

279-3281

8/6/2010

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

August 6, 2010

Chris Davis
FMC Corporation
1735 Market Street
Philadelphia, PA 19103

Subject: Amendment – Adding claims for control of wood-destroying pest for post-construction applications.
Bistar® WT Insecticide
EPA Reg. No. 279-3281
Your submission dated October 24, 2009

Dear Mr. Davis:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable subject to the comments listed below. Two (2) copies of the finished labeling must be submitted prior to releasing the product for shipment. A stamped copy of the label is enclosed for your records.

1. Replace “Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco” with “Wash thoroughly with soap and water after handling and before eating, drinking, using tobacco or using the toilet” in the Precautionary Statements section.
2. Add the following statements to the Directions for Use section:
 - a. “This product is not intended for application to soil; it is not a soil termiticide. Do not use to directly treat soil. Prior to using this product, consult with your state regulatory agency to see if they require additional qualifications for the person applying this product.”
 - b. “In new construction application for the prevention of termite infestation, structural wood is defined as: only wood needed for the basic building structure as found in the dried-in stage of construction, including wood in direct contact with foundations, interior and exterior wall sill plates, wood or cellulosic sheathing, floor joists, and sub-flooring. Apply when access to wooden structural components is optimized and when no further framing modifications will be made, such as after final framing inspection. Do not use for new construction treatments if the total linear footage of the cellulosic base plates is less than 60% of the total linear footage of all base plates in structure to include exterior and interior walls. In new

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construction with 60% or more lineal footage of base plates, but without continuous wood on every exterior wall, the treatment must be installed to all other exterior structural construction materials, including brick or block, to a height of 2 feet and extended out onto the slab at a minimum of 2 to a maximum of 8 inches.”

- c. “In structures where a soil treatment/barrier termiticide has been applied and/or termite bait system installed, this product may be applied as an additional treatment to protect wood from subterranean termites that may have penetrated the chemical gaps occurring within the termiticide-treated soil or have bypassed the bait/monitor systems.”
3. Add a 2 year duration claim as part of any and all control claims.
4. Add specific minimum efficacious amount of spray mixture to be applied instruction to the Direction for Use section, i.e. “xx gallons spray per square meter, to the point of surface saturation”, in accordance with the minimum efficacious does of 50 mg bifenthrin/square meter of wood. Directions for surface applications to wood (either post-construction pretreatment, or treatment of wood prior to construction) indicating to “apply to the point of runoff” are too ambiguous.
5. Revise the treatment of wood prior to construction, final wood residue levels must be achieved via pressure, surface, and/or glue-line treatment, and must meet or exceed the following:
 - a. For pressure treatment of wood: Final residue of ≥ 64 g bifenthrin/cubic meter.
 - b. For surface treatment of wood: Final residue of ≥ 50 mg bifenthrin/square meter.
 - c. For glueline treatment of wood: Final residue of ≥ 20 g bifenthring/square meter.
6. Replace “The application of Bistar® WT to both timber and timber based products as specified in the application instructions will protect treated products from damage from drywood and subterranean termites (including Formosan termites), carpenter ants, ambrosia beetles, powder-post beetles, false powder-post beetles, deathwatch beetles, old-house borers and others. For longer control use the higher rate” with “The application of Bistar® WT to both timber and timber based products as specified in the application instructions will protect treated products from damage for up to two years from drywood and subterranean termites (including Formosan termites), carpenter ants, ambrosia beetles, powder-post beetles, false powder-post beetles, deathwatch beetles, old-house borers and others. For longer control use the higher rate”. Also, delete the statement “For longer control use the higher rate”, the data cited or submitted doesn’t support this claim.
7. Submit an acceptable Wood Preservative Leaching Study or study protocol within one year from the date of this letter. This wood-leaching study remains outstanding as a condition of registration. The wood-leaching studies submitted in 2008 were withdrawn. Since this is a non-guideline study you must obtain approval of the protocol for the wood preservative leaching study from the Agency prior to study initiation.
8. On page 7 replace, “Structures should have a roof already installed prior to treatment to

reduce to the elements” with “Structures must have a roof already installed prior to treatment to reduce to the elements” under the Structural Pretreatment Application Instructions section. Also delete the phrase “such as” this phrase may give the user the impression that the product could be applied on other sites for which the product has not been approved.

- 9. On page 5 replace “It is recommended Bistar® WT be diluted in the following manner” with “Dilute Bistar® WT in the following manner”. Also delete the phrase “such as” this phrase may give the user the impression that the product could be applied on other sites for which the product has not been approved.
- 10. On page 8 delete the phrase “such as” this phrase may give the user the impression that the product could be applied on other sites for which the product has not been approved.
- 11. Re-instate the following to the Comments section in the Directions for use table on page 7.
 - a. For rate (10 oz/100 ft³ dry veneer) replace “... a minimum loadings of 0.001% mass/mass of veneers” with “... a minimum loadings of 0.024% mass/mass of veneers”. Also replace “... a minimum of 0.001% mass/mass” with “... a minimum of 0.024% mass/mass”.
 - b. For (0.1 oz/ft³ of the glueline) replace “...a minimum of 0.0042% mass/mass” with “... a minimum of 0.024% mass/mass”.
 - c. For (0.3 oz/100 lb fiber) replace “...a minimum of 0.0042% mass/mass” with “... a minimum of 0.024% mass/mass”. Also add “Where Bistar® WT is to be added to the glue mix the pH of the finished mix must not exceed 9.5”.
- 12. Replace “To the extent allowed by law, FMC or seller shall not be liable ...etc” with “To the extent consistent with applicable law, FMC or seller shall not be liable ... etc” in the Warranty statement. Also replace “The Directions for Use of this product should be followed carefully” with “The Directions for Use of this product must be followed carefully”.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

If you have any questions regarding this action, please contact BeWanda Alexander at Alexander.bewanda@epa.gov or (703) 305-7460.

Sincerely,

 Richard Gebken
 Product Manager
 Insecticide Branch
 Registration Division (7505P)

Enclosure

4011

ACCEPTED
with COMMENTS
In EPA Letter Dated
AUG 6 2010

Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
279-3281

Bistar® WT Insecticide

For use by individuals or firms licensed or registered by the State to apply wood preservation products. States may have more restrictive requirements regarding qualifications of persons using this product.

EPA Reg. No. 279-3281
FL-1

EPA Est. No. 279-

Active Ingredient	
Bifenthrin*	23.4%
Inert Ingredients**	76.6%
	100.0%

* Cis isomers 97% minimum, trans isomers 3% maximum;
**Contains petroleum distillates

Bistar® WT insecticide contains 2 pounds active ingredient per gallon.
U.S. Patent No. 4, 238, 505
U.S. Patent No. 6, 251, 415

KEEP OUT OF REACH OF CHILDREN

WARNING

See other panels for additional precautionary information.



FMC Corporation
Agricultural Products Group
Philadelphia, PA 19103

Net Contents

FIRST AID	
If swallowed	<ul style="list-style-type: none"> • Immediately call a poison control center or doctor. • Do not give any liquids to the person. • 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	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respirations, preferably by mouth-to-mouth, if possible • Call a poison control center or doctor for further treatment advice
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

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• Call a poison control center or doctor for treatment advice

HOTLINE 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-(800)-331-3148 for emergency assistance.

NOTE TO PHYSICIAN

Pesticide hotline (800) 858-7378. This product is a pyrethroid. This product also contains alsoaromatic 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.

For Information Regarding the Use of this Product Call 1-800-321-1FMC (1362).

PRECAUTIONARY STATEMENTS

Hazards to Humans (and Domestic Animals)

Warning

May be fatal if swallowed. Causes skin irritation and moderate eye irritation. Do not get on skin or on clothing. Avoid breathing vapors or spray mist, and contact with eyes. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash contaminated clothing before reuse.

Personal Protective Equipment

All pesticide handlers (mixers, loaders, and applicators) must wear long-sleeved coveralls worn over a minimum of short-sleeved shirt and short pants, socks, footwear impervious to aromatic solvents (neoprene or nitrile butadiene rubber), chemical-resistant gloves and protective eyewear (goggles, face shield, or safety glasses with front, brow, and temple protection). In addition, all pesticide handlers must wear a respiratory protection device¹ when handling the concentrate or when working in a non-ventilated space. All pesticide handlers must wear protective eyewear (goggles, face shield, or safety glasses with front, brow, and temple protection) when working in a non-ventilated space.

1. NIOSH approved respirator with any R, P or HE filter, or a NIOSH approved respirator with and organic vapor (OV) cartridge or canister with any R, P or HE prefilter.

Individuals entering treatment vessels and related equipment that are contaminated with the wood treatment solution must wear protective clothing as indicated above. OSHA confined space entry procedures must be followed. Protective clothing must be changed when it shows of contamination.

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 or to intertidal areas below the mean high water mark. Do not contaminate water by cleaning of equipment or disposal of equipment wash waters.

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other water unless in accordance with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

Physical/Chemical Hazards

Do not use or store near heat or open flame.

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DIRECTIONS FOR USE

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

STORAGE AND DISPOSAL

Pesticide Storage

If crystals are observed, warm material to above 60°F by placing container in warm location.

Shake or roll container periodically to redissolve solids. Do not use external source of heat for warming container.

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 FMC: (800) 331-3148.

To confine spill: if liquid, dike surrounding area or absorb with sand, cat litter, commercial clay, or gel absorbent. If dry material, cover to prevent dispersal. 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 at the nearest EPA regional Office for guidance.

Container Disposal

Metal or Plastic Container: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Do not cut or weld metal containers.

Returnable/Refillable Containers: Do not rinse container. Do not empty remaining formulated product. Do not break seals. Return intact to point of purchase.

General Instructions

Bistar® WT is a dual emulsifiable concentrate that may be diluted with either water or diluents commonly used in wood preservation such as white spirits. Bistar® WT can be used to treat wood to be used in areas where protection from weather exists, such as lumber and engineered woods, including for use in framing lumber, sillplates, millwork, pallets, wooden containers, and processed wood products. The application of Bistar® WT to both timber and timber based products as specified in the directions for use table will protect treated products from damage from termites, carpenter ants, ambrosia beetles, powder-post beetles, false powder-post beetles, deathwatch beetles, old-house borers and others. Bistar® WT is intended for use in commercial manufacturing or industrial wood processing or assembly plants only, and may be used in dipping, brushing, spraying, glueline or pressure treatments. For longer control use the higher use rates and/or apply by pressure treatment.

Complete coverage of wood is essential for optimal insect control. In applications by surface treatment such as dipping, spraying, or brushing, milling or cutting may expose untreated wood for insect attack. Cut ends need to be treated with brush application. Where control of rotting or staining organisms is desired, an appropriate fungicide will need to be added to the treatment solution or applied separately.

Handling Procedures

Wear protective clothing including eye protection, chemically resistant gloves, and footwear impervious to aromatic solvents (such as neoprene or nitrile butadiene rubber) during preparation of solution, treatment, and when handling freshly treated wood.

To avoid breathing spray mist during application in confined areas wear a NIOSH approved respirator with any R, P or HE filter, or a NIOSH approved respirator with and organic vapor (OV) cartridge or canister with any R, P or HE prefilter.

Wood can be safely handled without the use of protective clothing when dry.

Mixing

Add the required quantity of Bistar® WT to a diluent in the holding tank, or glue mixer and mix thoroughly. Maintain agitation during both mixing and application.

Tank Mixing

Unless prohibited by a product's label, users can tank mix pesticides currently labeled for similar use patterns. It is always recommended that a small jar compatibility test using proper proportions of chemicals be run to check for chemical compatibility before tank mixing.

Dilution Chart

Emulsion Concentrate Desired Gallons of Finished Spray	Amount of Bistar® WT		
	0.01%	0.06%	0.12%
25	1.3 oz.	8 oz.	0.5 qt
50	2.6 oz.	0.5 qt.	1.0 qt.
75	3.9 oz.	0.75 qt.	1.5 qt.
100	5.2 oz.	1.0 qt.	2.0 qt.
150	7.8 oz.	1.5 qt.	3.0 qt.
200	10.4 oz.	2.0 qt.	4.0 qt.

Directions for Application (Limited to use of Bistar WT in Manufacturing, Industrial, and Rights-of-Way Settings only)

To control wood infesting insects treat wood with appropriate dilution of bifenthrin in treatment solution, up to 0.12%. Monitoring of the treating solution may be necessary to ensure that the desired level of bifenthrin is maintained, particularly where the treating solution may be used for an extended period of time.

Dip Treatment

Wood infesting insects can be controlled in wood products such as freshly cut timber, wooden containers, millwork, pallets, and processed wood products by dipping. Use solution concentration rates up to 0.06% dilution of bifenthrin to achieve needed bifenthrin loading of 0.012-0.0047 w/w in the wood to provide protection. The wood should be totally submerged in the dilution until thoroughly wet (minimum 3 minutes) and then allowed to dry in a suitable location. Dipping solutions should be agitated if left unused for a period of time (such as overnight). For optimal performance and economy avoid heavy buildup of wood debris in dip tanks as bifenthrin may bind to the debris and thus reduce the strength of the dilution.

Spray Treatment and Brush Treatment

Wood infesting insects can be controlled in wood products such as freshly cut timber, wooden containers, millwork, pallets, and processed wood products by spraying or brushing. Use solution concentration rates up to 0.06% dilution of bifenthrin to achieve needed bifenthrin loading of 0.0012-0.0047 w/w in the wood to provide protection. The wood should be sprayed or brushed thoroughly, including backs and ends, with the treatment mixture. Apply to surfaces, voids, and channels where insects may be located. When spraying, use a sprayer capable of delivering a

coarse, low-pressure (about 20 psi) spray. On logs, ensure thorough bark coverage as untreated areas are subject to insect attack. When treating processed wood products, Bistar® WT may be sprayed onto wood chips or mixed with a compatible adhesive (such as spraying, rolling, or blending). Test compatibility and application on a small scale before full-scale production.

Pressure Treatment

For maximum, long-term control of wood infesting insects in products such as lumber (including framing lumber and sillplates), wooden containers, millwork, pallets, processed wood products, apply Bistar WT by pressure treatment. Treat to attain a minimum retention of 0.0012 – 0.0047% mass/mass. Bistar WT can be used in combination with other treatment solutions such as disodium octoborate tetrahydrate (DOT) where compatibility is the responsibility of the formulator.

Glueline Treatment

Engineered products such as composite paneling, OSB, plywood, and glue-laminated beams (glulam) can be treated by mixing in the appropriate amount of Bistar WT when preparing the glue resin mix to obtain a final minimum concentration of bifenthrin in the finished product of 0.0024-0.0047% mass/mass. Mode of treatment and determination of compatibility with resin and composite manufacturing method is the responsibility of the formulator.

Treatment for Unexposed or interior applications

Bistar WT can be used for applications where the treated wood is either unexposed to weather such as in millwork, sillplates, framing lumber, composite paneling and engineered floor joists, glue-laminated (glulam) beams. Mode of treatment and determination of compatibility with resin and composite manufacturing method is the responsibility of the formulator.

Note: Wood treated with this product is only for above ground uses and is not to be used in water immersion applications. Do not treat wood that will come in contact with raw agricultural commodities, food, feed or water.

Directions for use

Target Use	Pest	Rate (% a.i.)	Comments
Sawn and round timbers for treatment by vacuum or vacuum pressure impregnation for use in Hazard Class H1	Powderpost Beetles	0.5 oz/100 lb timber	<ol style="list-style-type: none"> 1. Calculate the uptake of suitable diluent (e.g. organic solvents, water, or water repellent) per 100 lb of timber. 2. Add the appropriate amount of Bistar® WT to the diluent to achieve recommended loadings. 3. Apply to timber through vacuum or vacuum-pressure treatment to ensure compliance with AWP standards 4. The minimum individual retention is 0.0018% mass/mass
Sawn and round timbers for treatment by vacuum or vacuum pressure impregnation for use in Hazard Class H2	All termites (including <i>Coptotermes formosanus</i>)	1.7 oz/100 lb timber	<ol style="list-style-type: none"> 1. Calculate the uptake of suitable diluent (e.g. organic solvents, water, or water repellent) per 100 lb of timber. 2. Add the appropriate amount of Bistar® WT to the diluent to achieve recommended loadings. 3. Apply to timber through vacuum or vacuum-pressure treatment to ensure compliance with AWP standards 4. The minimum individual retention is 0.0024% mass/mass
Framing timbers for surface spray application or dipping in Hazard Class H2 with no exposure to sunlight	All termites (including <i>Coptotermes formosanus</i>)	0.2 oz/100 ft ² of surface area	<ol style="list-style-type: none"> 1. Calculate the uptake of suitable diluent (e.g. organic solvents, water, or water repellent) per ft³ of timber. 2. Calculate the surface area of 1 ft³ of product to treat 3. Add the appropriate amount of Bistar® WT to the diluent to achieve recommended loadings. 4. Apply to timber through spray system or by dipping to ensure recommended rates 5. The minimum individual piece retention is 1.7 g/100 ft³

Target Use	Pest	Rate (% a.i.)	Comments
Processing & manufacture of softwood plywood in Hazard Class H2	All termites (including <i>Coptotermes formosanus</i>)	10 oz/100 ft ³ dry veneer	<ol style="list-style-type: none"> 1. Calculate the uptake of solution by veneers. 2. Dilute Bistar® WT as required to ensure minimum loadings of 0.001% mass/mass of veneers. 3. Following the manufacture of the plywood panel the loading of bifenthrin in the panel should be a minimum of 0.001% mass/mass.
Glueline treatment of softwood plywood for use in Hazard Class H2	All termites (including <i>Coptotermes formosanus</i>)	0.1 oz/ ft ³ of the glueline	<ol style="list-style-type: none"> 1. Calculate the usage of the glue per cubic foot of panel. 2. Add Bistar® WT to the glue during preparation of the mix. 3. Following the manufacture of the plywood panel the loading of bifenthrin in the panel should be a minimum of 0.0042% mass/mass.
Softwood particle & strand based boards in Hazard Class H2	All termites (including <i>Coptotermes formosanus</i>)	0.3 oz/ 100 lb fiber	<ol style="list-style-type: none"> 4. Add sufficient Bistar® WT into the glue to achieve a retention of 0.0042% mass/mass in the finished board. Alternatively particles or strands can be treated before manufacture.

Distributors should sell in original packages only

Conditions of Sale and Limitation of Warranty and Liability:

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

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Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) seller or FMC, and buyer assumes the risk of any such use.

To the extent allowed by law, FMC or seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Conditions of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.