELLER MAKE NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND TO BUYER OR USER, EITHER EXPRESS OR IMPLIED, OR BY USAGE OF TRADE, STATUTORY OR OTHERWISE, WITH REGARD TO THE PRODUCT SOLD, INCLUDING, BUT NOT LIMITED TO MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, USE, OR ELIGIBILITY OF THE PRODUCT FOR ANY PARTICULAR TRADE USAGE. UNINTENDED CONSEQUENCES, INCLUDING BUT NOT LIMITED TO INEFFECTIVENESS, MAY RESULT BECAUSE OF SUCH FACTORS AS THE PRESENCE OR ABSENCE OF OTHER MATERIALS USED IN COMBINATION WITH THE GOODS, OR THE MANNER OF USE OR APPLICATION,

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