

Use Preservative-treated Wood & Integrated Pest Management When Rebuilding



Large areas of land along the Gulf of Mexico have been flooded and destroyed by recent hurricanes. Many homes and other buildings are no longer habitable or will be demolished. Some of these structures will be rebuilt. With this rebuilding comes an opportunity to reduce the impact of a wide array of insects, wood decay and rot. The most serious pest in this area is the Formosan subterranean termite, now considered the most destructive insect in the Gulf South resulting in millions of dollars in losses caused by: treatments; repairs; defaults on loans; and collapse, demolition and rebuilding of structures. Your new home can be safeguarded by using preservative-treated wood and following an integrated pest management program at the time of construction.





Formosan subterranean termite

The Formosan subterranean termite is found throughout the Gulf South. **Its annual cost of destruction is estimated at more than \$500 million in Louisiana alone.** This cost will increase even more as the Formosan termite is moved to new locations. It cannot be eradicated with current technology; however, it can be reduced to a minor pest by adopting and practicing integrated pest management at the time of construction. Structures should be rebuilt using pressure-treated wood. The opportunity to make the Formosan subterranean termite a minor pest when homes are rebuilt should not be lost!

Why Choose Preserved Wood

*The single most important tool for integrated pest management of Formosan subterranean termites and other wood-destroying organisms is the use of **pressure-treated wood**.* Treated wood repels or kills termites and other wood-destroying organisms such as decay, lasts indefinitely, costs less than \$3,000 for all treated studs and sheathing in a 2,000-square-foot home, reduces the risk of houses being weakened or completely destroyed from termite damage and is safe.

In addition to treatments that enable the wood to last a long time or resist fire, treated wood has all of the environmental advantages associated with wood itself. It extends forest resources by extending the service life of structures; it is a renewable resource grown on managed timberlands requiring less energy to produce and use than alternative building materials. Because of its lighter weight, wood can often be installed with lighter equipment which has less environmental impact.

Wood offers excellent workability with common construction skills and tools, it provides design flexibility and economy, and it offers greater insulation value. Wood is generally less costly than alternative building materials and is considered easier to work with, not to mention being aesthetically preferable in many applications.

A recent study conducted by the Consortium for Research on Renewable Industrial Materials (CORRIM) found that wood-framed homes were rated higher than concrete and steel as more environmentally friendly. The life cycle assessment found that the total energy in the completed steel-frame house was 17 percent greater, and the concrete-framed house was 16 percent greater than the completed wood-frame house. Moreover, the bioenergy used was more than 250 percent that of wood, which researchers explained as meaning that 20 times more energy was used than saved by substitution of materials. For a condensed version of the full report, see www.corrim.org/reports/pdfs/FPJ_Sept2004.pdf.

Benefits of Wood

Wood has many advantages over other building materials. For example wood —

- Is a renewable natural resource.
- Is a leading employer in the Gulf South.
- Is a source of excellent thermal and sound insulation.
- Is easy to use and preferred by most builders.
- Provides a natural and warm feel.
- Uses less energy to process than steel, concrete, aluminum, or plastic.

Preservative-treated Wood Types

Wood pressure treated by different preservatives is available to consumers. Each of the types below is approved by the U.S. Environmental Protection Agency (EPA) and provides consumers with a safe product for your family along with supplying excellent protection against termites, other wood-destroying insects and wood decay fungi. The more common types of treated wood available to Gulf South consumers include:

Borates

ACQ (*alkaline copper quaternary*)

CA (*copper azole*)

MCQ (*micronized copper quaternary*)

Other treatments, namely some organic (metal-free) preservatives for above-ground use and surface-coated products for interior framing, are entering the market and can be effective. In addition, wood is now being treated via acetylation. Research is progressing on using heat treatment, which is treatment by heat only and no chemical treatment.



Integrated Pest Management

Integrated pest management of Formosan subterranean termites and other wood-destroying organisms involves managing every aspect of a house throughout its lifetime, including the construction and inhabitation phases. Some aspects of IPM follow.

ARCHITECTURAL DESIGN

Design the house to avoid wood and rigid foam insulation in soil contact; shed and drain water away from the walls, windows and foundation; eliminate hidden pathways for subterranean termites; make it easy to inspect and retreat; and use termite-resistant materials. Inspections may be carried out under raised houses but not under slabs. Refrain from designing a flat roof. Extend roof overhangs at least 18 inches; 2-foot overhangs are recommended. Factors other than low cost and appearance must be considered.

PRETREATMENT OF SOIL

Pretreatment involves treating the piers or the soil that is under the slab with a labeled, liquid termiticide. A pretreatment contract requires that the pest control operator treat under the slab and then, within one year (after landscaping has been completed), come back and do a conventional trench and treat or baiting (if a bait and chemical treatment contract is involved).

BARRIERS

A slab is a barrier in itself. A monolithic slab can serve as a termite barrier. Prevent cracks in the slab by compacting the soil that will be under the slab, using a low water-to-cement ratio mix, not overworking the surface during finishing and allowing sufficient wet curing time. Any crack or hole in the slab, including holes for pipes and bath traps, is a potential route of entry for subterranean termites. Consider adding termite shield collars around pipes and foundation perimeters to block hidden pathways.

CONSTRUCTION

Build the house to eliminate wood-to-soil contact, eliminate all sources of moisture in or around the house, eliminate hidden access by subterranean termites, provide easy treatment and inspection and use termite-resistant materials.



Make sure the site is prepared before soil treatment, the pretreatment is done properly and not disturbed. Durable 6 mil plastic sheeting should be laid over the treated soil and draped in the grade beam trenches up to grade to keep ground moisture from soaking into and wicking through the slab. Do not leave wooden form boards, grade stakes, concrete and bricks around the slab or driveways. Use grade stakes or form boards made from materials other than cellulose. Avoid using wood spacers in cold joints and expansion joints. Make sure at least 6 inches of slab are showing after landscaping (so design it at least 8 inches above grade). Do not fill porches with soil. Do not bury wood or other construction materials such as leftover concrete and brick.

LANDSCAPING

Keep plants a minimum of 3 feet from houses. Do not disturb the treated soil. Use termite-resistant materials and mulches near the house. Do not transport termite-infested wood, plants, mulch or soil. Mulches containing cellulose provide food for termites and, if used in the landscape, must be used properly. All mulches modify temperature and moisture conditions favorably for termites.

RESTORATION

When restoring storm-damaged or flooded homes, consider spraying the wood in exposed wall cavities with borate solutions before replacing insulation and drywall. Surface treatments do not offer total wood protection, but they may provide effective deterrence to both termite and surface mold formation.



Further information may be found by clicking on “Termites” on the LSU AgCenter website (www.LSUAgCenter.com) or by visiting the **Louisiana Forest Products Development Center** at www.rnr.lsu.edu/lfpdc

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