

TERM® Water|Termite Barrier

For Concrete Foundations



International Code Council
Termite Barrier System
Report ESR-3632
[Link to ICC ESR-3632](#)

Product Data Sheet

EPA Establishment No. 89537-TX-1

DESCRIPTION

Since 2002, hundreds of foundations across the United States have been protected with TERM Water|Termite Barrier to exclude both water and termites. TERM Water|Termite Barrier is a “peel and stick” barrier membrane used on concrete or ICF (Insulated Concrete Form) foundation walls.

Before that, Polyguard waterproofing membranes (without *termite exclusion*) have been used worldwide on both residential and commercial construction since 1970. Research and testing of termite and pest exclusion, in cooperation with scientists at Texas A&M’s Urban and Structural Entomology Laboratory, began in 1999. Today *TERM Water|Termite Barrier* is a key part of a whole structure waterproofing and termite exclusion system.

ADVANTAGES

TERM Water|Termite Barrier is a non-structural barrier which when properly constructed as part of the building envelope, blocks both termites and water. Documentation can be found at: [Link to Termite Barrier Development](#) TERM Water|Termite Barrier does not contain pesticides and is classified by the EPA as a physical barrier.

TERM® vs TERMITE SHIELDS

TERM Barriers and termite shields are similar, in that both physically block termites. But *TERM* is different from termite shields - in that *TERM* blocks almost every entry point that a subterranean termite could find.

Plus, *TERM* waterproofs buildings.

DESCRIPTION OF COMPONENTS

TERM Water|Termite Barrier is a strong, pliable, self-adhesive sheet made of a 4-mil high density polyethylene film integrally bonded to 64 mils of barrier sealant. Total thickness is 68 mils.

TERM Water|Termite Barrier is formulated for low temperature application down to 30°F (-1°C) *TERM Water|Termite Barrier* is wound on a disposable treated release sheet which can be peeled away to expose the adhesive face. Standard roll size is 39.4’ x 61’ (1.0m x 18.6m).

Polyguard 650LT Liquid Adhesive is a fast drying, high tack rubber-based adhesive used on horizontal and vertical surfaces at

temperatures above 30°F (-1°C). This solvent base product cannot be used on ICF surfaces.

Polyguard 650 WB Water-Base Liquid Adhesive is available where VOC concerns or limitations apply.

Polyguard 650 Mastic is asphalt mastic with a low solvent content. It is used to waterproof exposed edges of TERM Barrier Products.

Polyguard Detail Sealant is used with *Polyguard Barrier* to eliminate double-ply sheet on inside and outside corners or as a fillet on inside corners, *Polyguard Detail sealant* ensures adhesion to concrete in difficult areas to seal. *Polyguard Detail Sealant* is a solvent free, non-isocyanate adhesive sealant which is low VOC/HAPS free. It is



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formulated to be compatible with the *Polyguard TERM* barriers.

REFERENCES

LEED

Click here to view [LEED v4 Documentation](#).

INSTALLATION

Safety

All *Polyguard* products must be handled in a safe manner. Some products (some mastics or primers) contain solvents, and these

deserve special attention to safety since their vapors are both flammable and harmful if inhaled. Read both the product label and the Safety Data Sheet (SDS) before use. SDS sheets can be obtained on our website [Link to SDS's](#). Call Polyguard at 214-515-5000 if you have any questions. Health Product Declaration information is also available [Link to HPD Info](#)

The *650 LT Liquid Adhesive* is an industrial coating and would be harmful or fatal if swallowed. It is marked as red label from the standpoint of flash point.

Solvents could be irritating to the eyes, flush with water and contact physician.

Avoid prolonged contact with skin and breathing of vapor or spray mist from liquid adhesive. *In confined areas, use adequate forced ventilation, fresh air masks, explosion-proof equipment and clean clothing.*

Preparatory Work

Apply TERM Barrier only in fair weather, when temperatures are above 30°F (-1°C) and rising.

Prior to starting work, check that all horizontal surfaces to be covered slope towards drainage. This material is not designed to be applied in areas where water will pond.

A smooth monolithic concrete surface is required. Broom surfaces are not recommended. Concrete should be dry, frost free and cured a minimum of seven days prior to application of *TERM Barriers* and *Liquid Adhesive*. Surface must be free of voids, spalled areas, sharp projections, loose aggregate and form release agents. Concrete curing compounds containing oil, wax or pigments should not be used.

Form release agents must be self-dissipating which will not transfer to the barrier. Surface defects such as cracks, holes or cavities should be filled and finished flush with a Portland cement grout or concrete. Top surfaces of projecting ledges, below grade, except footings, should be finished to a bevel with Portland cement mortar. Concrete block walls or brick require a well adhered parge coat before application of barrier. Striking off joints flush with surface is also required.

Clean all surfaces to remove debris, dust and loose stones before application begins. DO NOT apply *Liquid Adhesive* or *Barrier* to frozen concrete.

Cracks of more than 1/16" (1.5 mm) on horizontal or vertical surfaces should be properly sealed in accordance to sealant manufacturer's instruction and pre-stripped with a 12" (305 mm) wide strip of *TERM Water|Termite Barrier* or *Detail Sealant*.

Cold joints, T-Joints and evident working cracks should be properly sealed with joint fillers, waterstop or sealant. A 12" (305 mm) strip should be placed directly over and centered in the crack with the final applied barrier providing double strength at the area of movement.

All expansion joints, contraction joints and control joints should be properly sealed with joint fillers, waterstop or sealant. An inverted 8" (203 mm) strip, covered by a 12" (305 mm) strip, shall be placed directly over the joint, before the final barrier is placed.

Detail Sealant

Apply fillets formed by *Detail Sealant*, latex modified cement mortar or epoxy mortar at the base of foundation walls and footings. DO NOT use wood or fiber cant strips. Fillets of *Detail Sealant* should be applied to provide a 3/4" (19mm) face and extend 6" (152mm) vertically and horizontally, 90 mils (2.286 mm).

Cover all corners, joints and the base of the foundation wall and footing using a 12" (305 mm) wide strip of barrier centered along the axis. Press or roll firmly to achieve a complete seal. Apply a second ply of barrier. *Detail Sealant* may be substituted for the initial 12" (305 mm) wide barrier strip on inside corners.

Pretreat inside corners with *Detail Sealant* 6" (152 mm) in each direction from corners, and form a fillet with *Detail Sealant* and apply a 12" (305 mm)

strip of barrier centered on the corners.

Detail Sealant may be substituted for the initial layer of sheet barrier on drains and protrusions by applying a 90 mil (2.286 mm) thick layer from the drain or protrusion out and extending 6" (152 mm) underneath sheet barrier. Apply *Detail Sealant* vertically to be level with height of wearing surface. Flash drains and projections with a second ply of barrier for a distance of 6" (152 mm) from drain or projection. Seal all terminations with *650 Mastic*.

Priming

Priming can be done using *650 WB Water Base Liquid Adhesive* or *650 LT Liquid Adhesive*. If using *650 LT Liquid Adhesive* be certain to review the safety information on our data sheets as well as the SDS.

Stir *Liquid Adhesive* before use. Apply over the entire surface at a rate of 250-350 square feet, per gallon (6-8.5 m²/l). Primed surfaces must be re-primed if barrier is not applied to the *Liquid Adhesive* within the same working day. Use brush or lamb's wool roller for application. *650 WB Water Base Liquid Adhesive* can also be applied using airless or air assisted sprayer. *Liquid Adhesive* must be dry prior to application of barrier. *Liquid Adhesive* retains a tacky adhesive surface.

Primed surfaces should be immediately covered or protected to prevent contamination occurring on the *Liquid Adhesive*. Metal surfaces may require. *Liquid Adhesive* to obtain bond of barrier to substrate. Field test to determine adhesion level. Surface must be free of contaminants.

Sheet Barrier Application

TERM Water|Termite Barrier must be overlapped. Side laps must be a minimum of 2-1/2" (64 mm). Staggered end laps should be minimum 6" (152 mm).

When applying *TERM Water|Termite Barrier* on vertical walls, a determined effort must be made to assure complete adhesion of barrier to the primed surface. Hand roll overlap seams with a wall type narrow roller. Use heavy hand pressure while smoothing out the barrier surface, as it is applied.

On horizontal surfaces, apply barrier from low to high pitch for maximum drainage. Use linoleum roller or water filled garden roller, covered with two plies of indoor-outdoor carpet to roll barrier immediately after application, with special attention at overlaps and "T-Joint". Seal all end laps with *650 Mastic*.

It is recommended that when vertical sections of more than 8' (2.4 M) are to be protected, barrier should be applied in sections no longer than 8' (2.4 M), starting from the lower foundation base and rising to the top with the 6" (152 mm) overlap, shingling down on each ply of barrier.

TERM Water|Termite Barrier should be applied over the edge of the

footing at the foundation base with the 6" (152 mm) overlap, shingling down on each ply of barrier. The upper terminating edge of *TERM Water/Termite Barrier* applied to a vertical wall should be completed over the top of the wall. If terminated in the vertical surface, such termination should be at a reglet or counter flashing. The terminated edge should be pressed firmly with a silicone roller and protected from water with a troweled bead of *650 Mastic*.

Flashing and Detailing Edges

Finish vertical wall barrier on top edge under flashing or in reglet. Seal T-Joints and terminations with a troweled bead of *Polyguard 650 Mastic*.

Care should be taken to obtain good adhesion between barrier used for repairs and originally applied barrier.

Mastic Application

650 Mastic should be applied at all terminations at the end of each day's work. *650 Mastic* should never be applied underneath the barrier.

Inspection and Repairs

Visually inspect barrier for tears, punctures, air blisters and "fishmouths" prior to water tests, placement of protection board and backfilling. Make repairs by removing all damaged barrier so that only well bonded barrier remains. Re-prime any exposed concrete. After *Liquid Adhesive* is dry, apply a new sheet of barrier over the concrete, extending 6" (152 mm) onto previously applied barrier. Slit all "fishmouths", overlap the pieces, place patch over area and roll or press in place. Puncture air blisters, expel the air, prime and cover with patch. Seal edges with *Polyguard Detail Sealant* or *Polyguard 650 Mastic*.

Ultraviolet Protection

TERM Water/Termite Barrier can be adversely affected by ultraviolet light. The waterproofing system must be covered as soon as possible and not left exposed to sunlight for over 30 days.

Barrier left exposed on top of foundation walls or parapets should

be covered with weather resistant flashing.

Barrier Protection and Drainage Mat

Polyguard Polyflow 15-P Drainage Protection/Drainage Mat with built in puncture protection plus drainage for vertical surfaces is required. This helps keep the structure dry, and makes it less attractive to foraging termites.

Drainage: Drainage systems should be designed with pipe sizes large enough to prevent water accumulation against the foundation. Perforated pipe should be covered with fabric to prevent fines or dirt from plugging perforations. Pipe should be of sufficient strength to prevent deformation due to soil weight or movement. Consideration should be given to provide drain outlets to the interior of the building when the water table level is above the base of the waterproofing barrier

Backfill

No waiting is required before backfilling. Backfill material should be dry sand or dry soil dirt as following:

- Fill material free of large dirt clods, rock, tree roots and debris.
- Backfill should be of a type readily compactable upon deposit.
- It should be placed against the drainage mat in 6" (152mm) to 8" (203mm) compacted layers to avoid vertical settlement.
- Backfill should not have high water content that would cause the soil to shrink upon drying.
- Mechanical compaction in horizontal layers should be used to achieve these results if necessary.
- Avoid sharp impact to the drainage mat when backfilling.

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PHYSICAL PROPERTY DATA

| Typical Properties of TERM Water Termite Barrier | | | |
|--|--|--|--|
| Property | Test Method | English | Metric |
| Color | -- | Red | Red |
| Barrier Thickness | ASTM D 1000 inch (mm) | .068 | 1.73 |
| Long Term Testing against Termite Penetration | ICC AC 380 Acceptance Criteria for Termite Physical Barriers | ICC ESR compliance ICC ESR-3632 | ICC ESR compliance ICC ESR-3632 |
| Elongation of Barrier Sealant – Percent Stretch Before Failure | ASTM D 412 | > 1000% | > 1000% |
| Resistance to Radioactive Radon Gas | % reduction in radon gas diffusion | 97.1% | 97.1% |
| Pesticide Repellency (Chlordane, fipronil, permethrin) | ASTM F 2130 | 0% | 0% |
| Permeance to Moisture / Water Vapor | ASTM E 96-B Grains/ft2/hr/in HGF(grains/hr/m2) | .03 | .02 |
| Tensile Strength – Film Backing | ASTM D 882 PSI / (N/mm2) | 6500 | 44.82 |
| Tensile Strength – Barrier Composite | ASTM D 412(Modified Die C) PSI / (N/mm2) | 325 | 2.24 |
| Peel Adhesion | ASTM D 903 lb/in width / (N/mm) | 17.0 | 2.9 |
| Overlap Bond | ASTM D 1876 lb/in width / (N/mm) | 8.0 | 1.4 |
| Low Temperature Flexibility | ASTM D 146 180° bend over 1” mandrel at -25°F(-32°C) | No cracking or delamination | No cracking or delamination |
| Barrier Puncture Resistance | ASTM E 154 (Blunt Instrument) lb / (N) | 50 | 182 |
| Resistance to Hydrostatic Head | ASTM D 5385Ft / M | 231/70.4 | 70.4 |

PACKAGING

| Packaging Information - TERM Water Termite Barrier | | | | |
|---|--|---|------------------|------------------------|
| Product | Unit of Measure | Approximate Coverage | Weight / Unit | Palletization |
| TERM Water Termite Barrier 39.4” x 61’ (1.0 m x 18.6 m). | Carton (1 roll) | 200 ft2 | 75 | 30 cartons |
| Polyguard 650 LT Liquid Adhesive | 5-Gal Pail or 4-1-Gal Pail | 250 – 350 ft2/gallon | 45 lb. 31 lb. | 36 Pails 54 Cartons |
| Polyguard 650 WB Water Base Liquid Adhesive | 5-Gal Pail or 4-1-Gal Pail | 250 – 350 ft2/gallon | 50 lb. 37 lb. | 36 Pails 54 Cartons |
| Polyguard Detail Sealant | Carton with 12 30 oz. tubes | 1/8” bead – 293 lf/tube ¼” bead – 73 lf/tube 3/8” bead – 30 lf/tube | 32 lb. | 25 Cartons |
| Polyguard 650 Mastic | 5-Gal Pail or 30 oz. tube x 12 / carton | 200 LF per gallon 40 LF per tube | 50 lb. 24 lb. | 36 pails 25 cartons |

Material Storage: Barrier and accessories should be unloaded and stored carefully. Cartons and containers must be protected from weather, sparks, flames, excessive heat, cold and lack of ventilation. DO NOT stack barrier material higher than 5' (1.5m) vertically, nor double stack pallets. Cartons should be stored on pallets and covered to prevent water damage. For best results, barrier should be stored 50-75°F prior to application.

LIMITATIONS

Polyguard’s TERM Barrier has been extensively tested, both in the laboratory and in long term field trials at multiple sites, against *Reticulitermes flavipes* and *Coptotermes formosanus* subterranean termites, which are the most voracious insects in the United States in terms of property damage. Polyguard’s TERM Barrier System products are part of an Integrated Pest Management (IPM) program and where local regulations require, may be used to supplement termiticide applications.

There are numerous other termite species, not known to be present in the United States, which are equally or more voracious than the U.S. species which were tested. Limited testing outside of the United States has been done or is in progress. Contact Polyguard for up to date information about non-domestic testing.

The information in this data sheet is designed to be helpful to the reader. It is based on experience and information considered to be accurate and true. Readers should carefully consider and verify the information with investigation of any areas with uncertainty. Polyguard does not warrant the results to be obtained. Additionally, please read everything here in conjunction with Polyguard’s conditions of sale, which are applicable to everything supplied by us. No statement here is intended for any use which would infringe any patent or copyright.

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