TERMAFOAM

*(Flo-x/Moldwash) 1 & 5 Gallon

The only EPA registered solution for the preservation, protection and preventative treatment of wood against decay, mold, fungi, and wood destroying insects and for remedial control of such pests and infested wood. It is a ready-to-use solution that protects all interior and exterior wood for preventative treatment of wood in existing structures. For pre-treatment of wood during construction and remedial treatment of infested wood for both interior and exterior structures.

The only EPA certified solution that protects against wood destroying insects and prevents reinestation.

Ready-To-Use Solution Prevents infestation on wood and cellulose materials. Penetrates deep into surface.

Application:
Termafoam* may be used a spray solution, foam or pressure injection. It is easily applied and requires no preparation. Normally two applications will treat remedial control of fungi and protects against future infestations, although additional layers of foam may be applied at the discretion of the user.

Termafoam* can be injected into wall cavities of drywall in both infested and uninfested structures. Please read technical bulletin for further instructions.

General Directions:
DO NOT Freeze product.
DO NOT tank mix with other products
DO NOT dilute.
DO NOT use near food.
DO NOT spray frozen wood or waterproofed areas.

Target Organisms:
Termafoam* is an effective treatment for wood against decay, fungi, white and red rots and wood-boring insects such as, but not limited to the following:

- Subterranean Termites
- Drywood Termites
- Dampwood Termites
- Carpenter Ants
- “False” Powderpost Beetles
- Furniture and Deathwatch Beetles
- Old House Borers
- Ambrosia Beetles

Target Organisms:
Termofoam (Flo-X/Moldwash) Specifications

Technical Information

Termofoam® is an EPA registered termiticide and insecticide for use by licensed Pest Management Professionals. Termofoam® is a unique product for the protection and remedial treatment of wood against all wood destroying organisms and general pest control. This unique product can be applied as a solution or as foam for the protection and remedial treatment of wood and can be used for some general pest control applications (see Table 1). The active ingredient in Termofoam® is a boron compound, disodium octaborate tetrahydrate. One of the benefits of this compound is its chemical stability over time. It does not break down thus providing long-lasting wood protection and residual pest control activity.

How does Termofoam® Work?

Termofoam® can be applied as a solution or foam for wood treatment against wood destroying organisms and as a crack and crevice treatment for general insect control, Termofoam® applied as a solution or foam to wood, will penetrate into the wood to various depths dependent on the moisture in the wood and the wood species. The active ingredient does not break down, therefore, as normal moisture changes occur in the wood, Termofoam® is always available to be drawn deeper into the wood over time, providing long lasting protection.

In a crack and crevice treatment fine particles deposited when the product dries out adhere to the body of an insect as it crawls over the treated area. The product is ingested through the insects’ normal grooming habits.

The mode of action for Termofoam® is that of a slow acting stomach poison to insects. As wood destroying organisms or their larvae feed on, tunnel in and/or digest wood, they accumulate the active ingredient into their systems.

What can it be used for?

Since Termofoam® is slow acting, termites that have fed on treated wood can accumulate the active ingredient and still move among other individuals in the colony. As workers feed nymphs, soldiers and reproductive’s this transfers the ingested Termofoam® throughout the colony. Affected individuals also exhibit behavioral changes, becoming sluggish, stop feeding and become moribund. Others in the colony will avoid these individuals as well as areas where these individuals have died.

The Termofoam® treated wood is not the first choice for feeding, therefore Termofoam® treated wood is avoided by foraging termites.

Wood treated with Termofoam® also deters wood destroying beetle larvae. Eggs deposited on the surface of treated wood by beetles will have a reduced hatch rate. Larvae that may hatch from eggs will soon die after attempting to eat into Termofoam® treated wood. In infested wood, the larvae will die from ingesting Termofoam® treated wood as they tunnel toward the surface of the wood to pupate. Depending on the life cycle of the beetle, type of beetle, and seasonality of treatment, adult beetles may emerge, but will not reinfect the wood.

Carpenter ants do not feed on wood but they cause substantial and rapid damage by excavating cavities in wood for nesting. Wood treated with Termofoam® becomes unpalatable to carpenter ants and is not excavated. However, treated wood alone may not prevent a carpenter ant infestation since the ants can penetrate construction features and avoid chewing treated wood. Regular inspection is recommended and further treatments to infestation sites is deter the carpenter ants from nesting.

Decay fungi can infect and rapidly destroy wood where there are moisture problems. Some fungi can actively transport moisture from the ground or a leak to wood of lower moisture content in efforts to expand the colonization of the wood. Termofoam® is highly toxic to decay fungi and will kill the fungi present and protect against future infections.

Termofoam® is also active against other general pests such as cockroaches, ants, silverfish, earwigs and crickets by a crack and crevice treatment of Termofoam® solution or foam.

Application of Termofoam® to control wood destroying organisms must be part of an integrated Pest Management (IPM) Strategy. Problems that may have led to the infestation, or that may do so in the future, must be corrected. This includes correcting moisture leaks, providing adequate ventilation and moisture barriers and removal of debris from crawl spaces. After the initial treatment, inspections should be performed on a regular basis and additional preventative treatments of Termofoam® (up to 4) can be made. Each additional treatment will increase the borate loading and penetration into the wood, further protecting it from insect attack.

Directions for use

Always estimate the amount of Termofoam® solution needed. 1 gallon of solution will be needed to treat 200 square feet of wood surface area. Termofoam® can be applied as a solution and as foam according to Table 1. This product contains 2 oz of foam per gallon.

When preparing foam, typically 1-2 ounces of foaming agent is added to the solution to produce dry foam with the desired expansion ratio of approximately 20 to 1 (approximately 20 gallons of foam per 1 gallon of aqueous solution). Termofoam® foam should be of the 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 manuals and the foaming agent’s label for specific instructions. If you need to make foam dryer, add more foam at your discretion.
Wood destroying organism control

Applications

Spray

Termofoam* solutions or foam should be applied evenly to wood using a medium to coarse spray at low pressures (20-30 psi). Low-pressure application will reduce drips, off-target spray and result in proper amounts of active ingredient on the surface.

Application rate is 1 gallon per 200 square feet of wood surface area. Ensure that all accessible wood surfaces are thoroughly wetted. Wood will absorb Termofoam* solution at different rates. Surfaces that absorb solution rapidly can be resprayed immediately.

Foam

Termofoam* can be applied as foam directly to wood surfaces, injected into infested galleries, applied to joints and injected into void areas such as studded and block walls. Foam is not to be used as a soil treatment technique. The foam should be of a consistency that adheres to the wood surface, minimizing run-off. Where possible, place foam between wood joints or abutting wood surfaces. In wall voids, inject enough foam to contact the wood surfaces of the studs in the wall or target area desired. When using foam to inject into galleries, refer to pressure injection directions.

Drilling patterns

Drill into the infested wood in the area of suspected infestation making injection holes (typically 7/64 or 1/8 inch in diameter). The holes should be drilled in a diamond pattern with the long axis along the grain and the holes spaced every 12 to 16 inches. Holes should be spaced approximately 4 to 6 inches across 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 available. Drill approximately ⅜ the width of the beam. If the widest surface is not accessible, holes can be drilled in the narrower surface. Drill holes approximately 8 to 10 inches apart (see figure 2).

Troubleshooting/hints

The best results and penetration will be obtained with temperatures above 56°F. Wood does not take up aqueous solutions as readily at lower temperatures.

Occasionally, Termofoam* solutions may drip or run onto glass surfaces such as windows and doors. After drying, a white residue may appear. This can be removed with warm water and a mild soap solution. DO NOT use window cleaners to clean windows with Termofoam* residues.

Heartwood is more difficult to penetrate with waterbased solutions as compared to sapwood. Logs may have knots in them that consist predominantly of heartwood. A white residue may remain in these areas after Termofoam* application. This can be removed with a damp cloth.

Termofoam* will not corrode metals normally used in construction. This includes ferrous metals, galvanized metals, screws and nails. Termofoam* will not affect electrical wir-
is active growth of the fungi may cause some spores of the fungi to become airborne. Mold spores can cause reactions in people allergic to these organisms. Make sure applications are performed at the recommended pressures, or consider using paint on applications to areas of active growth to reduce the possibility of airborne spores. Another option would be to consider washing the site(s) of active growth with a bleach/water mixture prior to the application of *Termatmoaf*. The customer should be advised of this situation also.

*Termatmoaf* should be applied only to bare, unsealed wood, plywood (and all other engineered wood products) and other cellulose materials where and 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 allow absorption of *Termatmoaf* into the wood. Allow the wood to dry before applying *Termatmoaf*. Treated wood can be machined, shaped, painted and glued.

Liquid or foam application to sealed surfaces should be avoided. Should this happen accidentally, a white residue of *Termatmoaf* may appear once the surface has dried. This can be removed with hot water and a cloth – do not use solvent based cleaners.

*Termatmoaf* 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. Allow the section to dry and if there is no damage, proceed with the application.

After use, equipment should be rinsed with clear, warm water if desired to flush any remaining *Termatmoaf* from the sprayer. The rinsate should be put in an appropriately labeled container and disposed of properly.

**Injecting method**

*Termatmoaf* solution and foams can be injected into infested wood. Press and hold the injection tip firmly into each hole and inject solution until runoff is observed from other holes, galleries, kick-holes, 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 (ordinary trash).

**Troubleshooting/hints**

Injection tips should be stainless steel and fit snugly into the drilled holes to prevent drip page 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; tarp or cover surfaces below.

Normal care and maintenance of spray equipment is sufficient.

<table>
<thead>
<tr>
<th>Organism</th>
<th>Application Method (spray or foam)</th>
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<tbody>
<tr>
<td>Fungi/Mold</td>
<td>One application. For serious infections, 2 applications, 1-24 hours apart or inject at source.</td>
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<tr>
<td>Beetles</td>
<td>One application. All accessible bare wood surfaces should be treated.</td>
</tr>
<tr>
<td>Subterrannean Termites</td>
<td>For remedial use, 2 applications, 1-24 hours apart. When accessible, drill and inject solution and foam directly into wood where galleries are detected.</td>
</tr>
<tr>
<td>Formosan Subterrannean Termites</td>
<td>2 applications, 6-24 hours apart. When accessible, drill and inject solution and foam directly into wood where galleries are detected.</td>
</tr>
<tr>
<td>Drywood Termites</td>
<td>For remedial use, 2 applications, 1-24 hours apart. When accessible, drill and inject solution and foam directly into wood where galleries are detected.</td>
</tr>
<tr>
<td>Carpenter Ants</td>
<td>One application to wood will prevent nesting. Excavations can be sprayed.</td>
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<tr>
<td>General pests</td>
<td>2 applications, 1-2 hours apart, as crack and crevice treatment.</td>
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**Organism**

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<th>Application Method (spray or foam)</th>
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<tr>
<td>Preventative Treatment</td>
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<tr>
<td>New construction</td>
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<tr>
<td>Siding, trim, logs</td>
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<tr>
<td>Decks</td>
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</table>

(See Table 1)
Specifications for Structural applications

Basement and crawlspace structure

Spray Termatreat solution and foam on all bare wood accessible in the flooring and subfloor. This application will control an infestation even when certain parts of a gallery are not directly sprayed. In addition, steps must be taken to correct moisture problems (leaks etc.) that may have led to and sustained the infestation.

Attics

Spray Termatreat solutions to all accessible wood: rafters, trusses, top-plates, ceiling joints, plywood, particleboard, etc. Accessible areas with known infestations should be drilled and injected depending on the type of infestation (see Table 1 above). This has been a very effective technique in spot treating for control of drywood termites.

Exterior wood

Termatreat 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 sealing coat can be removed prior to application.

Following treatment, the exterior wood should be sealed to protect Termatreat from diffusing out. Wood should be completely dry (at least 48 hours) before a sealing coat (paint, varnish or waterproofing seal) can be applied. When properly applied, Termatreat will not interfere with application of sealants. DO NOT apply Termatreat in inclement weather. Termatreat is not recommended for use on wood in direct contact with soil.

Deck treatment

Termatreat can be used to treat wood decks. Prepare the deck by removing any dirt, debris or sealants that will interfere with the application and absorption of Termatreat. After the deck has dried (dry to the touch, no standing puddles), one application of Termatreat can then be applied to the wood. Protect any surrounding plants, ornamentals from accidental contact with the solution. Following treatment, the deck should be sealed to protect the Termatreat from diffusing out. Wood should be allowed to dry before a sealing coat can be applied. Any commercially available sealants, stains or paints can then be applied.

Pre-treatment to wood – new construction

Spray application of Termatreat (Flo-X/Moldwash) solutions may be made to wood during construction. Any accessible bare wood surfaces can be sprayed including: flooring, subflooring, sills plates, top plates, wall studs, trusses, rafters, roofing, plywood, etc.

Application should be performed after framing and roofing are in place and before insulation and drywall are installed. Avoid spraying any electrical component. Protect treated wood from excessive rain.

Food handling areas

Termatreat is limited to crack and crevice treatments for food handling areas of food handling establishments. Apply Termatreat between different elements of construction, between equipment and floors, hollow spaces in walls and equipment legs and bases where insects hide. Care should be taken to avoid depositing the product onto exposed surfaces or introducing the material into the air. Avoid contamination of food and/or food processing surfaces.

Estimating amounts for application

Termatreat can be applied to wood as one application depending on the type of infestation (see Table 1) Calculating the amount of Termatreat to be used for a particular treatment is important.

Approximately 1 gallon of Termatreat solution will be needed to treat 200 ft² of wood surface area. The amount of solution needed will depend on the total square footage of wood to be treated and the technique to be used (spray or foam).

There are some predetermined factors which you can use as multipliers for given situations to calculate the square footage of wood to be treated:

For example, if you had to spray a piece of wood that was 10 feet long and 6 inches wide, one side of the piece of wood will be 5 ft² of wood surface area (10 ft x 0.5 = 5 ft²). If you spray all four sides once, the total square footage would be 20 ft² requiring 0.1 gallons Termatreat for one application (1 gallon treats 200 ft²). If the target organism (see Table 1) requires a second application then you will need to apply another 0.1 gallon after the required waiting time.

When calculating square footage of wood surface area in a crawl space or basement, you have to consider all the wood present. The calculations are easily done. First, determine the square footage of the crawl space by multiplying the length by the width, i.e., a 20 ft x 40 ft. crawl space is 800 ft². Multiply this by 2.5 and the result is an approximation of the total square footage of wood surface area for all the wood in the crawl space. Therefore, a 20 ft x 40 ft. crawl area would consist of 2,000 ft² of wood surface area (20x40x2.5), needing 10 gallons of Termatreat solution for one application.

In estimating the amount for a treatment of the entire structure, there are many sections to consider: attics, interior walls, exterior walls and flooring. The guideline to use here is to obtain the square footage for the living area of the structure from the building and multiply by 9. If a crawl space or basement is involved, then use the calculations above and add that number to the amounts calculated here. For example, if the structure to be treated is 2,000 ft² and has a 20 ft x 40 ft. crawl space, then the wood surface area is 2,000 ft² multiplied by 9, equaling 18,000 ft². Add the 2,000 ft² (calculated above) for the crawl space to get 20,000 ft² of wood surface to be treated. This is 100 gallons of Termatreat.
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<tr>
<td>Skin</td>
<td>Wash with mild soap and water.</td>
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<tr>
<td>Eyes</td>
<td>Flush with tepid water for 15 minutes. If irritation persists, consult a physician.</td>
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<tr>
<td>Ingestion</td>
<td>Drink plenty of water and contact physician or poison control center.</td>
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**Safety**

Termfoam® is a ready-to-use solution. Use of an MSHA/NIOSH approved dust/mist mask respirator is recommended when utilizing Termfoam® solutions in confined spaces. Refer to MSDS for specific information.

Eye protection (e.g. goggles) should be worn to prevent splashing or dripping of solution into eyes. Waterproof gloves are also recommended when applying Termfoam®. Accidental exposure: Consult the MSDS for more information.

**Storage**

Termfoam® should be stored in a dry place above ground where children and animals cannot gain access.

Termfoam® solutions can be stored indefinitely in sealed containers and should be kept from freezing or evaporating.

There is no fire hazard with Termfoam® solutions.

**Environmental**

Boron is an essential micronutrient for plant life; however, solutions of Termfoam® are concentrated enough to kill plants or seriously damage foliage.

Do not carelessly spill or apply Termfoam® to croplands, ornamental plants, trees or lawns.

Do not apply Termfoam® to any body of water; certain aquatic life forms are very sensitive to excess boron concentrations.