Treat Termite Infestation With SPF Spray Foam

By General Coatings.

This quick guide will tell you everything you need to know about inspecting for termites and treating potential termite infestations in buildings using SPF insulation.

No homeowner wants to have to deal with a termite infestation in their home. Unfortunately, termites are a common pest that a homeowner may have to deal with at some point. Help homeowners keep this pest under control by educating them on how SPF insulation can treat termites. Luckily, General Coatings has advice and basic information about termite inspection and treatments methods.

Termites and the Model Building Code

For residential construction, the International Residential Code (IRC) specifically addresses subterranean termite control methods in Section R318 during new construction, and measures depend upon the building location. The requirement for preservative-treated or naturally durable termite resistant wood are also identified as termite control strategies are identified in the International Building Code (IBC), Section 2304.12 for commercial buildings. These measures detailed in the IRC Section R318 include:

- Borate treatment of select wood members
- Termiticide application on the surrounding ground areas
- Termite baiting systems
- Use of preservative treated wood or termite resistant wood
- Physical barriers (sheet metal or wire mesh) between foundation and framing
- In areas of very heavy termite infestation:
    - The use of foam plastic insulation is not permitted on the exterior face of walls, or below footings, foundations or slabs that are below grade.
    - Foam plastic on above grade walls must be 6” above the ground.

Energy efficiency and visual termite inspection

Recent changes to the model energy codes now call for buildings with increased levels of insulation and significantly reduced air leakage. One of the most significant sources of air leakage in framed buildings where the framing meets the foundation. Driven by differential pressure, air infiltration occurs through gaps between the sill plate and foundation, at the bottom and top edges of the rim joists, and through various penetrations for plumbing, wiring and ductwork. In homes built more than about 10-15 years ago, these areas were rarely insulated and almost never properly sealed.

SPF is often used by builders of new homes and weatherization contractors in existing homes at the framing-foundation area, and is often regarded as an especially cost-effective and reliable means to insulate and air seal these critical areas.

Alternative methods of insulating these areas may include the use of cut foam insulation board perimeter sealed with caulk or polyurethane foam sealant. This approach, is used by some weatherization contractors. It is generally more labor intensive than SPF application, as it requires cutting of the foam board followed by the application of a caulk or sealant. It can be especially difficult application in tight areas and will require cutting around engineered wood I-joists. Like SPF, this

application provides long-lasting insulation, air sealing and moisture control. Note that this method does not always provide sealing of the gap between the sill plate and foundation.

Another means of insulating and air sealing of the framing near the foundation involves application of a caulk or sealant around the perimeter of each cavity, followed by installation of insulation batts. Like the use of foam board insulation, it requires a labor-intensive caulking or sealing. It should be noted that unlike SPF and boardstock, this is not a permanent installation.

In some buildings, the SPF application is extended to insulate conditioned crawlspaces and basements by applying a continuous layer of insulation from the subfloor to the vapor retarder/barrier installed on the floor of the crawlspace or to the slab in the basement.

The concern by some pest control and inspection companies with these permanent applications of foam plastic in the rim joist is that it does not permit removal of the insulation for traditional visual inspection of the sill plate, band/rim joists or the ends of the floor joists. This challenge can be addressed through use of newer technologies when inspecting for termites.

In addition, some states including North Carolina, Georgia and Alabama have modified the model code to include a termite inspection strip above and below the top of the foundation wall to expose the sill plate and lower band/rim joist for visual inspection. SPF can be installed in this manner to meet these state-specific codes.

It should be noted that the SPF installation, while sealing some air leakage paths and meeting certain code requirements for termite inspection strips, does not seal the path between the sill plate and foundation, and caulking may be needed at this location to enhance the air leakage resistance of the sill sealer. As an alternative to encapsulated or conditioned crawlspaces, with the interior of the stem walls covered in foam, SPF can be applied directly below the subfloor and leaving the crawlspace vented. This installation.

While this application will typically require more insulation than a conditioned crawlspace, it enables complete access to the band joist and sill plate areas for termite inspections. Application of SPF to the subfloor will help provide air sealing and insulation of the floor assembly, but can limit access to wiring and plumbing.

Insulation may need to be added to ductwork and piping located in the vented, unconditioned crawlspaces. Additionally, a vapor retarder may be needed between the SPF and vented crawlspace to help control moisture condensation in hot-humid climates if open cell SPF is used.

Useful practices for SPF installation for termite control (new construction)

1 - For all new construction, follow the requirements of the building code for termite control. Always check with the local building code official regarding termite-resistant construction requirements. These requirements may include treatment of wood and soil, use of termite resistant lumber and installation of termite barriers.

2 - Always check local building codes to determine if termite inspection strips are required. Even if not required by code, discuss this option with the builder, as it may impact a continuing pest control program, especially in areas where termites are a concern.

Useful practices for SPF installation for termite control (existing buildings)

These practices primarily address infestation by subterranean termites, which are prevalent across most of the United States.

1 - For existing buildings, install SPF according to the local building codes, even if the installation is not subject to inspection by a local code official.

2 - Always check local building codes to determine if termite inspection strips are required. Even if not required by code, discuss this option with the building owner, as it may impact existing pest control programs, especially in areas where termites are a concern.

3 - It is a good idea to have a termite inspection performed before installation of SPF. If there is any sign of termite damage, consider advising the building owner and waiting to proceed with the work until repairs are complete and a termite management program is initiated.

4 - Discuss SPF application with prospective pest management contractors in the area. Builders and homeowners should also consider the need to construct and maintain buildings and surrounding areas. These measures can include:

- Removing the conditions that termites need to survive – food and water.
- Diverting water by grading the landscape away from the house. Installing properly functioning gutters, downspouts and splash blocks.
- Repairing any water leaks into the crawlspace.
- Reducing humidity in crawlspaces with moisture barriers, proper ventilation and dehumidification.
- Preventing shrubs, vines and other vegetation from growing over and covering crawlspace vents.
- Removing old wood boards and grade stakes that were used during building construction.
- Removing old tree stumps and roots around and beneath the building.
- Separating the soil and wood portions of the building (e.g., 18” gap or more).
- Routinely inspecting the foundation for termite activity or damage.

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