

Termite & Other Insect Protection for EPS

Cellofoam expanded polystyrene (EPS) foam is often used to insulate buildings that may be of risk for termite infestations, such as perimeter and under-slab foundations, exterior walls, and EIFS (Exterior Insulation Finishing Systems). Geostuctural EPS foam products such as Geofoam or Elastic Inclusion may also be at risk of insect damage, especially if used in the proximity of wood products. Untreated EPS contains no nutritional value for termites or other insects and therefore does not attract them. However, insects can use the material to build tunnels to access food sources, such as wood or other cellulosic components of a structure. As the termites' burrow through the EPS, they create holes that may reduce the insulation's structural integrity and insulating properties (R-value). Termite excretions may also affect the strength and hardness of the EPS foam.



Multiple Solutions to Protect EPS Foam Insulation & Geostuctural Foam

Cellofoam offers two insecticide options for protecting EPS foam products, one for lower risk termite areas and the other, a premium product, for geographically defined "very heavy" infested areas. Figure 2603.8 of the 2015 International Building Code (IBC) shows an approximate termite risk across the continental United States. The IBC allows plastic foam insulation to be used on building exteriors at or below grade in "very heavy" termite infested areas only when treated with an approved method to protect from termite damage. While there is no IBC code treatment requirement for areas outside of "Very Heavy" termite risk, local, jurisdictional codes should always be checked.

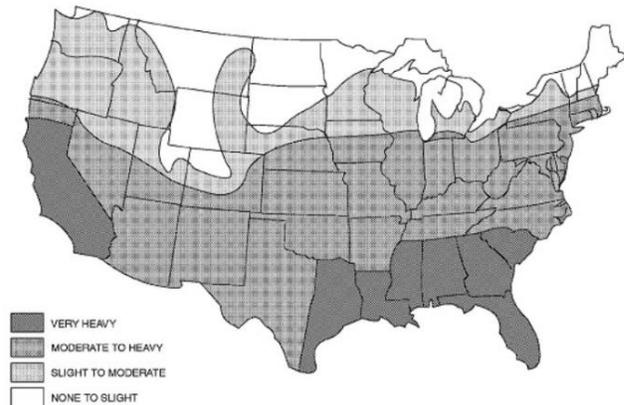


FIGURE 2603.8
TERMITE INFESTATION PROBABILITY MAP

The insecticide used in Cellofoam treated EPS products for "very heavy" infested areas is PREVENTOL® TM Preservative Insecticide. PREVENTOL® TM provides a more effective alternative than traditional methods to protect EPS foam from termite damage (photo A). The active ingredient in PREVENTOL® TM, imidacloprid, is



Photo A: Comparison of EPS in AWPA E1 two choice test (4 week exposure) (L-R): PREVENTOL® TM Preservative Insecticide, borate, and untreated.

an organic molecule that is pH neutral and non-abrasive. Imidacloprid is one of the most widely used insecticides in the world, especially in agriculture, and is rated in the EPA's 2005 Carcinogen Risk Assessment Guidelines as group "E", which indicates no evidence of carcinogenicity for humans. The product is safe to handle by installers. Additionally, PREVENTOL® TM Preservative Insecticide has low water solubility which ensures the active ingredient will remain in the foam, thus providing long term efficacy against termites, even under harsh conditions and climates.

PREVENTOL® TM is fully certified by the International Code Council Evaluation Services (ICC-ES) as an approved treatment against insect attacks on EPS (see ICC-ESR 2918), and meets the requirements of ICC-ES AC239, Acceptance Criteria for Termite-Resistant Foam Plastics.



CELLOFOAM®
North America Inc.

Insect Resistant EPS

In addition to PREVENTOL® TM, Cellofoam employs CELLUTREAT® to protect EPS products in lower termite risk geographic areas. CELLUTREAT® is a traditional borate powder (disodium octaborate tetrahydrate or DOT) that has been successfully used to protect EPS foam for decades. CELLUTREAT® is inorganic and odorless, and has the advantage of lasting indefinitely. It is also non-carcinogenic, is safe to handle by installers, and has a low toxicity to humans and pets.

Both CELLUTREAT® and PREVENTOL® TM insecticides are introduced to and coat each individual polystyrene bead prior to the molding process, ensuring 100% protection throughout the EPS block. Both insecticides are registered with the Environmental Protection Agency for this application. As CELLUTREAT® and PREVENTOL® TM act as a deterrent but not a barrier to insects, treated Cellofoam EPS products should be used as just one part of a more comprehensive pest management program.

PREVENTOL® TM is a registered trademark of LANXESS Deutschland GmbH.
CELLUTREAT® is a registered trademark of Nisus Corporation.

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CAUTION: This product is combustible and if exposed to a fire of sufficient heat and intensity may burn rapidly. It should not be left exposed or inadequately protected. Consult specific instructions for use accompanying this product.

Cellofoam North America Inc. is an expanded polystyrene foam manufacturer and not an engineering consulting firm. Thus, it is beyond our scope to provide design services on the specific use for our products. Users of our EPS products should consult with appropriate engineering and code experts to determine the exact type and specifications of EPS required for their project. The sale of these products shall be subject to Terms and Conditions of Sale, including those limiting warranties as set forth in Cellofoam's invoices. No agent, employee, or representative of Cellofoam North America Inc. or its subsidiary or affiliated companies is authorized to modify this disclaimer.