

## TERM® Underslab Water|Termite Barrier



International Code Council  
Termite Barrier System  
Report ESR-3632

[Link to ICC ESR-3632](#)

### Product Data Sheet

U. S. Patent No. 7,488,523 and 7,686,903  
EPA Establishment No. 89537-TX-1

#### DESCRIPTION

TERM® Underslab Water|Termite Barrier is a strong sheet barrier with 8.5 mils high strength cross-laminated polyethylene backing topped with a 69-mil thick layer of TERM barrier sealant integrated into a high strength non-woven geotextile fabric. Total membrane thickness is factory controlled at 95 mils.

On the fabric side, a 4" wide lap of waterproofing adhesive compound is left exposed along one edge with a removable silicone coated release sheet. This adhesive is exposed just prior to the installation of the adjacent roll, which creates a 4" wide self-adhesive overlap seam.

#### 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 Underslab Water|Termite Barrier is non-chemical. It is classified by the EPA as a device, and not as a pesticide.



Visitors' Center, Texas

#### 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 Underslab Water|Termite Barrier is a strong sheet barrier with a high strength cross-laminated polyethylene backing topped with a 69-mil thick layer of TERM barrier sealant integrated into a high strength non-woven geotextile fabric.

TERM Underslab Water|Termite Barrier is formulated for low temperature application down to 30°F (-1°C). Standard roll size is 50' x 48' (1.27m x 14.63m).

Polyguard 650 LT 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.

TERM Water|Termite/Sealant Barrier is a formulation which is suitable for sealing slab penetrations. Installation quality and cost will be used if Polyguard FastPitch™, a field formed flexible rim for containment of sealant around penetrations, is used.

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 insures 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 formulated to be compatible with the Polyguard TERM barrier sealant.

#### 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 stand-point of flash point.

Prohibit flames, sparks, welding and smoking during application.

Refer to product label for handling, using and storage precautions.

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

Level, tamp or roll granular base prior to application of *TERM Underslab Water/Termite Barrier*. Sub-base compaction should be accomplished per project specifications. Surface debris such as rocks, trash, concrete chunks, roots, sticks, etc. must be removed. The membrane should never be placed in standing water. Base must be dry prior to application.

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

### TERM Underslab Water/Termite Barrier Application

Place the *TERM Underslab Water/Termite Barrier* with the polyethylene backing toward the soil and the fabric side is facing up to receive the concrete. The barrier should be placed with the longest dimension parallel with the direction of concrete pour. *TERM Underslab Water/Termite Barrier* should be lapped over the concrete footings and slab perimeter/grade beams to insure a tight bond with the concrete pour. Once the *TERM Underslab Water/Termite Barrier* has been installed, all penetrations should be sealed.

**Side Laps** If any lap areas become dirty during construction remove all debris and/or dust from the polyethylene backing. Clean the backing with 30% isopropyl alcohol prior to exposing the 4" self-adhesive seam. Remove the 4" wide silicone treated release sheet and align the adjacent roll for seaming. Once the lap is secured, roll with a min. 75 lb. linoleum roller to obtain full adhesion.

**End Laps** *Underslab Barrier* overlap must be 4". Center a 12" wide piece of *UNDERSEAL FABRIC TAPE* over the seam, extend a minimum 6" on each side of lap in a heavy coat 150 - 200 sq. ft. per gallon (13.93 - 18.58 M<sup>2</sup>) of tacky 650 LT Liquid Adhesive. Note that 650 WB or Shur-Tac Water Base Liquid Adhesives are not usable for this detail. Apply even pressure with the linoleum roller to obtain full adhesion.

**Patching** Take precautions to protect the *TERM Underslab Water/Termite Barrier* during placement of reinforcing steel and concrete. Visually inspect the barrier prior to pouring of concrete for any punctures or damage to barrier which needs to be repaired.

Patch damaged areas using *Underseal Fabric Tape* installed over 650 LT Liquid Adhesive at coverage rate of 150 - 200 sq. ft. per gallon (13.93 - 18.58 M<sup>2</sup>) to the damaged *Underslab Barrier*. Patches must extend a minimum of 6" in all directions from the damaged area. All patches must be rolled with a hand roller or linoleum roller to insure proper adhesion and seal. Repaired areas must be sealed around the edges with *Detail Sealant*.



Sealing the footer

### Sealing Penetrations

Once the *TERM Underslab Water/Termite Barrier* has been installed, all penetrations must be sealed as follows:

1. Prepare all penetrations for application of *TERM Water/Termite/Sealant Barrier* by:
  - a. Any sleeves on penetrations should be removed from the portion of the penetration where the pourable sealant is to be placed (minimum 2" high).
  - b. Prepare surface of penetrations with wire brush or sand.
2. Measure the length of *Polyguard FastPitch™* which will be needed to create a pitch pocket around the penetration or penetration cluster which is to be sealed. The *FastPitch™* rim should be long enough to allow a minimum of 2" space between the penetration and the rim. Also, the rim should be a minimum of 2" away from any exposed edge of the *TERM Underslab Water/Termite Barrier*.
3. Cut a length of *FastPitch™* to the length determined in step 1 plus 3" for overlap of the ends.
4. Apply a coating of 650 LT Liquid Adhesive along the line where you plan to apply the *FastPitch™* rim. Allow to cure until the adhesive is tacky.
5. Install the *FastPitch™* rim:
  - a. Set *FastPitch™* down in the approximate installation area.
  - b. At the point where the ends of the *FastPitch™* come together, remove 3" of release liner from the end of the *FastPitch™*. This will expose the adhesive face.
  - c. The adhesive face on one end of the *FastPitch™* which has been exposed should be adhered to the back side of the other end. Press to seal firmly.
  - d. Now make final adjustments to the ring or oval shape of the *FastPitch™* rim, making sure to allow the minimum required 2" spacing from anywhere where there is a penetration or an edge of the *TERM Underslab*

**Water/Termite Barrier.** When the rim is aligned at the proper space, press down on the 2" vertical rim against the surface of the *TERM Underslab Water/Termite Barrier* which has been coated with the *650 LT Liquid Adhesive*.

- e. Once the *FastPitch™* rim has been fully adhered in place around the prepared penetration(s) apply *TERM Pourable Penetration Barrier* at all penetrations extending a minimum of 2" onto Underslab barrier membrane, and 2" in depth. The depth of the sealant must completely fill the *FastPitch™* rim with no areas below the top edge of the rim.



**Gas Vapor Protection** For full gas vapor protection all pipes must be wrapped using the *TERM UVR Barrier Tape* and secured to the pipe with a screw clamp.

**Rebar Chairs** Steel reinforcement may be applied directly over the *TERM Underslab Water/Termite Barrier*. It is important that reinforcement (rebar) chairs are compatible with the system. Compatible rebar chairs will distribute the load of the steel reinforcement sufficiently to reduce the risk of the chair puncturing the barrier when fully loaded with the weight of the reinforcement steel and other common auxiliary loads.



**PHYSICAL PROPERTIES**

Typical Properties of TERM® Underslab Water   Termite Barrier			
Property	Test Method	English	Metric
Color	--	Red / white logo	Red / white logo
Barrier Thickness	ASTM D 1000 inch (mm)	.095	2.41
Long Term Testing against Termite Penetration	ICC AC 380 Acceptance Criteria for Termite Physical Barriers	ICC ESR compliance <a href="#">ICC ESR-3632</a>	ICC ESR compliance <a href="#">ICC ESR-3632</a>
Barrier Puncture Resistance	ASTM E 154 (Blunt Instrument) lb / (N)	224	996
Barrier Puncture Resistance	ASTM D 1709	Note 1	Note 1
Elongation of Barrier Sealant – % Stretch Before Failure	ASTM D 412	> 1000%	> 1000%
Resistance to Radioactive Radon Gas	Radon Reduction Technology Laboratory % reduction in radon gas diffusion	97.1%	97.1%
Pesticide Repellency ( <i>Chlorodane, fipronil, permethrin</i> )	ASTM F 2130 (percentage penetration)	0%	0%
Permeance to Moisture / Water Vapor	ASTM E 96-B Grains/ft2/hr/in HGF( <i>grains/hr/m2</i> )	.03	.02
Breaking Strength - 1" wide Polyethylene Film Layer	ASTM D 882 PSI ( <i>N/mm<sup>2</sup></i> )	5700 PSI	39.3 <i>N/mm<sup>2</sup></i>
Tensile Strength - 1" wide Polypropylene Geotextile layer	ASTM D 4632	80.0 lb	36.3 kg
Peel Adhesion to Concrete	ASTM D 903	20.0 lb/in. width	3.4 <i>N/mm</i>
Overlap Bond to Self	ASTM D 1000lb/in width / ( <i>N/mm</i> )	8.0	1.4
Low Temperature Flexibility	ASTM D 146 180° bend over 1" mandrel at -15°F(-26°C)	No cracking or delamination	No cracking or delamination
Water Absorption	ASTM D 570	0.1%	0.1%
Resistance to Hydrostatic Head	ASTM D 5385ft / M	231	70.4
Exposure to Fungi in Soil	GSA-PBS 07115 16 weeks	No effect	No effect

Note 1: The capacity of ASTM D 1709 Puncture Test machine is 9.14 lb. (4145 grams). TERM Underslab exceeded the capacity of the testing machine. ASTM E 154 is a meaningful measure of puncture resistance. ASTM E 154 puncture results are 224 lb. (101,604 grams)

**PACKAGING INFORMATION**

Packaging Information TERM® Underslab Water   Termite Barrier				
Product	Unit of Measure	Approx. Coverage	Lbs. / Unit	Pallet
TERM Underslab Water   Termite Barrier - 50" x 48' (1.27 m x 14.63 m).	Carton (1 roll)	200 ft2	80	22 cartons
Underseal Fabric Tape - 12" x 200' (.31 m x 60.9 m)	Carton (1 roll)	200 ft2	70	24 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 Detail Sealant	Carton with 12 30 oz. tubes	1/8" bead – 293 lf/tube 1/4" bead – 73 lf/tube 3/8" bead – 30 lf/tube	32 lb.	25 Cartons

### **Inspection and Repairs**

Visually inspect barrier for tears, punctures, "fishmouths", or other gaps, prior to the concrete pour. Repair by removing all damaged barrier so that only well bonded barrier remains. Reprime 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. Care should be taken to obtain good adhesion between barrier used for repairs and originally applied barrier.

Slit all "fishmouths", overlap the pieces, place patch over area, roll or press in place. Seal edges with *650 Mastic*.

**Ultraviolet Protection** *TERM Underslab 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.

**Material Storage** Unload and store barrier and accessories carefully. Protect cartons and containers 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. Store cartons on pallets and cover 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 can be said to be the most voracious insects in the United States measured in terms of property damage.

There are 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. A limited amount of 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.

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Purchaser is responsible for complying with all applicable federal, state, or local laws and regulations covering use of the product including waste disposal.

Contact *Polyguard Products, Inc.* for further information.