



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

May 16, 2017

Christopher Davis
Registration Manager
AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660-1706

Subject: Label Amendment – for the addition of Crane Fly larvae as lawn pests
Product Name: Wisdom 2EC Insecticide/Miticide
EPA Registration Number: 5481-592
Application Date: 16 January 2017
Decision Number: 525480

Dear Mr. Davis:

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

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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

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

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with FIFRA section 6. If you have any questions, please contact Helen Hull-Sanders by phone at 703-347-0243, or via email at hull-sanders.helen@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to be 'Kable Bo Davis', enclosed within a hand-drawn oval.

Kable Bo Davis, Product Manager 3
Invertebrate and Vertebrate Branch 1
Registration Division (7505P)
Office of Pesticide Programs

Enclosure

WISDOM[®] 2EC

Insecticide/Miticide

Intended for use by authorized individuals and/or firms licensed or registered by their local State or Regulatory Agency to apply termiticide products in that state. States may have more restrictive requirements regarding qualifications of persons applying this product and/or termiticide products. Individuals are advised to consult with the appropriate structural pest control regulatory agency of your State or the application regulations thereof prior to use of this product. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.
Intended for use by professional lawncare applicators.

ACTIVE INGREDIENT:

Bifenthrin

(2 methyl[1,1'-biphenyl]-3-yl) methyl 3-(2-chloro-3,3,3-trifluoro-1-propenyl)-

2,2-dimethyl-cyclopropanecarboxylate*25.1%

INERT INGREDIENTS** 74.9%

TOTAL100.0%

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

** Contains xylene range aromatic solvents.

Wisdom 2EC Insecticide/Miticide contains 2 pounds active ingredient per gallon.

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

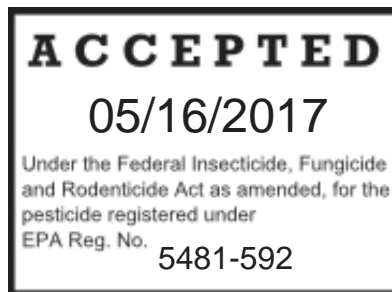
FIRST AID	
If swallowed:	<ul style="list-style-type: none"> • Immediately call a Poison Control Center or doctor. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give any liquid to the person • Do not give anything by mouth to an unconscious person.
If on skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none"> • 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.
<p>Note to Physician: This product is a pyrethroid. This product also contains aromatic hydrocarbons. Because of the risk of hydrocarbon pneumonitis if even tiny amounts are aspirated into the lung during emesis, consideration should be given to gastric lavage with endotracheal tube in place. Treatment is symptomatic and supportive. Animal and vegetable fats, milk, cream and alcohol may increase absorption and should not be administered.</p>	
<p>Have the product container or label with you when calling a poison control center or doctor, or going for treatment.</p> <p>FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:</p> <p>For Medical Emergencies, phone:.....1-888-681-4261</p> <p>For Transportation Emergencies, including spill, leak or fire, phone: CHEMTREC[®]1-800-424-9300</p> <p>For Product Use Information phone: AMVAC[®] 1-888-462-6822</p>	

SEE (SIDE) (BACK) PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-592

EPA Est. No. _____

Net Contents: _____





AMVAC Chemical Corporation
4100 E. Washington Blvd. Los Angeles, CA 90023 U.S.A.
1-888-462-6822

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING: Contains petroleum distillate. May be fatal if swallowed. Causes moderate eye injury. Do not get in eyes or on clothing. Harmful if inhaled or absorbed through skin. Avoid breathing vapor or spray mist and contact with skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. User should remove clothing/PPE immediately if pesticide gets inside. Then, wash thoroughly and put on clean clothing. User should remove PPE immediately after handling this product. Wash outside of gloves before removing, and wash thoroughly and change into clean clothing as soon as possible. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

All pesticide handlers (mixers, loaders, and applicators) must wear long-sleeved shirt, pants, or coveralls (worn over a minimum of short-sleeved shirt and short pants), socks, chemical-resistant footwear, chemical-resistant gloves and protective eyewear. 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, shirts, pants, socks, shoes and waterproof gloves are sufficient. In addition, all pesticide handlers must wear a respiratory protection device (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) when handling the concentrate or when working in a non-ventilated space. All pesticide handlers must wear protective eyewear when working in a non-ventilated space or applying termiticide by rodding or sub-slab injection.

When treating adjacent to an existing structure as a soil termiticide, the applicator must check the area to be treated and the immediately adjacent areas of the structure, for visible and accessible cracks and holes to prevent any termiticide solution 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 deposition of termiticide solution within 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.

Environmental Hazards

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, where runoff into such water is likely to occur, or to intertidal areas below the mean high water mark. Rinsing application equipment over the treated area will help avoid runoff to water bodies or drainage systems. Do not apply when weather conditions favor drift from treated areas or if rain is predicted within the next 24 hours. Care should be used when spraying to avoid contamination by spray application to waters inhabited by fish and reptile pets in or around ornamental ponds.

Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging the treatment area.

Physical/Chemical Hazards

Combustible. Do not use or store near heat or open flame.

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

Directions for Use

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. ALWAYS READ AND FOLLOW PESTICIDE LABEL DIRECTIONS.

Do not apply by air.

Do not use in greenhouses or nurseries.

Do not apply this product through any kind of irrigation system.

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Not for use on sod farm turf, golf course turf or grass grown for seed.

Do not water treated area to the point of run-off.

Do not make applications during rain.

Do not apply directly to impervious horizontal surfaces such as sidewalks, driveways, and patios except as a spot or crack-and-crevice treatment. During application, do not allow pesticide to enter or run off into storm drains, drainage ditches, gutters or surface waters.

All outdoor applications, if permitted elsewhere on this label, must be limited to spot or crack-and-crevice treatments only, except for the following permitted uses, if allowed elsewhere on this label:

1. Applications to soil or vegetation, as listed on this label, around structures;
2. Applications to lawn, turf and other vegetation, as listed on this label;
3. Applications to the side of a building, up to a maximum height of 3 feet above grade;
4. Applications to undersides of eaves, soffits, doors, or windows permanently protected from rainfall by a covering, overhang, awning, or other structure;
5. Applications around potential pest entry points into the buildings, when limited to a surface band not to exceed one inch in width;
6. Applications made through the use of a coarse, low pressure spray to only those portions of surfaces that are directly above bare soil, lawn, turf, mulch or other vegetation, as listed on this label, and not over an impervious surface, drainage or other condition that could result in runoff into storm drains, drainage ditches, gutters, or surface waters, in order to control occasional invaders or aggregating pests.

Product Use Information

Do not use on plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. For use only on plants intended for aesthetic purposes or climate modification and being grown in ornamental parks and gardens, interior landscapes, or lawns and grounds.

Wisdom 2EC Insecticide/ Miticide prevents and controls termite infestations in and around structures and constructions.

To institute a barrier between the wood and the termites in the soil, the Wisdom 2EC Insecticide/ Miticide solution must be effectively dispersed in the soil. It is important to remove unnecessary construction materials and debris that contain cellulose and wood from around foundation walls, crawl spaces (inside of structure), and porches. Leaks from plumbing, roofs and other sources of moisture should be noted for repairs as needed. Faulty grade around the structure should be noted for correction as needed to correct or mitigate moisture sources. Treat the soil around untreated structural wood in contact with soil as stated below.

To use Wisdom 2EC Insecticide/ Miticide effectively, it is important that the termite technician/Miticide applicator be familiar with current control practices including trenching, rodding, sub-slab injection, low-pressure spray applications, coarse fan spraying of soil surfaces, crack and crevice (void) injection, excavated soil treatment and brush and spray applications to infested or susceptible wood. Using these techniques correctly is essential to prevent or control infestations by subterranean termite species of genera *Reticulitermes*, *Zootermopsis*, *Coptotermes* and *Heterotermes*. When determining what procedures to follow, the service technician should consider certain variables. Some of the variables to consider are species biology and behavior, structure design, heating, ventilation, and air conditioning (HVAC) systems, water table, soil type and compaction, grade conditions, and the location and type of domestic water supplies and utilities.

For information concerning the most up to date control practices in a given region or locale, consult the local resources for structural pest control, state cooperative extensions or regulatory agencies.

Subterranean Termite Control – General Use and Application Directions

Important: Observe the following precautions to avoid contamination of public and private water supplies:

- Use anti-backflow equipment, such as an air gap or anti-back flow valve, and procedures to prevent insecticide from being siphoned into water supplies.
- Do not contaminate cisterns, wells, or other water tanks which may be present within the structure being treated.
- Do not treat soil where runoff may occur as a result of precipitation during application.
- Do not treat water-saturated soil or frozen soil.
- Consult local and state specifications for recommended treatment practices in your area.
- If local or state specifications do not exist, consult the Federal Housing Administration (H.U.D.) guidance

documents.

Note: For the purposes of this label, crawl spaces are defined as being inside of the structure.

Critical Areas: Points at which the foundation is penetrated or abuts another structure are critical areas. These areas include bath traps, cracks and expansion joints, utility entry points and adjacent structures such as patios, slab additions, soil filled porches and stairs.

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. It should be treated using the treated back fill method. 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 suitable container or wheelbarrow.
 - b) Treat the soil at the rate of 4 gallons of dilute dilution per 10 linear feet per foot of depth of the trench, or 1 gallon per 1.0 cubic foot of soil. See "Mixing Directions" section of this 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 diluted solution, replace the soil into the trench.
2. Treat infested and/or damaged wood in place using an injection technique such as is 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 treatment recommendations 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. Do not apply the Wisdom 2EC Insecticide/ Miticide solution to soil within three feet of such water pipes or utility lines that lead to or from a well or cistern. Soil treatments to soil in these areas should be done using the treated back fill method to prevent contamination of the well or other bodies of water.
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 be taken into account in determining the depth of the 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 off-site movement of termiticide.

Before these techniques are used close to cisterns, wells, or other bodies of water, seek advice from local, state, or federal agencies for information on treatment practices that are accepted in your area if necessary.

Application Rate: Use a 0.06% dilution for subterranean termites. For applications made to control other pests as listed on this label refer to the label use directions for specific pests as listed rates.

Mixing Directions: Mix the termiticide use dilution in the following manner: Fill tank to approximately $\frac{1}{4}$ to $\frac{1}{2}$ full. Start pump to begin bypass agitation and place end of treating tool in tank to allow circulation through application hose. Add appropriate amount of Wisdom 2EC Insecticide/ Miticide for the desired volume. Add remaining amount of water. Let pump run and allow recirculation through the hose for 2 to 3 minutes.

Wisdom 2EC Insecticide/ Miticide may also be combined into full tanks of water. If combined into full tanks of water, allow sufficient time for agitation and/or recirculation through the application hose to ensure uniform solution dilution throughout the entire volume of solution within the application tank and hose.

To prepare a 0.06% water dilution, ready to use, dilute 1 quart of Wisdom 2EC Insecticide/ Miticide with 99.75 gallons of water.

Mixing: Using the chart below, determine the volume of Wisdom 2EC Insecticide/ Miticide and water required to produce the desired volume of finished dilution.

Amount of Wisdom[®] 2EC Insecticide/ Miticide (Gallons except where noted)			
Dilution Concentration Desired	Amount of Wisdom 2EC Insecticide/ Miticide Needed	Amount of Water Needed	Desired Gallons of Finished Solution
0.06%	0.32 oz	127.68 oz.	1
	1.6 oz.	4.99 gallons	5
	3.2 oz.	9.975 gallons	10
	8 oz.	24.94 gallons	25
	0.5 qt.	49.875 gallons	50
	0.75 qt.	74.8125 gallons	75
	1 qt.	99.75 gallons	100
	1.5 qt.	149.62 gallons	150
0.12% *	2 qt.	199.5 gallons	200
	0.64 oz.	127.36 oz.	1
	3.2 oz.	4.975 gallons	5
	6.4 oz.	9.95 gallons	10
	0.5 qt.	24.875 gallons	25
	1 qt.	49.75 gallons	50
	1.5 qt.	74.625 gallons	75
	2 qt.	99.5 gallons	100
3 qt.	149.25 gallons	150	
1 gallon	199 gallons	200	

Units of measure:

1 pint = 16 fluid ounces (oz.)

1 quart = 2 pints = 4 cups = 32 fluid ounces (oz.)

* When treating for termites, use this rate only in conjunction with volume adjustments, foam applications or underground services applications as indicated on this label.

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 solution 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 termiticide barrier. Variance is allowed when volume and concentration are consistent with the label directed rates and a continuous barrier can still be achieved.

The volume of the Wisdom 2 EC Insecticide/ Miticide solution may be reduced by up to ½ if the solution is applied at double the dilution rate of 0.12% dilution where desirable for pre- and post-construction applications when the soil will not accept the applied solution volume. When the volume is reduced, the hole spacing for subslab injection and soil rodding may also need to be adjusted such that application injection points are closer to account for lower volume dispersal of the termiticide solution in the soil. Consult the following Volume Adjustment Chart for details.

VOLUME ADJUSTMENT CHART For Soils That Will Not Accept Normal Solution Application		
Rate (% dilution)	0.06% Solution	0.12% Solution
Volume allowed: • Horizontal (gallons dilution/10 ft ²)	1.0 gallon	0.5 gallon
Volume allowed: • Vertical (gallons dilution/10 linear ft.)	4.0 gallons	2.0 gallons

After treatment: All holes in commonly occupied areas into which material 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

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.

The treatment site must be covered prior to a rain event in order to prevent run-off of the pesticide into non-target areas.

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 but not limited to, lakes; reservoirs; rivers; permanent streams; marshes or ponds; estuaries; and commercial fish farm ponds).

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

When treating foundations deeper than 4 feet, apply the Wisdom 2EC Insecticide/ Miticide solution as the backfill is being replaced. If the construction contractor fails to notify the applicator to permit backfill soil treatment, treat the foundation to a minimum depth of 4 feet after the backfill has been installed. The applicator must trench and apply the termiticide solution by soil rod application or similar into the trench or trench along the foundation walls and around pillars and other foundation elements, at the rate of 4 gallons of solution applied per 10 linear feet of foundation wall per foot of depth from finished grade level to the top of the footing or 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.

To produce effective pre-construction subterranean termite control, create vertical and/or horizontal chemically treated zones of protection using 0.06% dilution of Wisdom 2EC Insecticide/ Miticide. Follow the current edition of the Housing and Urban Development Minimum Property Standards to assure that F.H.A. termite-proofing requirements are met.

Horizontal Barriers

Establish a horizontal chemical barrier wherever treated soil will be covered by a concrete slab of the structure, such as basement floors, garages, carports, entrance platforms, footing trenches, poured beams, slab floors and other such construction elements.

Apply 1 gallon of 0.06% dilution per 10 square feet, or use 0.32 fluid ounce of Wisdom 2EC Insecticide/ Miticide per 10 square feet in sufficient water (no less than ½ gallon or more than 2 gallons) to provide a uniform treated barrier for the area being treated.

If the fill is coarse aggregate, such as washed gravel, a sufficient volume of dilution must be applied to allow it to reach the soil beneath the coarse fill.

Make applications with a low-pressure spray (less than 25 p.s.i.), using a coarse spray nozzle. If foundation walls have not been installed around the treated soil and the slab will not be poured the same day as treatment, the treated soil must be covered with a water-proof barrier. Polyethylene sheeting may be used for this purpose.

Vertical Barriers

Establish vertical barriers in critical areas, such as along the inside of foundation walls, plumbing, bath traps, utility services and other features that will penetrate the slab.

Using a 0.06% dilution, apply 4 gallons of dilution per 10 linear feet per foot of depth or 1.28 fluid ounces of Wisdom 2EC Insecticide/ Miticide solution per 10 linear feet per foot of depth from grade level to the top of the footing in sufficient water to provide a uniform treated barrier. Use not less than 2 gallons to not more than 8 gallons of water per 10 linear feet per foot of depth. When trenching and rodding into the trench, or trenching, take care to ensure that the dilution reaches the top of the footing. Space the rod holes so that a continuous treated barrier is created, but not exceeding 12 inches apart. Avoid washing-out the soil around the footing. Application trenches should be about 6 inches wide and no more than about 6 inches deep. Incorporate or mix the Wisdom 2EC Insecticide/Miticide solution with the soil as it is being replaced in the trench to assure that a continuous treatment barrier is attained. Inside vertical barriers may not be required for monolithic slabs. Critical areas such as bath traps and utility penetrations should be treated. When treating hollow block voids, use 2 gallons of Wisdom 2EC Insecticide/Miticide solution per 10 linear feet to assure that the dilution reaches the top of the footing. Termiticide application to the soil along the exterior perimeter of the structure should be made when the finished soil grade level has been established during the final phases of construction.

Hollow block voids may be treated at the rate of 2 gallons of Wisdom 2EC Insecticide/Miticide solution per 10 linear feet so that the emulsion reaches 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 Wisdom 2EC Insecticide/Miticide solution has been absorbed into the soil.

Post-Construction Subterranean Termite Treatment

Application Volume: To provide maximum control and protection against subterranean termite infestation, apply the specified volume of the finished Wisdom 2EC Insecticide/Miticide solution as set forth in the directions for use section of this label. If the 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 the label directed rates and a continuous barrier can still be achieved.

The volume of the 0.12% dilution may be reduced by ½ the labeled volume where desirable for pre- and post-construction applications. When the volume is reduced, the hole spacing for subslab injection and soil rodding may also need to be adjusted to account for lower volume dispersal of the termiticide in the soil. Consult the following Volume Adjustment Chart for details.

Volume Adjustment Chart For Soils That Will Not Accept Full Label Solution Volumes		
Rate (% dilution)	0.06% Solution	0.12% Solution
Volume allowed: Horizontal (gallons dilution/ 10 ft ²)	1.0 gallon	0.5 gallon
Volume allowed: Vertical (gallons dilution/ 10 linear ft.)	4.0 gallons	2.0 gallons

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

For post-construction treatment, use a 0.06% dilution. Post-construction treatments shall be made by subslab injection, trenching and rodding into the trench or trenching using low-pressure spray not exceeding 25 p.s.i. at the nozzle. Proper precautions should be taken to avoid soil wash-out around the footing.

Locate, identify, and mark wells, electrical conduits, water and sewer lines, and radiant heat pipes prior to application of Wisdom 2EC Insecticide/Miticide. Do not puncture or inject Wisdom 2EC Insecticide/Miticide into such structures.

Foundations

For termiticide treatment to the soil along the exterior perimeter of the structure foundation, 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. The application trench must be about six inches wide and six inches deep. 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 and apply the Wisdom 2EC Insecticide/Miticide solution at the rate prescribed on this label 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 the soil be treated below the footing.

Slabs

Create vertical termiticide barriers to soil along the slab perimeter by trenching and rodding into the trench or trenching the soil along the exterior perimeter of the slab at a rate of 4 gallons of dilution per 10 linear feet per foot of depth to the top of the footing and by sub-slab injection within the structure. Ensure an even distribution of chemical. Applications must not be made to soil below the bottom of the footing.

Apply to soil adjacent to the slab exterior perimeter and under the slab to the soil along the inside of foundation walls, where needed. Treatment of slabs may also be necessary under and beside both sides of any interior footing-supported walls, in all cracks and expansion joints, bath traps, utility penetrations and beside one side of interior partitions where termites may be active. Sub-slab treatment may be made by long-rodding or grid pattern injection vertically through the slab, horizontal barriers may be created where necessary.

- a. To permit the creation of an uninterrupted termiticide barrier, drill holes in the foundation and/or slab.
- b. For foundations that are less than or equal to 1 foot, dig a narrow trench about 6 inches wide in soil along the exterior foundation walls. Do not dig beneath the bottom of the footing. Incorporate the termiticide solution with the soil as the soil is replaced into the trench; apply at a rate of 4 gallons of 0.06% Wisdom 2EC Insecticide /Miticide solution per 10 linear feet per foot of depth to the top of the footing to the trench and soil to a depth of not more than four feet.
- c. Follow the rates for basements (below) for foundations that are deeper than 1 foot.
- d. A 0.06% dilution may be used to treat exposed soil and wood in bath traps.

Basements

Treatment 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 to the top of the footing up to a depth of four feet. When the footing is greater than four feet below finished grade level, the applicator may trench and rod into the trench, or trench beside foundation walls at the volume rate designated on this label up to four feet of depth. Space rod holes to create a continuous insecticidal barrier, but in no case more than 12 inches apart. A structure should never be treated below the footer. Sub-slab injection may be needed along the inside of foundation walls, utility penetrations, partition walls, bath traps and other areas where termites may be active.

Crawl Spaces - Accessible

For crawl spaces, apply vertical termiticide barriers at the rate of 4 gallons of Wisdom 2EC Insecticide/Miticide solution per 10 linear feet per foot of depth from grade to the top of the footing. If the footing is more than 4 feet below grade, treat the soil up to a depth of 4 feet. Apply by trenching and rodding into the trench, or trenching. The treatment trench should be about six inches wide by six inches deep. Treat both sides of foundation wall and around all piers and utility penetrations. Where physical obstructions such as concrete walkways, slabs, driveways and other such elements are present and adjoining the structure prevent trenching, treatment may be made by drilling and sub-slab injection. When the top of the footing is exposed, the applicator must treat the soil adjacent to the footing but must not treat the soil below the bottom of the footing. Read and follow the mixing and use direction section of

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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 solution treatment and 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 to be wider than 6 inches. When trenching in sloping (tiered) soil, the trench must be stepped to ensure adequate distribution and 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 fully absorbed by the soil.

Crawl Spaces - Inaccessible

For inaccessible interior areas, such as areas where there is insufficient clearance between floor joists and soil surface to allow operator access for treatment, excavate if possible, and treat according to the instruction for accessible crawl spaces. The homeowner should be advised of inaccessible areas where present. Otherwise, apply one or a combination of the following two methods.

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 TeJet[®] 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 power spray 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 systems of the structure until application has been completed and all the applied termiticide solution has been fully absorbed by the soil.

Masonry Voids

Drill and treat voids in hollow masonry elements such as concrete blocks 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 a rate of 2 gallons of dilution per 10 linear feet of foundation wall 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 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 the clean-up is completed.

Masonry Veneers

It is necessary to treat the void which is present behind masonry veneer such as brick, stone and other such veneers. When treating the structural void behind such veneer take proper care to not drill beyond the void behind the veneer. If concrete blocks exist behind the veneer, both can be drilled and treated simultaneously. Do not treat voids insulated with rigid foam board insulation. It may be best to use foam applications to treat masonry veneer wall voids.

Excavation/Treated Backfill Method: When treating in troublesome areas (e.g., beside fieldstone or rubble walls, beside faulty foundation walls, and around pipes and utility lines leading downward from the structure to a well or pond) apply using the following technique:

- a. Prepare a trench, placing the removed soil onto heavy-weight plastic sheeting or similar, water-impermeable material.
- b. Treat the soil with 4 gallons of 0.06% dilution per 10 linear feet per foot of depth of the trench. Completely mix the dilution into the soil, exercising care to avoid liquid running off the sheeting.
- c. Place the treated soil back into the trench after it has absorbed the dilution.

Attention: Wear a NIOSH-approved respirator and unvented goggles when applying Wisdom 2EC Insecticide/Miticide in a confined space and/or non-ventilated area.

Foam Applications

Wisdom 2EC Insecticide/Miticide solution, from 0.06 to 0.12% may be converted to foam with 2X - 40X expansion characteristics and used to control or prevent termite infestations. Foam applications are useful to treat hollow void areas where termites may be active and liquid applications may not fully treat a hidden void or reach to areas where termite mud tubes may be present.

Depending on the circumstances, foam applications may be used alone or in combination with liquid solution applications. Applications may be made to hidden void areas behind veneers, piers, chimney bases, into rubble foundations, into block voids or structural voids, beneath slabs, stoops, porches, or to the soil in crawlspaces, and other similar voids.

Foam and liquid application must be consistent with volume and active ingredient instructions in order to ensure 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 solution volume of product should 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 Crawlspaces to Prevent or Control Termites

When making applications, Wisdom 2EC Insecticide/Miticide solution may be applied as a foam and can be used alone or in combination with liquid dilution. Whether applied as a dilution, foam, or some of both, the equivalent of at least 4 gallons of 0.06% dilution (1.28 fluid ounces of Wisdom 2EC Insecticide/ Termiticide concentrate) per 10 linear feet must be applied for a vertical barrier, or at least 1 gallon of 0.06% dilution (0.32 fluid ounce of Wisdom 2EC Insecticide/Miticide concentrate) per 10 square feet must be applied for a horizontal barrier. For a foam only application, apply Wisdom 2EC Insecticide/Miticide concentrate in sufficient concentration and volume to equal 1.28 fluid ounces of concentrate per 10 linear feet or 1 ounce of concentrate per 10 square feet. For example, 2 gallons of 0.12% dilution converted to foam and used to cover 10 linear feet is the equivalent of 4 gallons of 0.06% dilution per 10 linear feet.

Sand Barrier Installation and Treatment

As long as termites have access to soil that has not been treated and can avoid soil that has been treated with Wisdom 2EC Insecticide/Miticide solution, they can build mud tubes over surfaces that have been treated. Cracks and spaces should be filled with play sand or builder's sand and then treated in the same manner as soil. Follow the rates listed on the Wisdom 2EC Insecticide/Miticide label.

Retreatment for subterranean termites can only be performed if there is clear evidence of re-infestation or disruption of the treatment barrier due to construction, excavation, or landscaping modifications and/or evidence of the breakdown of the termiticide barrier in the soil. These vulnerable or re-infested areas may be retreated in accordance with application techniques described on the Wisdom 2EC Insecticide/Miticide label.

Annual re-treatment of the structure is prohibited unless there is clear evidence that re-infestation or barrier disruption has occurred.

Application in Conjunction with the use of Termite Bait Products

As part of an integrated pest management (IPM) program for termite control, Wisdom 2EC Insecticide/Miticide 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 in conjunction with and to supplement termite baiting systems.

Specific Pest Control Applications

For Underground Services, such as cables, conduits, pipes, utility lines, wires, etc. Services may be within structures or located outside of structures or within right-of-ways, to include long range installations which can be several miles.

Treat the soil using a 0.06 to 0.12% Wisdom 2EC Insecticide/Miticide dilution to prevent and control termite and ant infestations.

Treat the bottom of the trench with 2 gallons of dilution per 10 linear feet and let it soak into the soil. Place the services 592-20170505 per epa comments Feb. 7, 2017

on the treated soil and cover with about 2 inches of fill soil. Apply another 2 gallons per 10 linear feet over the fill soil to complete the chemical barrier. Only treat the soil in the area near the services in wide trenches, but ensure a continuous barrier of treated soil surrounding the services.

In the event that the soil will not accept the volume stated above, 1 gallon of 0.12% Wisdom 2EC Insecticide/Miticide may be applied per 10 linear feet of trench over the soil that covers the services and to the base of the trench.

Fill the remainder of the trench with the treated fill soil. Where each service protrudes from the soil, the soil may be treated by trenching/rodding no more than 1 to 2 gallons of dilution into the soil.

Precautions: Do not treat electrically active underground services.

Fence Posts, Wood Poles and Other Such Constructions

Treat soil adjacent to wooden construction elements such as sign and fence posts (signs, fences, and landscape ornamentation) by application of Wisdom 2EC Insecticide/Miticide solution. An insecticidal barrier can be established by treating with a 0.06% dilution. Sub-surface injection and gravity-flow through holes in the bottom of the trench, are two treatment methods that can be used on poles and posts that have already been installed. Establishing a complete chemical zone around the pole can be accomplished by treating on all sides. For poles and posts that are fewer than 6 inches in diameter use 1 gallon of dilution per foot of depth and 1.5 gallons for larger poles, applying under the wood to a depth of 6 inches. 4 gallons per 10 linear feet per foot of depth should be used for larger constructions.

Control of Wood-Infesting Insects in Wood (Localized Areas in Structures)

Insects	Application Rate	Remarks
Termites Ants Carpenter Ants Wood-infesting beetles (including but not limited to Old House Borer & Powder Post beetles)	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 foundations where wood is at risk.	-Can be applied as a paint or fan spray. -Place plastic sheeting under overhead areas that are spot treated except for soil surfaces in crawl spaces. -Areas to which access is difficult can be treated by drilling, and then injecting dilution with a crack and crevice injector into the damaged wood or void spaces. (Not intended as a replacement for soil treatment, mechanical alteration or fumigation to control widespread infestation of wood-infesting insects.

Controlling termite carton nests in building voids can be accomplished by injecting with a 0.06% dilution. To obtain control, various depths of injection and numerous injection points may be needed. After treatment is complete and when feasible, remove the carton nest material from the building void.

To control Bees, Wasps, Hornets, and Yellow-Jackets, apply a 0.06% dilution late in the evening or when insects are at rest. Direct the spray at nest openings in the ground, bushes, and in cracks and crevices, where the insects may nest. Saturate the openings and contact as many insects as possible.

Important: Locate, identify, and mark wells, electrical conduits, water and sewer lines, and radiant heat pipes prior to application of Wisdom 2EC Insecticide/Miticide. Do not puncture or inject Wisdom 2EC Insecticide/Miticide into such structures. Do not apply into electrical fixtures, switches or sockets.

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

During any overhead applications to overhead interior areas of structures, cover surfaces below with plastic sheeting or similar materials (except where exempt).

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.

Do not use in food/feed areas of food/feed handling establishments, restaurants or other areas where food/feed is commercially prepared or processed. Do not use in serving areas while food is exposed or facility is in operation. Serving areas are areas where prepared foods are served such as dining rooms but excluding areas where food may be prepared or held.

In the home, cover all food handling surfaces and cover or remove all food and cooking utensils, or wash thoroughly after treatment. Non-food/feed areas of food/feed areas are areas such as garbage rooms, lavatories, floor drains (to sewers), entries and vestibules, offices, locker rooms, machine rooms, boiler rooms, garages, mop closets, and storage (after bottling or canning).

Not for use in Federally Inspected Meat and Poultry Plants.

Control of Wood-Infesting Insects and Nuisance Pests (Outside of Structures)

In order to control wood-infesting insects active inside trees, utility poles and/or fences, a 0.06% dilution should be injected into the infested cavity, which can be found by drilling into the wood. If treating nuisance pests on the exterior of the structure, use a fan spray at a maximum pressure of 25 p.s.i. and apply up to the point of runoff. To control Bees, Wasps, Hornets, and Yellow-Jackets, apply late in the evening. Direct the spray at nest openings in the ground, bushes, and in cracks and crevices, where the insects may nest. Saturate the openings and contact as many insects as possible.

Pests under Slabs, in Crawl Spaces and Other Such Areas

To control infestations of arthropods (e.g., ants, cockroaches, scorpions and spiders) that live beneath slabs, in crawl spaces and other such areas, drill or horizontally rod and inject 1 gallon of a 0.06% to 0.12% dilution per 10 square feet or 2 gallons of dilution per 10 linear feet. Direct or residual applications may be made using a suitable application device such as a compressed air sprayer to pests and/or the areas where these pests may harbor or travel. Refer to application and solution mix rates located elsewhere on this label.

Attention

Do not apply to pets, crops, or sources of electricity.

Do not treat firewood

Use only in well ventilated areas.

During any application to overhead areas of structure, cover surfaces below with plastic sheeting or similar material (except where exempt).

Do not allow spray to contact food, foodstuffs, food contacting surfaces, food utensils or water supplies.

Do not treat areas where food is exposed.

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

During indoor surface applications do not allow dripping or run-off to occur.

General Applications Instructions

Wisdom 2EC Insecticide/Miticide mixes readily with water and other aqueous carriers, and controls a wide spectrum of insects and mites on trees, shrubs, foliage plants, non-bearing fruit and nut trees, and flowers in interior plantscapes including hotels, shopping malls, office buildings, etc. and outdoor plantscapes, such as around residential dwellings, parks, institutional, recreational, athletic fields and home lawns. Non-bearing crops are perennial crops that will not produce a harvestable raw agricultural commodity during the season of application.

Wisdom 2EC Insecticide/Miticide may be tank-mixed with other products, including insect growth regulators. When tank mixing Wisdom 2EC Insecticide/Miticide with other products, observe all precautions and limitations on each separate product label. The addition of spreader stickers is not necessary. The physical compatibility of Wisdom 2EC Insecticide/Miticide may vary with different sources of pesticide products and local cultural practices. Any tank mixture which has not been previously tested should be prepared on a small scale (such as a pint or quart jar quantity), using the proper proportions of product concentrates 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.

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APPLICATION RECOMMENDATIONS

Lawns

Wisdom 2EC Insecticide/Miticide solution may be used as a broadcast treatment. To accomplish uniform control when applying to dense grass foliage, use volumes of up to 10 gallons per 1,000 square feet being treated.

For low water volume usage, less than 2 gallons/1,000 square feet, addition of a non-ionic or silicone based surfactant (0.25% v/v) is recommended, as is immediate irrigation of treated area with at least 0.25 inch of water following application to ensure efficacy against sub-surface pests such as, but not limited to, Mole Crickets.

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, Wisdom 2EC may be applied at up to 0.33 fl. oz. per 1,000 square feet to control each of the pests listed in this Table. The higher application rates should be used when maximum residual control is desired.

Pest	Application Rate Wisdom 2EC
Armyworms ¹ Cutworms ¹ Sod Webworm ¹	0.06-0.083 fluid oz. per 1,000 sq. ft.
Annual Bluegrass Weevil (<i>Hyperodes</i>) (Adult) ² Banks Grass Mite ³ Billbugs (Adult) ⁴ Black Turfgrass Ataenius (Adult) ⁵ Centipedes Chinch Bugs ⁶ Crickets Earwigs Fleas (adult) Grasshoppers Leafhoppers Mealybugs Millipedes Mites ³ Pillbugs Sowbugs	0.083-0.167 fluid oz. per 1,000 sq. ft.
Ants Crane Fly larvae ⁷ Fleas (Larvae) ⁸ Imported Fire Ants ⁹ Japanese Beetle (Adult) Mole Cricket (Adult) ¹⁰ Mole Cricket (Nymph) ¹¹ Ticks ¹²	0.167-0.33 fl. 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 Wisdom 2EC Insecticide/Miticide 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 0.33 fluid oz. per 1,000 square feet) may be required during periods of high pest pressure.

²**Annual Bluegrass Weevil (*Hyperodes*) adults:** Applications should 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 (*Cornus 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 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 be made during May and July to control the first and second generation of black turfgrass ataenius adults, respectively. The May application should be timed to coincide with the full bloom stage of Vanhoutte spiraea (*Spiraea vanhouttei*) and horse chestnut (*Aesculus hippocastanum*). The July application should be timed to coincide with the blooming of Rose of Sharon (*Hibiscus syriacus*).

⁶**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 0.33 fluid oz. per 1,000 square feet) may be required to control populations that contain both nymphs and adults during the middle of the summer.

⁷**Crane Fly larvae:** Applications should target early- to mid-stage larvae. Applications targeting late-stage larvae may only provide suppression. Two species of crane flies damage turfgrass. *Tipula paludosa* has one generation per year and adults emerge in late summer. Early- to mid-stage larvae of this species are present from late summer through mid-winter. Late-stage larvae, which are more difficult to control, are present from mid-winter through spring. *T. oleracea* has two generations per year. The timing of one of its generations coincides with that of *T. paludosa*. Adults of *T. oleracea* also emerge in the spring and produce a summer generation of larvae.

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 Wisdom 2EC at 0.083 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 apply 0.33 fluid oz. per 1,000 square feet. Mounds should be treated by diluting 1 teaspoon of Wisdom 2EC per gallon of water and applying 1 to 2 gallons of finished spray per mound. The mounds should be treated with sufficient force to break their apex and allow the insecticide solution to flow into the ant tunnels. A four foot diameter circle around the mound should also be treated. For best results, apply in cool weather (65-80°F) or in early morning or late evening hours. **Note:** A spray rig that is calibrated to apply 0.33 fluid oz. per 1,000 square feet of Wisdom 2EC in 5 gallons per 1,000 square feet contains the approximate dilution (1/3 teaspoon per gallon) that is required for fire ant mound drenches in the spray tank.

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 be made as late in the day as possible and should 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 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 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 be made as late in the day as possible and should 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 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 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 be made as necessary from mid-spring to early fall to control American dog tick larvae, nymphs and adults.

Wisdom 2EC Lawn Dilution Chart

Application Volume: Gallons per 1,000 sq. ft.	Application Rate: Fluid Ounces per 1,000 sq. ft.	Fluid Ounces* of Wisdom 2EC Diluted to these Volumes of Finished Spray			
		1 gallon	5 gallons	10 gallons	100 gallons
1.0	0.06	0.06	0.30	0.60	6.00
1.0	0.083	0.083	0.416	0.83	8.33
1.0	0.16	0.16	0.83	1.66	16.66
1.0	0.33	0.33	1.66	3.33	33.33
2.0	0.06	---	0.15	0.30	3.00
2.0	0.083	0.043	0.21	0.416	4.16
2.0	0.16	0.083	0.416	0.83	8.33
2.0	0.33	0.16	0.83	1.66	16.66
3.0	0.06	---	0.10	0.20	2.00
3.0	0.083	---	0.14	0.276	2.76
3.0	0.16	0.056	0.276	0.556	5.56
3.0	0.33	0.11	0.556	1.11	11.10
4.0	0.06	---	0.076	0.15	1.50
4.0	0.083	---	0.10	0.21	2.10
4.0	0.16	0.043	0.21	0.416	4.16
4.0	0.33	0.083	0.416	0.83	8.33
5.0	0.06	---	0.06	0.12	1.20
5.0	0.083	---	0.083	0.16	1.66
5.0	0.16	0.033	0.16	0.33	3.33
5.0	0.33	0.066	0.33	0.66	6.66
10.0	0.06	---	---	0.06	0.60
10.0	0.083	---	0.043	0.083	0.83
10.0	0.16	---	0.083	0.16	1.66
10.0	0.33	0.033	0.16	0.33	3.33

*To convert to milliliters, multiply by 29.57.

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

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Do not use household utensils to measure Wisdom 2EC.

Ornamental Trees, Shrubs, Flowers and Foliage Plants: Dilute 0.18 to 1.45 fl. oz. of Wisdom 2EC Insecticide/Miticide per 10 gallons of water and apply as a full coverage foliar spray. As foliage and pest pressure increases, repeat application as needed using the higher rates.

ORNAMENTAL 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, Wisdom 2EC may be applied at up to 0.33 fluid oz. per 1,000 square feet (14.5 fl. oz. per 100 gallons) to control each of the pests listed in this Table. The higher application rates should be used when maximum residual control is desired.

Pest	Application Rate Wisdom 2EC	
	Fluid Ounces per 1,000 square feet	Fluid Ounces per 100 gallons
Bagworms ¹³ Cutworms Elm Leaf Beetles Fall Webworms Gypsy Moth Caterpillars Lace Bugs Leaf Feeding Caterpillars Tent Caterpillars	0.042-0.083	1.80-3.60
Adelgids [†] Ants Aphids Bees Beet Armyworm Beetles ^{14, †} Black Vine Weevil (Adults) Brown Soft Scales Broad Mites Budworms California Red Scale (Crawlers) ¹⁴ Centipedes Cicadas [†] Citrus Thrips Clover Mites Crickets Diaprepes (Adults) Earwigs European Red Mite Flea Beetles Fungus Gnats (Adults) Grasshoppers Japanese Beetle (adults) [†] Leafhoppers Leafrollers Mealybugs Millipedes Mites Mosquitoes Orchid Weevil Pillbugs Pine Needle Scales (Crawlers) ¹⁴ Plant Bugs (Including <i>Lygus spp.</i>) Psyllids [†] San Jose Scales (Crawlers) ¹⁴	0.083-0.167	3.60-7.23

Scorpions Sowbugs Spider Mites ¹⁵ Spiders Spittlebugs [†] Thrips Tip Moths Treehoppers [†] Twig Borers ¹⁴ Wasps Weevils ¹⁴ Whiteflies		
Imported Fire Ants ^{**} Leafminers Pecan Leaf Scorch Mite Pine Shoot Beetle (Adults) Spider Mites ¹⁵	0.167-0.33	7.23-14.50

¹³**Bagworms:** Apply when larvae begin to hatch and spray larvae directly. Applications when larvae are young will be most effective.

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

¹⁵**Spider Mites:** Wisdom 2EC 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 Wisdom 2EC. Combinations of Wisdom 2EC with other registered miticides have also proven effective. Alternately, Wisdom 2EC applications 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.

**For foraging ants.

[†]Not for use in California.

Wisdom 2EC Ornamental Dilution Chart

Application Volume: Gallons per		Application Rate: Fluid ounces per	Fluid Ounces* of Wisdom 2EC 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	0.042	---	0.09	0.18	1.80
2.3	100	0.083	0.036	0.18	0.36	3.60
2.3	100	0.167	0.073	0.363	0.723	7.23
2.3	100	0.33	0.146	0.723	1.45	14.50
4.6	200	0.042	---	0.046	0.09	0.90
4.6	200	0.083	---	0.09	0.16	1.80
4.6	200	0.167	0.036	0.18	0.363	3.63
4.6	200	0.33	0.073	0.363	0.723	7.23
6.9	300	0.042	---	---	0.06	0.60
6.9	300	0.083	---	0.06	0.12	1.20
6.9	300	0.167	---	0.12	0.24	2.40
6.9	300	0.33	0.05	0.24	0.483	4.83

*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 Wisdom 2EC Flowable.

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Pest Control on Outside Surfaces and Around Buildings

Use Sites	Pests	Rate	Comments
Including, but not limited to: Outdoor siding Foundations Porches Window frames Overhangs and eaves Patios Garages Garbage sites Soil Mulched areas Trunks of woody ornamentals Lawns next to: Private houses Duplexes Townhomes Condos Trailers Apartments Carports Garages Fence rows Utility sheds Barns Residential and noncommercial structures Areas where pests gather or have been seen	Ants (Carpenter Ants and Fire Ants) Armyworms Bees Centipedes Chiggers Chinch Bugs Clover Mites Crickets Cockroaches Cutworms Dichondra Flea Beetles Earwigs European Crane Flies Grasshoppers Hornets Millipedes Mosquitoes Moths Scorpions Sod Webworms Sowbugs (Pillbugs) Spiders (Black Widow Spiders) Springtails Ticks (Brown Dog Ticks) Wasps	For a 0.02% dilution mix 1/10 fl. oz. / 1 gal. water (1/10 fl.oz. = 2/3 teaspoon) or 2/3 pint / 100 gallons For a 0.06% dilution mix 1/3 fl. oz. / 1 gal. water (1/3 fl.oz. = 2 teaspoons) or 2 pints / 100 gallons	Apply Wisdom 2EC Insecticide/Miticide as a residual spray using a 0.02 to 0.06% dilution. Do not use household utensils to measure Wisdom 2EC Insecticide/Miticide. For heavy pest infestation, quicker knockdown or longer residual control, use the higher rate. To sustain effectiveness, repeat treatment as needed.

Perimeter Treatment: Apply to a 10 foot wide band of soil and vegetation around and adjacent to the structure and treat the foundation of the structure to a height of 3 feet. Use a spray volume of up to 10 gals. of solution per 1,000 sq. ft. If foliage is thick or there is mulch or leaf litter nearby, the higher volumes of water may be necessary. If certain pests such as gypsy moth adults and caterpillars, boxelder bugs, elm leaf beetles, earwigs or silverfish are nearby, application to siding and surfaces where these pests harbor may be necessary.

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). 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 1 to 2 teaspoons of product per gallon of water and applying this dilution at the rate of 1 gallon per 1,000 square feet.

Wisdom 2EC Perimeter Application Dilution Chart

Application Volume: Gallons per 1,000 sq. ft.	Application Rate: Fluid ounces per 1,000 sq. ft.	Fluid Ounces* of Wisdom 2EC Diluted to These Volumes of Finished Spray			
		1 gallon	5 gallons	10 gallons	100 gallons
1	0.11	0.11	0.556	1.11	11.10
1	0.16	0.16	0.83	1.66	16.66
1	0.22	0.22	1.11	2.22	22.23
1	0.25	0.25	1.25	2.50	25.0
1	0.33	0.33	1.66	3.33	33.33
2	0.11	0.056	0.276	0.55	5.50
2	0.16	0.083	0.416	0.83	8.33
2	0.22	0.11	0.556	1.116	11.16
2	0.25	0.126	0.626	1.25	12.5
2	0.33	0.16	0.83	1.66	16.66
3	0.11	0.036	0.183	0.366	3.66
3	0.16	0.056	0.276	0.556	5.56
3	0.22	0.073	0.37	0.743	7.43
3	0.25	0.083	0.416	0.83	8.33
3	0.33	0.11	0.556	1.11	11.10
4	0.11	---	0.136	0.276	2.76
4	0.16	0.043	0.21	0.416	4.16
4	0.22	0.056	0.28	0.556	5.56
4	0.25	0.063	0.313	0.626	6.26
4	0.33	0.083	0.416	0.83	8.33
5	0.11	---	0.11	0.22	2.23
5	0.16	0.033	0.16	0.33	3.33
5	0.22	0.043	0.22	0.443	4.33
5	0.25	0.05	0.25	0.50	5.00
5	0.33	0.06	0.33	0.66	6.66
10	0.11	---	0.056	0.11	1.10
10	0.16	---	0.083	0.16	1.66
10	0.22	---	0.11	0.22	2.23
10	0.25	---	0.126	0.25	2.50
10	0.33	0.033	0.16	0.33	3.33

*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 Wisdom 2EC.

For Optimal Control of Ants and Fire Ant Mounds use Wisdom 2EC Insecticide/Miticide 0.06% solution as a Mound Drench Method: Sprinkle the mound, using 1-2 gallons of dilution, until it is wet and apply to a 4 foot diameter circle around the mound. When treating mounds larger than 12", use the higher volume. Do not treat in the heat of the day and for optimum results, apply in cool weather, such as in early morning or late evening hours. Incorporating the solution into the mound soil will enhance control results.

Application to Home Lawns: Apply Wisdom 2EC Insecticide/Miticide as a broadcast treatment in 2 to 10 gallons of carrier per 1000 sq. ft. When treating thick grass foliage, use the higher volumes to get complete, uniform coverage.

Attention: Keep children and pets off treated areas following application until the spray has dried.

TRUNK SPRAYS TO ORNAMENTAL TREES

To control *Dendroctonus* bark beetles such as black turpentine beetle, mountain pine beetle, western pine beetle, southern pine beetle, as well as engraver beetles (*Ips* spp.)

Preventative Control: In the spring, or when trees nearby have become infested posing a threat, treat the trunk of the tree with a hydraulic sprayer using a mixture that contains 1 to 2 pints of Wisdom 2EC Insecticide/Miticide per 100 gallons (0.25 to 0.5 lb. ai/100 gallons) of water. Treat the main trunk from the base of the tree to at least halfway into the live crown spraying the tree directly and until the bark is completely wet (usually 1 to 4 gallons of spray per tree). Do not apply more than 0.2 lb. ai (12.8 fl. oz.) of Wisdom 2EC Insecticide/Miticide to trees per acre. If reinfestation is probable it may be necessary to repeat treatment. Depending on certain local variables and target pests, application rates and timing will differ. Check with your local State Extension Specialist or other qualified expert for specific recommendations.

Treatment of Infested Trees: To control emerging brood, treat trees that still have beetles in the bark by using a spray mixture containing 2 pints of Wisdom 2EC Insecticide/Miticide per 100 gallons of water. Treat the main trunk from the base of the tree to at least halfway into the live crown spraying the tree directly and until the bark is completely wet (usually 1 to 4 gallons of spray per tree). Do not apply more than 0.2 lb. ai (12.8 fl. oz.) of Wisdom 2EC Insecticide/Miticide to trees per acre. Trees that have needles that have all turned brown normally have been vacated and should not be treated unless infestation is evident. Scrape off the outer bark to determine whether or not the tree is infested. If trunks are currently infested, fell the infested trees and cut into sections. Spray the trunk and large limbs of the sections thoroughly to treat the entire surface area. Do not apply more than 0.2 lb. ai (12.8 fl. oz.) of Wisdom 2EC Insecticide/Miticide per acre.

To control other beetles such as ambrosia beetles, elm bark beetles and emerald ash borer

Preventative Control: In the early spring or before adult beetle flight and tree infestation, treat the trunk, scaffolding and limbs of the tree with a hydraulic sprayer using a spray mixture containing 1 to 2 pints of the product per 100 gallons (0.25 to 0.5 lb. ai/100 gallons) of water. Spray the tree until the bark is completely wet (usually 6 to 12 gallons of spray per tree). Do not to apply more than 0.2 lb. ai to trees per acre. If reinfestation is probable it may be necessary to repeat treatment. Depending on certain local variables and target pests, application rates and timing will differ. Check with your local State Extension Specialist or other qualified expert for specific recommendations.

Other Borers on Ornamental Trees

To control other boring insects see the table below. Depending on geographic location and environmental conditions, application rate and timing will differ. Spray the tree until the bark is completely wet (usually 1 to 4 gallons of spray per tree). Do not apply more than 100 gallons of diluted spray mixture to trees on a treated acre. Check with your local State Extension Specialist or other qualified expert for specific recommendations.

Pest	Rate	Comments
Clearwing Moth Borers Ash borer Banded Ash Clearwing Dogwood Borer Lesser Peachtree Borer Lilac Borer Oak Borer	6.4 to 12.8 fl. oz. per 100 gallons	Treat trunks and lower branches before adult emergence.
Coleopteran Borer Bronze Birch Borer Flatheaded Appletree Borer	6.4 to 12.8 fl. oz. per 100 gallons	
For maximum residual control of the above listed pests.	12.8 fl. oz. per 100 gallons	

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

STORAGE AND DISPOSAL

Pesticide Storage : Do not freeze or store product below 40°F. If crystals are observed, gradually warm product to above 60°F by placing container in a warmer location. Gently shake or roll container periodically to redissolve solids. Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, replace lids and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call Chemtrec 1-800-424-9300.

To confine spill: Dike surrounding area or absorb with sand, cat litter or commercial clay. Place damaged package in a holding container. Identify contents.

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative of the nearest EPA Regional Office for guidance.

Container Disposal

For 1 gallon plastic container: Nonrefillable container. Do not reuse or refill this container.

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities.

For 15 gallon returnable product container: Returnable container. Nonrefillable container. Do not reuse or refill this container. This container is a dedicated, single-product returnable container. Return empty container to seller at location designated by seller as a collection point. Do not break seals, add anything to container or open container after use. Do not rinse or contaminate empty container. Do not dispose of untampered empty container or use it for any other purposes. Any evidence of broken seals or other tampering or adding anything to the container renders it unfit for return. In such case, it is the obligation of the holder of the container to dispose of it properly or offer for recycling, if available.

Distributors Should Deal in Original Packages Only.

Terms of Sale or Use: On purchase of Wisdom 2EC Insecticide/Miticicide buyer and user agree to the following conditions:

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

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