

Technical  
**Bulletin**

# Drywood **Termites**



# Prevention and/or Remediation using Bora-Care®

## *The Alternative to Fumigation*

*(ALWAYS READ LABEL COMPLETELY BEFORE ANY APPLICATIONS.)*

### Introduction

Drywood termites live in wood, which has a relatively low moisture content. They require no contact with the ground or other moisture source. Drywood termites are usually found in the humid coastal and subtropical regions of the United States, but there are several species found in the desert southwest, and they do appear to be spreading. Although there are many species of drywood termites, they all belong to the same family, the *Kalotermitidae*, and they are all rather similar in appearance. Like other termites, drywood termites will share food amongst one another.

Drywood termites eat across the grain, consuming both spring and summer wood. They make galleries connected by tunnels, both of which have velvety walls, as if smoothed with fine sandpaper. Usually, there are fecal pellets throughout this system, which are ejected from kick holes (often the first sign of their presence).

Swarming drywood termites fly into structures and infest wood directly. They typically infest exposed wood such as window and door frames, trim, eaves and attics. When swarming, they will often re-infest the same structure multiple times. There is no soil associated with the damage, which clearly differentiates it from subterranean termite damage. Although the damage may be localized to an area occupied by a relatively small colony, the combination of many colonies as a result of new infestations or re-infestations can cause major damage over time.

The total annual cost of repairing drywood termite structural damage and their eradication is estimated to be many millions of dollars. Unfortunately, a large portion of this cost is a result of treatment by fumigation. This type of treatment has no residual protection and the only thing it will guarantee is that the structure will need fumigating again (within 5 to 10 years) when the termites come back.

Fortunately for pest control professionals and especially homeowners, there is now a proven option that can be used. BORA-CARE is highly efficacious against drywood termites (as well as other wood destroying pests) and can be used on new construction and in existing homes as either a complete or spot treatment. The great advantage of BORA-CARE, aside from its natural active ingredient and low acute toxicity

to people and pets, is its permanence. A BORA-CARE treatment is designed to protect the wood for the life of the structure.

### **BORA-CARE Termiticide, Insecticide and Fungicide Concentrate**

*BORA-CARE Termiticide, Insecticide and Fungicide Concentrate* is an enhanced specially formulated and patented EPA registered product for use by professional pest control operators. BORA-CARE is colorless, virtually odorless and readily diluted in water to create a treatment solution (no hazardous solvents to use).

This unique product carries with it a wide range of application options to control most wood destroying pests; however, only the control of drywood termites is dealt with here.

The active ingredient in BORA-CARE is a natural borate salt called Disodium Octaborate Tetrahydrate (DOT). One of the most notable benefits of the DOT in BORA-CARE is its chemical stability over time. Because it will not break down, it will provide long-lasting wood protection and residual performance against drywoods. BORA-CARE is effectively formulated to give permanent control of drywood termites.

### **How Does BORA-CARE Work?**

Insects are killed by BORA-CARE by coming into contact with or ingesting BORA-CARE treated wood. Once ingested, it acts as a slow stomach poison. While it achieves the same deadly result with all wood destroying organisms and general pests, it is important to know how best to deliver the borate to them.

Since BORA-CARE is slow-acting, drywood termites may feed on, tunnel in and/or digest treated wood, accumulate the BORA-CARE and still move among other individuals in the colony. During the transfer of food from workers to nymphs, soldiers and reproductives, the termites will transfer the ingested BORA-CARE between one another, resulting in the eradication of the colony.

One of the features that makes BORA-CARE so effective is its enhanced penetration. When

BORA-CARE is applied to wood, it immediately begins to penetrate into the wood. BORA-CARE may be applied as a spray, foam or mist onto wood, or injected into wood, depending upon the situation. Because the active ingredient does not break down, BORA-CARE is always available to be drawn deeper into the wood. Application of BORA-CARE to control wood destroying organisms should be part of an Integrated Pest Management (IPM) strategy.

### **Whole House New Construction Treatments**

When used for whole house new construction treatments, BORA-CARE is applied to all structural wood during the dried-in phase of construction in a 5:1 dilution. For information on determining solution and concentrate for application, see the enclosed worksheets.

### **Existing Construction Remedial Treatments**

#### ***Inspection***

Inspection is one of the most important aspects for a thorough BORA-CARE drywood termite treatment program. Inspect all areas of the structure, concentrating on the attic, window framing, door framing, trim and eaves and all areas where drywood termites are known to infest. Inspect for signs of infestation to include wings and bodies of swarming alates, fecal pellets dropped from kick-out holes or visible damage. For inaccessible or non-visible areas of possible infestation, it is suggested to use the latest available technology and equipment to inspect these areas.

Problems which may have led to the infestation, or that may do so in the future, should also be corrected. After the initial treatment, inspections should be performed on a regular basis and additional preventative sprays or injection treatments of BORA-CARE can be made, if desired.

## **Directions for Use**

### **Estimating Amounts for Application**

Calculating the amount of BORA-CARE to be used for a particular treatment is important. Approximately 1 gallon of BORA-CARE solution will be needed to treat 400 sq. ft. of 1" thick wood surface area or 400 board feet. You should always try to avoid extra or leftover solution. The amounts of BORA-CARE solution needed will depend on the amount of wood to be treated and whether injection as well as spray or foam is needed. Topical spray applications will require a second application in areas where only 1 to 2 sides of a wood member is exposed. The second application can be done after a 20-minute delay.

There are some predetermined factors found on the *Whole House Preventative BORA-CARE Treatment for New Construction Worksheet* at the end of this technical bulletin that you can use to calculate the board feet of wood to be treated in new structures. For information on existing structures that will help determine product usage, refer to the *Preventative and Remedial BORA-CARE Treatments for Existing Construction Worksheet* found at the end of this technical bulletin.

**Considering the various building practices, the following product usage information is to be considered a general guideline and not a standard of application. It is based on label applications in common building construction. It is very difficult to list exact product application usage due to varying building construction and materials found in structures in different parts of the country.**

### **Mixing Instructions**

Always estimate the amount of BORA-CARE solution needed in advance. Approximately 1 gallon of solution will be needed to treat 400 square feet of 1" thick wood or 400 board feet of lumber. For preventative drywood termite control, BORA-CARE should be used as a 5:1 dilution in water (5 gallons water with 1 gallon BORA-CARE to make 6 gallons of solution). For remedial drywood termite control, a 1:1 solution (1 gallon water with 1 gallon BORA-CARE) may be applied as a spray, mist, foam or injection, or a 2:1 (2 gallons water with 1 gallon BORA-CARE) solution may be misted or foamed into confined spaces.

#### ***Example (5:1 solution)***

1. Pour four gallons of water into a six-gallon pail.
2. Attach mixing impeller to drill and begin agitation.
3. Gradually pour BORA-CARE into water and continue to mix solution.
4. Use remaining one gallon of water to triple rinse container and pour contents into mixing solution.
5. Continue to mix until solution is fully mixed (you do not feel resistance of any remaining concentrate). Normal mixing time may be five minutes. Warm water will reduce mixing time, but is not actually required.

***Mixing tip:*** Use a plastic mixing impeller to mix the BORA-CARE solution. If using a metal mixing impeller, avoid touching the sides or the bottom of the pail. This may create small plastic chips that could clog spraying equipment.

## Tools and Application Methods

There is no one tool that can effectively apply BORA-CARE in all situations. The following is a description of the equipment and treatment methods that exist today:

### Sprayers and Tanks

Use a 2-4 gallon handheld stainless steel sprayer or backpack sprayer to apply up to 2-4 gallons of solution at a time. For larger amounts, a 10-100 gallon spray unit with mechanical pump is recommended. For best results, this unit should also have mechanical agitation for proper mixing to prevent any potential clogging of spray equipment. It is recommended to mix only the amount of BORA-CARE 1:1 solution needed for that day's applications; a 5:1 solution will remain stable for up to 30 days.

Table A below describes the best application scheme for drywood termites.

**High Pressure Misting Unit** – Designed to develop high pressure. At this pressure, the mist treatment of areas such as hollow wall voids by misting is more thorough and can be accomplished in a short time without over-wetting. Calibration of the tip will allow you to know how much liquid you are applying in the void, so you can avoid damage due to over-application (contact Nisus for manufacturer/ supplier information). The use of a high pressure pump with an atomizing tip will allow the delivery of tiny droplets rather than a coarse spray. This can be used for treating wall voids or even for treating entire attics. For high pressure misting applications into wall voids, use machines approved by NISUS and specifically designed for high pressure misting into wall voids.

**Electric or Gas Spray Units** are primary tools in pre- or

post-construction treatment when the broadcast application of a liquid is required. Topical sprays of BORA-CARE solution should be applied evenly to wood using a medium to coarse spray at low pressures (e.g., 30-40 psi). Low pressure application will reduce drips, off-target overspray and splash back, and will result in proper amounts of active ingredient on surfaces. The uses vary with the addition of application tools:

**a. Fan Spray Wand:** To coat the surface of exposed wood members.

**b. Pin Stream:** To treat cracks behind wood members.

**c. Extension Boom:** The boom extends from 6' to 12' to reach areas of the structure that would otherwise be inaccessible. *Example:* air conditioning ducts do not allow you to physically reach a portion of the attic.

**Compressed Air Sprayer** – The compressed air sprayer is to be used in situations where you are either doing a small retreat of an area or into areas where it is not possible to reach with other equipment. It is not designed to do the entire job. The compressed air sprayer can be used with a variety of attachments for various jobs, including fan spray and needle injection.

### Foaming

BORA-CARE foam is a good application to consider where excess moisture may be a problem or in difficult-to-reach areas such as around insulation in attics or in wall voids. (ProFoam® Platinum is the product of choice for BORA-CARE foaming applications.)

For prevention, prepare a 5:1 dilution as directed above and add foaming agent. Typically, 3-8 ounces of a foaming agent per gallon of solution will produce a dry foam with the desired expansion ratios of approximately

TABLE A	
Dilution Ratios	Application Notes
<b>Remedial or Preventative Treatment in Existing Homes:</b> <ul style="list-style-type: none"> <li>• 5 parts water to 1 part BORA-CARE for prevention (5:1).</li> <li>• 1 part BORA-CARE to 1 part water (1:1) for remedial liquid treatments.</li> <li>• 2 parts water to 1 part BORA-CARE (2:1) for foam and mist remedial applications</li> </ul>	Spray, mist or foam bare wood with an appropriate dilution of BORA-CARE solution to the point of wetness. When accessible, drill and inject solution directly into active galleries. Inaccessible areas such as wall voids should be foamed or high pressure misted between studs, or studs could be drilled and injected through wallboard in areas of activity.
<b>New Construction Preventative Application:</b> <ul style="list-style-type: none"> <li>• 5 parts water to 1 part BORA-CARE (5:1)</li> </ul>	Spray all wood to be protected with a 5:1 dilution of BORA-CARE with water during the dried-in stage of construction. Special attention should be given to termite entry points and exterior wood such as soffits, eaves, windows and gazebos.

20:1 (approx. 20 gallons of foam per 1 gallon of aqueous solution). BORA-CARE foam should be of a consistency that adheres to wood surfaces so that run-off is minimized. Since each foam machine can produce different foams, refer to the equipment manufacturer's manual and the foaming agent's label for specific instructions.

To foam into wall voids, use a foam machine designed for wall foaming applications and approved by NISUS Corporation. Mix foam product per label directions to produce the ratio of foam to BORA-CARE solution required. Use a moisture meter to determine the flow of foam into void.

**Foam Machine** – The foam machine is a primary treatment tool to be used when a foam product is more desirable. The uses are as follows:

- a. Attic Foam Gun:** To treat between insulation and ceiling joists when desired.
- b. Needle:** To treat active infestation by injecting foam into the galleries.
- c. J-Tip:** To inject foam into void areas such as wall voids.

*(ProFoam® Platinum by NISUS is specially formulated to be used with borates and other termiticides for the best foam solution.)*

#### **d. Calibration of Foaming Equipment and Foaming Material**

Apply the foam solution from the foam application equipment into a pre-measured container. Measuring containers can be found in the paint department of hardware stores. Allow foam to dissipate into a liquid. The volume measurement of foam compared to the volume measurement of the resulting liquid is the foam ratio.

*Example:* If you measure a gallon of foam (128 oz.), and the foam dissipates to 6.4 oz., the ratio is 128/6.4 or 20:1.

NOTE: A de-foaming agent can help speed up this process. De-foaming agents can be purchased from your distributor. This agent placed in a small spritz bottle works well to reduce the foam.

#### **Pressure Injection**

- a. Heavily Infested Wood:** BORA-CARE solution or foam should be injected into heavily infested wood. Drill into the infested wood and inject until the liquid or foam runs out of openings, damaged areas or kick-out holes. This procedure is not an alternative to

spraying; it should be used in addition to spraying when structural timbers are greater than 4 inches thick and/or for active drywood termite galleries. Injection is especially important to reduce call backs due to post treatment swarming. Post-treatment swarming could occur for a while after application if only a topical treatment is used.

#### **b. Injection into active galleries:**

*Liquid Injection:* Locate and inject up to 1 ounce of BORA-CARE 1:1 solution per board foot into active drywood termite galleries.

*Foam Injection:* Locate and inject up to 20 ounces foam (use a 2:1 solution—2 parts water to 1 part BORA-CARE) per board foot into active drywood termite galleries. Mix foam with solution at no less than a 20:1 ratio foam (20 parts foam to 1 part liquid solution).

NOTE: Amounts of liquid and foam may vary according to size and number of galleries per board foot.

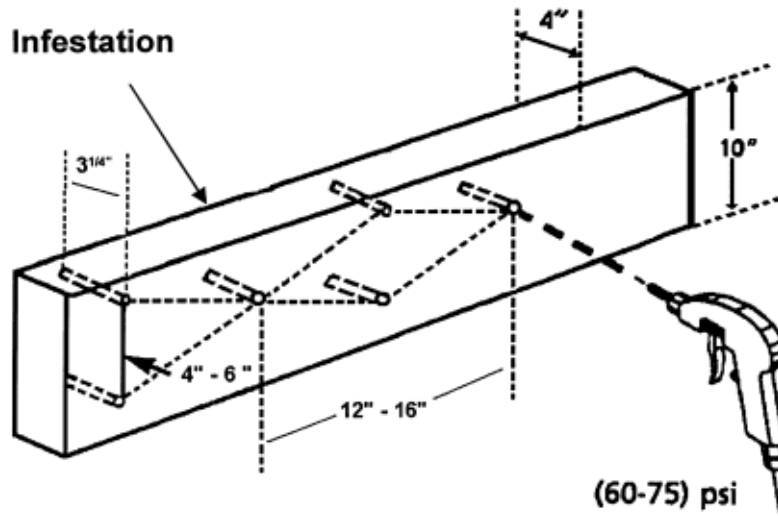
- c. Unfinished or Painted Wood:** BORA-CARE solution can also be injected into uninfested wood, including the wood adjacent to the infested areas. This procedure can also be used for painted or sealed wood. The application tip should be designed to avoid splash back. Refer to the directions below for specifics on drilling and placement of drill holes.

- d. Application Technique:** Injection holes (typically 7/64" or 1/8" in diameter) should be drilled in the area of suspected infestation. The holes should be drilled in a diamond pattern with the long axis along the grain. Holes should be spaced approximately 4-6 inches across the grain and 12-16 inches along the grain (see Figure 1). When possible, the wood should be treated one diamond length pattern beyond the immediate area of visible infestation.

Drill the holes through the widest dimension of the wood that is available. Drill approximately 3/4 the width of the beam. If the widest surface is not accessible, holes can be drilled in the narrower surface approximately 8-10 inches apart.

Press and hold the injection tip firmly into each hole and inject solution until runoff is observed from other holes, galleries, kick-out holes, etc. You may get splash-back if the wood is solid.

Release the trigger, wait briefly and withdraw the injection tip. Excess solution can be absorbed with paper towels and disposed of in ordinary trash.



**Figure 1:** Drill and pressure injection of a 4" x 10" structural beam with BORA-CARE solution.

## Specifications for Specific Structural Areas

A drywood termite treatment involves treating as much of the wood in a structure as possible with BORA-CARE. Keep in mind that every structure is unique, and that you will need to use your best judgment in each case, with safety as the primary concern.

We have broken the structure down into three sections: Attic, Interior and Exterior Applications. You will need to do a thorough inspection of each area and use the appropriate treatment for each situation.

BORA-CARE should be topically applied only to bare, unsealed wood, plywood, particleboard and other cellulose materials where an intact water repellent barrier such as paint, stain or a sealer is not present. Dirt, debris and any existing water repellent finish must be removed to permit absorption of BORA-CARE into the wood.

### Attic Applications

Spray BORA-CARE solution on all accessible wood: rafters, trusses, top-plates, ceiling joists, plywood, particleboard, etc. Accessible areas with known infestations should be drilled and injected with liquid or foam solution to speed eradication and reduce call-backs. Foam may be used in difficult-to-reach areas such as around insulation.

If an infestation is present beneath or partially hidden by insulation, remove the insulation and direct application to those areas.

## Interior Applications

### a. How to apply foam and high pressure mists in stud walls.

Have a wet/dry vac plugged into a remote power source and ready to use. **Electrical power must be turned off and remain off for a period of time to allow the treatment to dry when treatments are made near electrical outlets.**

Use a non-intrusive moisture meter to check the moisture in the wall that you will be treating. Start at the ceiling, moving down to the floor. A normal reading should be from 9% to 15%. A Post-It® note may be used to record the reading on the wall. Continue on all walls in the area to be treated.

Locate studs with a stud finder in the area to be treated. Drill a 1/4" hole 6 to 8 inches below the ceiling between each stud, or—better still—drill two holes to either side of the stud. A timed and calibrated foam or mist application into these areas is sufficient if the foam or mist is directed to cover the wood surface areas. The foam will run down each stud or the high pressure mist will hit each stud. If insulation is tightly packed in the void, it can normally be moved slightly and temporarily using the foaming or misting tip prior to shooting. A single hole drilled between studs at the bottom of the wall (immediately above kick plate/skirting board) and a timed and calibrated foam or mist injection is sufficient to treat the sill plate and bottom of stud areas (see *Figure 2*).

Do not over-treat the void. There is no need to completely fill the void with foam or liquid. You only

need to coat the wood. **YOU ARE PLACING A LIQUID IN A VOID AREA. THE POSSIBILITY OF WATER DAMAGE MUST BE KEPT IN MIND AT ALL TIMES.**

Repeat the moisture check 30 to 45 minutes after treating the void. If there is a blockage in the wall, you will get a high moisture reading at the blockage. You should then treat about 6 inches below the blockage for complete treatment of void area. Patch the holes with appropriate filler compound, and paint if required.

#### **b. Walls (Uninsulated)**

Normally the interior walls will not contain insulation. The hollow walls are treated with foam or high pressure misting by making a small hole at the bottom of the wall near the baseboard and/or making another drill hole near the top of the wall. The objective is to obtain uniform coverage of the studs, the top and bottom plates and the back of the wall board inside the void area.

##### *Misting Into Uninsulated Wall Void Areas:*

Apply 3.5 ounces of a 5:1 BORA-CARE solution (preventative) or a 2:1 BORA-CARE solution (remedial) into each uninsulated wall void listed in your structural treatment protocol. This application

relates to 26.25 ounces of solution for every 10 feet of un-insulated wall void area, or approximately 2 gallons of solution for every 100 feet linear feet of un-insulated wall void area. Apply the mist in a direction that best coats all wall wood stud and sill areas. Application should be done to lower and higher areas of void.

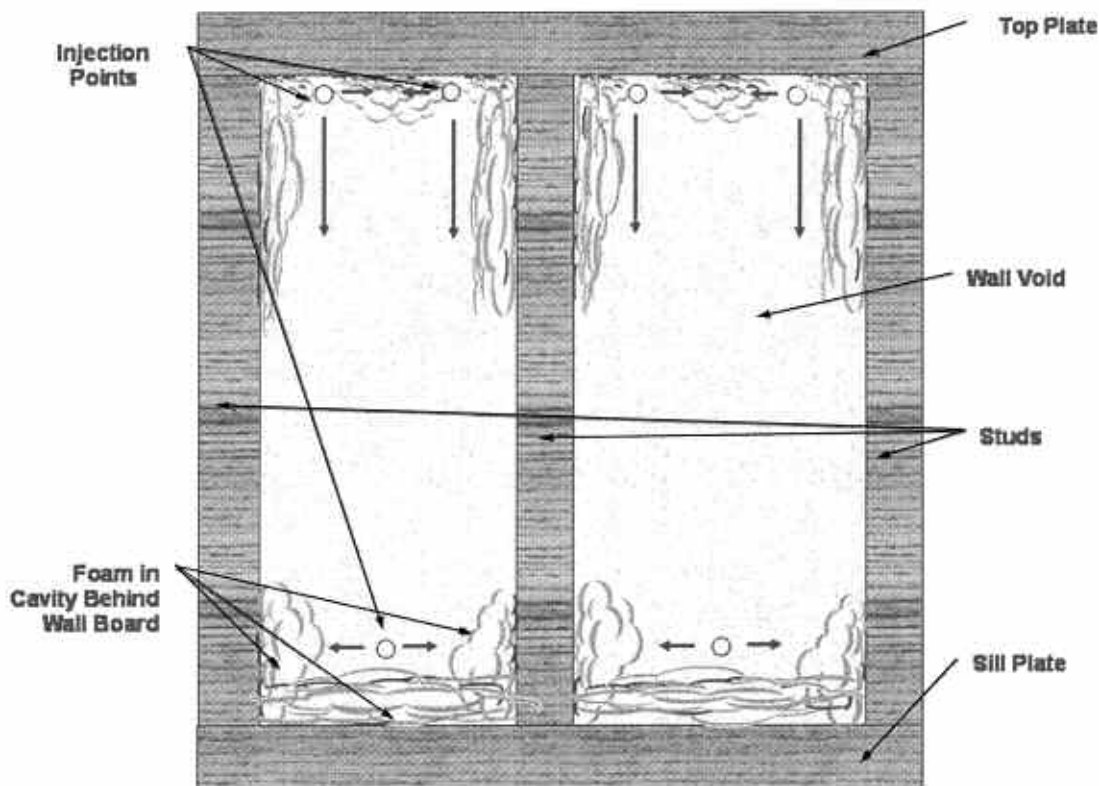
##### *Foaming Into Uninsulated Wall Voids:*

Use a 5:1 BORA-CARE solution for preventative treatments or a 2:1 BORA-CARE solution for remedial treatments and mix with foaming agent to create a dry foam (20:1 or higher—20 parts foam to 1 part BORA-CARE solution).

Apply 40 ounces of foam in each wall void area to be treated. Divide foam amounts between the upper and lower corners of void area in a way that best allows the foam to cover wood stud and sill plate surfaces. This relates to 300 ounces of foam per 10 lineal feet of wall void area, or approximately 23 gallons of foam per 100 lineal feet of wall void area.

#### **c. Walls (Insulated)**

Because exterior walls normally contain insulation, treating them effectively can be more difficult. Foam



**Figure 2**

can be applied and will work its way around the insulation. In an area of infestation, you can treat with foam on each side of the stud, staying close to allow the foam to move down the stud instead of soaking into the insulation. The use of a moisture meter against the drywall can tell you where the foam is moving and will help you to decide if more or less treatment is needed in a particular void.

#### *Misting Into Insulated Wall Void Areas:*

Apply 6 ounces of a 5:1 BORA-CARE solution (preventative) or a 2:1 BORA-CARE solution (remedial) into each insulated wall void to be treated. This application relates to 45 ounces of solution for every 10 feet of insulated wall void area and 3.5 gallons of solution for every 100 feet of insulated wall void area. Apply the mist in a direction that best coats all wall wood stud and sill areas. If possible, direct mist around both sides of insulation. Application should be done to lower and higher areas of voids (see *Figure 2*).

#### *Foaming Into Insulated Wall Void Areas:*

Use a 5:1 BORA-CARE solution for preventative treatments or a 2:1 BORA-CARE solution for remedial treatments to mix with foaming agent.

Use a 20:1 (20 parts foam to 1 part BORA-CARE solution) or higher foam ratio to apply 80 ounces of foam into each wall void area to be treated. Divide foam amounts between upper and lower corners of void areas in a way that best allows the foam to cover wood stud and sill plate areas. If possible, direct foam around both sides of the insulation. This relates to 600 ounces of foam product per 10 linear feet of void area.

#### **d. Doors**

- *Hollow* – Drill holes in the top of the door and use foam or light pressure misting. Caution should be taken to not over wet the door, which will cause swelling and splitting.
- *Solid* – Drill into galleries through the kick-out holes and inject with foam or liquid.

#### **e. Baseboards**

Treat the cracks and crevices around the baseboards with liquid or foam. Inject foam or liquid into kick-out holes and gallery sites.

#### **f. Tack Strips**

In an area of known infestation, you may need to pull the carpet back and treat or remove the tack strip.

#### **g. Basement or Crawl Space Structure**

For prevention, spray a BORA-CARE 5:1 dilution on all bare wood accessible in the flooring and subfloor. Apply at the rate of 1 gallon of solution per 200 square feet of crawl space area, treating floor joints, sills and sub-flooring. Inject active infestation areas with a BORA-CARE 1:1 solution. A second application is required when only one or two sides of the wood member is exposed.

#### **Exterior Applications**

BORA-CARE can be applied to bare siding, trim or logs. Applications can be made by spray or pressure injection techniques. Painted or sealed wood can be treated by pressure injection or the wood can be stripped prior to a spray application.

#### **a. Window and door frames**

Window and door frames are to be treated by drilling and injecting foam or liquid in the surrounding voids or, when an active infestation is present, by drilling and injecting the infested wood. Use your moisture meter to tell you how well the foam is moving in the voids. Normally, you will only need one hole on each side of the window and one on the top and bottom (four total). Inspect window and door area for signs of activity such as kick-out holes, pellets, damage or wings. Treat known termite galleries around windows and doors as instructed previously for gallery treatments.

NOTE: Window and door framing can vary. It is difficult to determine wood framing after the wallboard or sheetrock is installed. Take care not to apply excessive liquid product solution into these areas. Apply only enough solution to wood surface areas to prevent infestations or to eliminate activity.

#### *Misting or injecting window and door framing*

Apply by mist or injection up to 1 ounce of solution per linear foot of window framing or door framing in areas of application. A 5:1 BORA-CARE solution is used for preventative treatments, and a 2:1 BORA-CARE solution by mist application, or a 1:1 BORA-CARE solution by liquid injection is used in confirmed or suspected areas of active infestation.

#### *Foaming into window and door framing*

Direct up to 10 ounces of foam per linear foot into wall areas around window and door framing. A 5:1 BORA-CARE solution mixed with a foam concentrate to create a 20:1 or higher foam ratio is used for prevention. A 2:1 BORA-CARE solution mixed with a foam concentrate to create a 20:1 or higher foam ratio is used for confirmed or suspected activity.



### **b. Overhang area or eaves (soffit area)**

The overhang is a common place for an infestation due to its accessibility to swarming drywood termites. Exposed, unfinished wood can be treated by spraying with BORA-CARE solution, and void areas can be drilled and misted. Active galleries may be injected or foamed. Protect any surrounding plants and ornamentals from accidental contact with the solution.

#### *Misting into eaves and soffit areas.*

Using a high pressure misting machine approved for use by NISUS Corporation, apply up to 12 ounces of a 5:1 BORA-CARE solution per 10 linear feet of soffit or eaves area as a preventative treatment. Apply a 2:1 BORA-CARE misting solution in areas of confirmed or suspected termite activity. Application may be made through the soffit vents or by drilling into soffit/eaves void area. Apply only enough BORA-CARE solution to coat the surfaces of the wood, being careful not to overtreating the area.

#### *Dusting into eaves and soffit areas*

Products such as BORACIDE™ and TIM-BOR® PROFESSIONAL can be dusted into eaves and soffit areas for drywood termite prevention and control when used in conjunction with other listed treatment applications. Follow instructions on product labels.

### **c. Decks & Gazebos**

BORA-CARE can be used to treat wood decks and other exterior structures. Prepare the wood by removing any dirt, debris or sealants that will interfere with the application and absorption of BORA-CARE. After the deck has dried (dry to the touch, no standing puddles), the BORA-CARE can be applied to the wood. Protect any surrounding plants and ornamentals from accidental contact with the solution. Following treatment, the deck can be sealed to prolong performance.

## **Care of Spray Equipment**

Normal care and maintenance of spray equipment is sufficient. BORA-CARE solutions are compatible with stainless steel, brass and all plastic components of spray equipment. BORA-CARE solutions should be mixed as needed and drained from equipment daily. After use, equipment should be rinsed with clean water (warm if possible) to flush any remaining BORA-CARE from the sprayer. The rinsate can be saved in appropriately labeled service containers for future preparations of BORA-CARE solutions (in place of fresh water). It is always best to try to use all product on site.

## **Reoccurrence or Retreatments**

When responding to a reoccurrence of drywood termites, go through the following steps:

### **Inspection:**

Do a thorough inspection of the property (not just one small area). Part of this inspection is to look at the graph and any other documentation that may help you to determine where treatment may be needed. Try to recreate the service you did and determine if it was the proper treatment. If necessary, a borate indicator test kit (available from your distributor) can be used to validate treatment.

Ask yourself: *What has been done? What hasn't been done? Did I drill and inject? Are there conditions conducive to infestation?*

### **Identification:**

Identify where the infestation is to determine whether it is the same area that was originally treated or if it is in an untreated area.

### **Determination of Problem:**

Determine what will need to be done to take care of the problem.

### **Control Procedures:**

Do the treatment that you have decided upon, following label instructions and safety procedures.

### **Communication:**

Let the customer know what you found, what you did about it and what they should expect from your service. Answer their questions.

## **Troubleshooting / Hints**

### **Spray/Injection Tips:**

Under some conditions, spray tips may clog due to evaporation. Spray tips can be unclogged by flushing or soaking in warm water.

Injection tips should be brass or other metal and fit snugly into the drilled hole to prevent dripping or spray back. Use a short injection tip (approximately 1 inch). This will allow the solution to flow into the drilled wood. If drilling overhead, be prepared for solution to exit galleries, so tarp or cover surfaces underneath.

### **Clean-up on Non-Target Areas**

Occasionally, BORA-CARE solutions may drip or run

onto glass surfaces such as windows and doors or other non-target areas. After drying, a sticky residue may appear. This can be removed easily with warm water, but is easier to remove before drying.

## Corrosion

BORA-CARE will not corrode metals normally used in construction, including ferrous metals, galvanized metals, screws and nails. BORA-CARE will not affect electrical wiring, but it is recommended that pretreatment applications to wood be performed before wiring is in place or that all power is turned off until the area is dry.

## Compatibility

BORA-CARE will not discolor most wood and is compatible with most paints and sealants. If the aesthetic look of the wood is a concern, it is suggested that a small, non-visible area be tested for discoloration. After the section has dried, apply the paint or sealant (if one will be used) to ensure compatibility.

## Safety

BORA-CARE is a low toxicity material with little risk associated with it when properly applied or used. However, it is a legal requirement to always follow the label and to wear the specified personal protective equipment. Refer to label and MSDS for specific information.

## Warranty Limitations and Disclaimer

### Warranty Disclaimer

Manufacturer warrants that this product conforms to the chemical description on the label and is reasonably

fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. **MANUFACTURER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

### Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Lack of performance or other unintended consequences may result because of such factors as use of the product contrary to label instructions, abnormal conditions, the presence of other materials, the manner of application or other factors, all of which are beyond the control of the seller. All such risks shall be assumed by the buyer.

### Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability or other legal theories) shall be limited to, at Manufacturer's election, one of the following:

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# BORA-CARE WORKSHEET: WHOLE HOUSE PREVENTATIVE TREATMENT FOR NEW CONSTRUCTION

**Whole Structural Wood Treatment (New Construction)**

Calculations are based on an average of 6,500 board feet per 1,000 square feet in a crawlspace or basement framed structure. Five gallons of water should be diluted with one gallon of BORA-CARE.

One gallon of diluted solution will treat 400 board feet of structural wood. All structural wood should be treated. Calculations include attic space.

**Whole Structure**

Measure the linear footage of the exterior walls of each level with a measuring wheel, then calculate the square footage.

**Square Footage of 1st Floor (Including garage)** ..... \_\_\_\_\_

**Square Footage of 2nd Floor (living area only, if applicable)** ..... + \_\_\_\_\_

**Square Footage of 3rd Floor (living area only, if applicable)** ..... + \_\_\_\_\_

**Total Square Footage** ..... = \_\_\_\_\_

**Convert to Board Feet Using Number from *Conversion Table* below**  
(enter "multiply by" number here) ..... x \_\_\_\_\_

<b>CONVERSION TABLE</b>	
<i>Square Feet to Board Feet Conversion Factors</i>	
Unfinished Basement Foundation	.....Multiply by 6.5
Crawlspace Foundation	.....Multiply by 6.5
Slab with Exterior Sheathing	.....Multiply by 5.5
Slab without Exterior Sheathing	.....Multiply by 5.0
Slab with Concrete Block Walls	.....Multiply by 4.5

**Total Board Feet to be Treated** ..... = \_\_\_\_\_

**Total Gallons of Diluted Solution (5 gal. water + 1 gal. BORA-CARE) Needed**  
(One gallon of BORA-CARE solution treats 400 board feet.) ..... ÷ 400 = \_\_\_\_\_

**Total Gallons of BORA-CARE Concentrate Needed**  
(5 gal. water + 1 gal. BORA-CARE = 6 total units of 5:1 solution) ..... ÷ 6 = \_\_\_\_\_

**Finished Basements**

One gallon of diluted solution will treat 50 linear feet of stud wall area. To treat a finished basement, measure all basement stud walls in linear feet and divide by 50 to get the gallons of diluted BORA-CARE solution needed.

**Example: Treating a New Construction Home with a Slab and No Sheathing**

1. Measure the exterior walls of the footprint, including the garage, and living areas with a measuring wheel. Use the linear feet measurements to calculate the square footage of each floor as described below.
2. The footprint and garage combined measures 1400 square feet and the remaining upstairs living area measures 800 square feet
3. Footprint + upstairs living area = 2200 total square feet
4. Multiply by 5 to convert to board feet = 11,000 board feet
5. Divide by 400 to get the gallons of solution needed = 27.5 gallons
6. Divide by 6 to get the gallons of concentrate needed = 4.58 gallons



# BORA-CARE WORKSHEET: PREVENTATIVE AND REMEDIAL BORA-CARE TREATMENTS FOR ATTICS

<b>Total Board Feet to Be Treated</b>	<ul style="list-style-type: none"> <li>• <b>Determine Total Board Feet (of lumber to be treated)</b> NOTE: Full attic treatments include insulation on attic floor: multiply square footage of attic by factor below based on attic peak height to get average Total Board Feet.</li> </ul> <p><b>Use A <u>or</u> B to determine Total Board Feet:</b></p> <p>A. Attic peak is 6 feet high or less ..... <b>Attic Sq. Ft. x 2</b></p> <p style="text-align: right;">= _____ Total Board Feet</p> <p>B. Attic peak is higher than 6 feet ..... <b>Attic Sq. Ft. x 2.5</b></p>	
	<p>NOTE: If floor is <b>not</b> insulated, multiple <i>Total Board Feet</i> (above) by 1.2 to include treatment of attic floor rafters (<i>if floor is insulated, leave blank</i>) . . .x <b>1.2</b></p>	<b>x</b>
	<ul style="list-style-type: none"> <li>• <b>Total Board Feet to Be Treated</b></li> </ul>	= _____ Total Board Feet to Be Treated
<b>Solution Needed</b>	<ul style="list-style-type: none"> <li>• <b>Determine Total Gallons of BORA-CARE <u>Solution</u> needed to treat attic</b></li> </ul> <p>Divide <i>Total Board Feet to Be Treated</i> (from row 3 above) by 400. . . . . ÷ <b>400</b></p> <p>(One gallon of BORA-CARE solution treats 400 board feet.)</p>	= _____ Total Gallons of BORA-CARE Solution
<b>Concentrate Needed</b>	<ul style="list-style-type: none"> <li>• <b>Determine Total Gallons of BORA-CARE <u>Concentrate</u> needed to treat attic</b></li> </ul> <p><b>Use A <u>or</u> B to determine gallons of BORA-CARE <u>Concentrate</u> needed:</b></p> <p>A. <i>Preventative Treatments (5:1 solution)</i>: Divide <i>Total Gallons of BORA-CARE Solution</i> (above) by 6 to get gallons of concentrate required. . . . . ÷ <b>6</b> (5 gal. water + 1 gal. BORA-CARE = 6 total units of 5:1 solution)</p> <p>B. <i>Remedial Treatments (1:1 solution)</i>: Divide <i>Total Gallons of BORA-CARE Solution</i> (above) by 2 to get gallons of concentrate required. . . . . ÷ <b>2</b> (1 gal. water + 1 gal. BORA-CARE = 2 total units of 1:1 solution).</p>	= _____ Total Gallons of BORA-CARE Concentrate

**Example Preventative Attic Treatment:**

**A 1,000 square foot attic that is 6 feet high with insulation on floor**

- 1,000 X 2 = 2,000 average board feet
- 2,000 ÷ 400 = 5 gallons of solution required
- 5 gallons ÷ 6 = .83 gallons of concentrate required



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