



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

OFFICE OF  
 PREVENTION, PESTICIDES  
 AND TOXIC SUBSTANCES

DEC 02 2008

Mr. Vincent Opaskar  
 Quality Borate  
 3690 Orange Place, Suite 495  
 Cleveland, Ohio 44122

Subject: BoraSol-WP, EPA Reg. No. 69529-2  
 July 21, 2008, Label Amendment  
 Decision: 398217

Dear Mr. Opaskar:

The labeling referred to above, submitted in connection with registration under the Federal insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comments listed below:

- In the first paragraph under the heading "Remedial application of solution to invested wood," change the phrase "...0.25 pcf DOT (2.8 kg/m<sup>3</sup>) against Non-Formosan termites" to read "...0.25 pcf DOT (4.0 kg/m<sup>3</sup>) against Non-Formosan termites."
- In the first sentence of the paragraph below the "Pressure Treatment" table, change the phrase "...or 0.25 pcf (4.2 kg/m<sup>3</sup>) DOT for Non-Formosan termites..." to read "...or 0.25 pcf (4.0 kg/m<sup>3</sup>) DOT for Non-Formosan termites..."
- In the second sentence of the paragraph below the "Pressure Treatment" table, change the phrase from "For Formosan termites, the retentions must be 0.28 pcf (4.5 kg/m<sup>3</sup>) B<sub>2</sub>O<sub>3</sub>..." to read "For Formosan termites, the retentions must be 0.28 lb/ft<sup>3</sup> (4.5 kg/m<sup>3</sup>) B<sub>2</sub>O<sub>3</sub>..."
- In the Storage and Disposal section, please add the sentence "Offer for recycling if available" to the Container Disposal language, per 40 CFR §156.140(a)(3).

In addition, please provide a copy of the studies summarized in MRID No. 47482101 within 12 months of the date of this letter. Because this submission is a review paper that summarizes the available research at the time of publication, the Agency needs

copies of the studies summarized in order to fully evaluate the data. However, please note that the information as presented does support the addition of wood decay fungi to the product label.

If you have any questions regarding this letter, please contact Melody Banks on (703) 305-5413.

Sincerely,



Kimberly Nesci  
Product Manager 11  
Insecticide Branch  
Registration Division (7505P)

Enclosures: Copy of Label Stamped "Accepted with Comments"  
Copy of November 24, 2008, Product Performance Review

DEC 02 2008

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
69529-2

# BoraSol-WP

Manufactured by: Quality Borate Co., 3690 Orange Place, #495  
Cleveland, OH 44122

Phone: 1-866-BORATES (866-267-2837)

FOR PROTECTION AND PREVENTATIVE TREATMENT OF WOOD AGAINST TERMITES AND THE  
REMEDIAL CONTROL OF SUCH PESTS IN INFESTED WOOD, PRESSURE TREATMENT AND DIP-  
DIFFUSION TREATMENT.

**ACTIVE INGREDIENT:**

Disodium Octaborate Tetrahydrate (Na<sub>2</sub>B<sub>8</sub>O<sub>13</sub> • 4H<sub>2</sub>O) .98%

**INERT INGREDIENTS:**.....2%

(Product contains 2% H<sub>2</sub>O-absorbed moisture)

EPA Reg. No. 69529-2 EPA Est. No. 79740-ARG-001

Use of this product does not substitute for mechanical alteration, soil treatment or  
foundation treatment, but is merely a supplement that is used as a preventative or  
remedial treatment to protect treated wood only.

**KEEP OUT OF REACH OF CHILDREN**

Precautionary Statements:

Hazards to humans and domestic animals

## C A U T I O N

Harmful if swallowed. Avoid contact with eyes. Wash thoroughly after handling. Avoid  
contamination of food and feed. Do not leave container where children or animals may gain  
access.

Have the product or label with you when calling a Poison Control Center or Doctor or going for  
treatment. In case of emergency, for additional information call (866-267-2837).

	FIRST AID
If swallowed	-Call poison control center or doctor immediately for treatment advice. -Have person sip a glass of water if able to swallow. -Do not induce vomiting unless told to do so by the poison control center or doctor. -Do not give anything by mouth to an unconscious person.
If in eyes	-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 on skin or clothing	- Rinse skin with plenty of water for 15-20 minutes. -Take off contaminated clothing. -Call poison control center or doctor for additional treatment advice.
If Inhaled	Move person to fresh air. -If person is not breathing, call 911 or an ambulance, then give artificial

	respiration, preferably by mouth-to-mouth, if possible -Call a poison control center or doctor for further advice.
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### Personal Protection Equipment

Applicators and other handlers must wear a long-sleeved shirt and long pants which cover the entire arm and leg skin surface, socks, water resistant boots, chemical resistant gloves, and chemical resistant protective eyewear – splash goggles are recommended. When applying this product in confined spaces such as crawl spaces and attics, a ventilation exhaust system is required. If this is impractical, the use of a NIOSH approved respirator designed for dusts/mists is required. Clean spills and over-spray with a clean damp cloth or use an absorbent. Dispose of spill as required by state guidelines and laws.

**DIRECTIONS FOR USE:** It is a violation of Federal Law to use this product in a manner inconsistent with it's labeling.

- Do not apply to foamboard.
- Do not use in edible product areas of food processing plants or on counter tops and other surfaces where food is prepared.
- Do not use in serving areas where food is exposed.
- Do not contaminate feed, water or food.
- Do not use to treat lumber that will contact soil or be exposed to leaching by weather. Do not apply in classrooms when in use.
- Do not use in aircraft cabins.
- Do not apply to patient rooms in hospitals and nursing homes while occupied.
- Do not apply directly to food.
- In a non-federally inspected meat and poultry plant and food-processing establishment, the facility must not be in operation when this product is used.
- Exposed food should be covered or removed prior to the application. Thoroughly wash all food processing surfaces before reuse.
- After application in bakeries, meat packing plants, food processing plants, cafeterias, and similar facilities, wash all benches, shelving equipment etc. where exposed food will be handled with an effective cleaning compound followed by a potable water rinse to remove all traces of contamination.
- This product cannot be tank mixed with other pesticide products.
- In the home, remove or cover exposed food, food handling surfaces, and cooking utensils. Wash thoroughly after treatment and before reuse.
- When spraying overhead interior areas of homes, apartments buildings, and all other dwellings, cover or protect all surfaces below the area being treated with plastic sheeting or other material which can be disposed of if contamination from dripping or splashing occurs. •Use of this product does not substitute for mechanical alteration, soil treatment or foundation treatment, but is merely a supplement that is used as a preventative or remedial treatment to protect treated wood only.

**GENERAL INFORMATION**

BoraSol-WP is a water-soluble inorganic borate salt with termiticidal properties. BoraSol-WP is effective for the protection and remedial treatment of wood against wood-destroying organisms, including the target pests listed below. This product can be used for remedial treatment of wood infested with target organisms, for preventative treatment of wood in existing structures (before signs of infestation), for treatment of wood during construction, for the pressure treatment of lumber and for the dip-diffusion of lumber.

BoraSol WP will penetrate the wood to the heartwood, protecting the wood from termite and other wood destroying insects. BoraSol WP may be tank-mixed with an approved pesticide or an approved fungicide/moldicide for increased performance in insect protection or fungus/mold protection on hard surfaces. BoraSol WP will protect wood from both white rot and brown rot and other fungi. Tank mixing with other fungicides or pesticides must follow any label instructions and precautions.

**TARGET ORGANISMS**

BoraSol-WP is effective for treatment of wood (and wood-foam composite structural components) against wood-boring insects, including the following insects.

- |                               |                                   |
|-------------------------------|-----------------------------------|
| Subterranean Termites         | Powderpost Beetles                |
| Reticulitermes, Heterotermes, | Lyctidae, Anobiids,               |
| Coptotermes (Formosan)        | Bostrichidae, Cerambycidae        |
| Dampwood Termites             | Wood Decay Fungi                  |
| Zootermopsis                  | Brown Rot, White Rot, other fungi |

**This label is for End-Use Applications Only.**

**WOOD**

BoraSol-WP is recommended for wood materials in accordance with the specific treatment methods described below. BoraSol-WP is effective for interior and exterior wood (and wood-foam composite structural components) that will be protected from rain and not in direct contact with soil. Types of wood include, but are not limited to, all types of lumber, logs, and plywood. This product is toxic to wood-destroying insects, but surface etching of treated wood may occur.

**REMEDIAL TREATMENT OF INFESTED WOOD**

**PREPARATION OF TREATMENT SOLUTION**

A 15% aqueous solution of BoraSol-WP is used for treatment. While agitating, 1.50 pounds of BoraSol-WP (equivalent to 1.47 lbs of disodium octaborate tetrahydrate) is then gradually added for each gallon of treating solution that is required. The remaining water is then added and the solution is agitated until the product has dissolved. Please see the table below for mixing instructions for various treatment areas.

**BoraSol WP Mixing Table**

Surface Area (sq. ft.)	200	1000	2000	5000	10,000	20,000
Water (gallons)	1.0	5.0	10.0	25.0	50.0	100
Water (lbs)	8.3	41.5	83.0	207.5	415.0	830.0
BoraSol-WP (lbs)	1.5	7.5	15.0	37.5	75.0	150.0
Equiv. DOT (lbs)	1.47	7.35	14.7	36.75	73.5	147.0

**REMEDIAL APPLICATION OF SOLUTION TO INFESTED WOOD**

For remedial control of listed organisms attacking wood, apply the 15% aqueous solution of BoraSol-WP by brush or spray until surface is thoroughly wet (5 gallons per 1000 square feet). For adequate penetration, treatment must be conducted a second time after surface has dried. Treatment should include the crawl space, slab, basement, attic and all void constructions. Application must be made by drilling and then injecting the solution under pressure into sound wood or until run-off is observed from entry/exit holes of infested wood. This product must be applied only to treat bare wood, plywood, and particleboard, where an intact water repellent such as paint, stain, or a sealer is not present. Be sure to check the wood for structural integrity as this product does not enhance or provide structural integrity to treated wood. Remedial treatment must result in retention of 0.17 lb/ft<sup>3</sup> (2.8 kg/m<sup>3</sup>) B<sub>2</sub>O<sub>3</sub> or 0.25 pcf DOT (2.8 Kg/m<sup>3</sup>) against Non-Formosan termites. Formosan termites require 0.28 lbs/ft<sup>3</sup> B<sub>2</sub>O<sub>3</sub> (4.5Kg/m<sup>3</sup>) or 0.42 pcf DOT (6.67 Kg/m<sup>3</sup> DOT).

Do not use this product on wood in contact with the soil or exposed to rain and moisture.

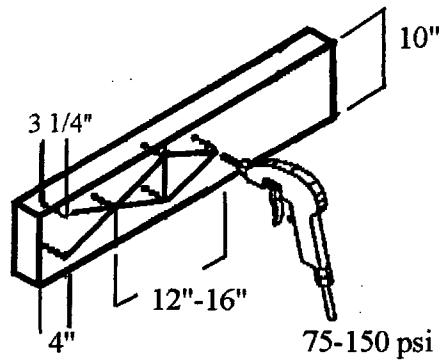
For treating infested wood thicker than one inch, the BoraSol-WP solution must be injected into the wood in addition to spraying.

- Injection holes (1/8 inch in diameter) must be drilled in the area of suspected infestation. The holes must be drilled in a diamond pattern with the long axis along the grain and the holes spaced every 12 to 16 inches. Holes must be spaced 4 to 6 inches across the grain (see figure 1). When possible the wood must be treated one diamond pattern beyond the immediate area of visible infestation.
- Drill the holes through the widest dimension available. Do not drill completely through the beam, leave about 3/4 inch undrilled (See figure 1). If the widest surface is not accessible, holes can be drilled in the narrower surface. If the diamond pattern cannot be used. Drill holes 8-10 inches apart. All holes must be deeper than the injection tip. A longer injection tip can not be used (See Fig. 2).
- Press and hold the injection tip firmly into each hole and inject solution until runoff is observed from other holes, galleries, etc. When injecting solid wood maintain the injection pressure for 15 to 60 seconds at each hole. Longer times give better penetration.
- Release the trigger, wait briefly, and withdraw the injection tip. Excess solution can be absorbed with paper towels and collected for disposal.

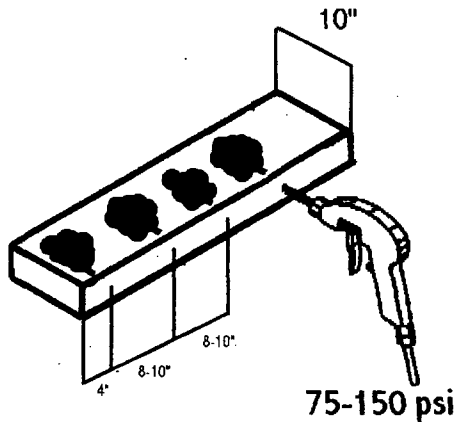
- BoraSol-WP solutions are compatible with stainless steel, brass and all plastic components of spray equipment.
- Equipment should be rinsed with clear water to flush remaining BoraSol-WP out of equipment. The rinsate should be saved and treated as clean water to make up future BoraSol-WP solutions or disposed in accordance with local regulations.

**Example: Treat an infestation in a structural beam with nominal 4x10 inch dimensions.**

- Each hole is drilled approximately 3.25" deep in the diamond pattern shown.
- Solution is injected under pressure (75-150 psi) for 15 to 60 seconds in each hole.
- If a gallery is directly penetrated, solution should be injected until runoff is detected from other holes. Wood surrounding the gallery must also be pressure injected. Treat "one diamond" length beyond the suspected area of infestation.



**Drill and pressure injection of a 4" x 10" structural beam**



**Alternative pressure treatment of a 4" x 10" structural beam**

**Estimating amounts of application**

Calculating the amount of BoraSol WP to be used for a particular treatment is important. Approximately 1 gallon of BoraSol WP solution will be needed to treat 200 sq.ft. for wood surface area. You should always try to avoid extra, leftover solution. There are some predetermined factors which you can use as multipliers for given situations to calculate the square footage of wood to be treated.

**PRESSURE TREATMENT**

The table below is an example of pressure treated wood using a 2% DOT (equiv.) solution.

<b>Board Feet</b>	500	1000	2000	3000	5000	10,000
<b>Wood (cubic feet)</b>	41.7	83.3	166.7	250.0	416.7	833.3
<b>Water (gallons)</b>	62.7	125.4	250.8	376.2	627.0	1,254.0
<b>Water (lbs)</b>	521.7	1,043.3	2,081.6	3,122.46	5,216.6	10,433.3
<b>BoraSol-WP (lbs)</b>	10.6	21.2	42.4	63.6	106.1	212.2
<b>Equiv. DOT (lbs)</b>	10.4	20.8	41.6	62.4	104.0	208.0

Pressure treatment of wood must result in retention of 0.17 lb/ft<sup>3</sup> (2.8 kg/m<sup>3</sup>) B<sub>2</sub>O<sub>3</sub> or 0.25 pcf (4.2 Kg/m<sup>3</sup>) DOT for Non-Formosan Termites in the assay zone specified in AWWA standard C-2. For Formosan termites, the retentions must be 0.28 pcf (4.5Kg/m<sup>3</sup>) B<sub>2</sub>O<sub>3</sub> or 0.42 pcf (6.67Kg/m<sup>3</sup>) for DOT. The concentration of the solution must be adjusted to give the correct retention for wood species and size being treated; in general, solutions are in the range of 1-2% DOT (0.083-0.166 lb/gal w/v). Standards C-1 and C-2 of the American Wood Protection Association should be consulted regarding treatment times, pressures and temperatures necessary for various species of wood.

Clean wood must be cut to dimension, dried to less than 25% moisture (as oven dry weight), stickered before treating. If several species are being treated at once, the treatment schedule must be chosen for the most difficult-to-treat species. If both sapwood and heartwood are included, use the schedule for heartwood to ensure adequate loadings.

**End cut treatment**

Certain pressure treated lumber should be treated when cut at a construction site because typical wood preservatives do not penetrate some wood species effectively. Spray, brush or dip the end-cuts over a plastic drop cloth to collect any runoff. Spray or brush generously until the wood will accept no more solution. Alternatively, dip each end-cut for about 5 minutes.



**DIP-DIFFUSION TREATMENT**

**PREPARATION OF SOLUTIONS:** To prepare solutions, described below, water should be added to the tank to about 80% of the volume of solution required. The temperature is then raised to the desired level and the calculated amount of BoraSol-WP is gradually added with good agitation. The remaining water is then added and the solution agitated for an additional 10 minutes to insure that all of the product has dissolved. The temperature of the solution must be maintained during treatment. Upon cooling some borate may crystallize out of the solution, but will re-dissolve when the solution is heated for the next treatment session. In very cold weather, some heating or insulation should be provided to prevent solidification in the bottom of the tank. The tank should be covered when not in use to prevent contamination and evaporation of water.

**Conditions and Solution Strengths for the Dip-Diffusion Method**

Lumber Thickness	Pounds of BoraSol-WP Per Gallon of Water	Pounds of DOT (equiv.)	DOT (equiv.) Solution Conc.	Solution Temp.	Time of Diffusion
Up to 1 inch (2.5 cm)	1.7	1.67	16.5%	105°F (40°C)	2 to 4 weeks
1 to 1.75 in. (2.5 to 4.0 cm)	2.2	2.16	20.5%	120°F (50°C)	4 to 6 weeks
1.75 to 2.5 in. (4.0 to 6.5 cm)	3.5	3.43	29.1%	130°F (55°C)	4 to 6 weeks
2.5 to 3.0 in.* (6.5 to 7.5 cm)	4.2	4.12	33.0%	135°F (57°C)	6 to 8 weeks

\* Lumber over 3 inches (7.5 cm) in thickness or over 5 inches (12.5 cm) in width should be dipped twice 24 to 72 hours apart.

**DIP-DIFFUSION METHOD OF APPLICATION:** Dip freshly cut lumber in a tank containing a hot aqueous solution of BoraSol-WP for 2 to 5 minutes. After dipping, the newly treated wood should be stacked and stored under a tarpaulin or shed roof to slow the drying process and prevent washoff by rainfall, thus improving penetration.

Diffusion of the wood preservative into the interior of the wood will start immediately and will require several weeks to thoroughly penetrate the lumber, depending on species and thickness of wood. Dip-diffusion of lumber must result in a retention of 0.28 lb/ft<sup>3</sup> (4.5kg/m<sup>3</sup>) B<sub>2</sub>O<sub>3</sub>.

**ENVIRONMENTAL HAZARDS**

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other water unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product 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.

**STORAGE AND DISPOSAL**

BoraSol WP is contained in a nonrefillable container. Do not reuse or refill this container.

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

STORAGE: Store in a dry place. Do not store where children or animals may gain access.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Completely empty bag into application equipment. Then dispose of empty bag in a sanitary landfill or by incineration, or if allowed by state and local authorities by burning. If burned, stay out of smoke.

**NOTICE**

Neither manufacturer nor seller shall be liable in respect to any injury or damage suffered by reason of the use of this product for a purpose not indicated by the label or when used contrary to the directions or instructions hereon nor with respect to breach of any warranty not expressly specified herein. Buyer accepts this material subject to these terms, and assumes all risk of usage and handling except when used or handled in accordance with this label. For active termite infestations, get a professional inspection.