

## TERM® Foundation Barrier

EPA Establishment No. 89537-TX-1

### Product Data Sheet

#### DESCRIPTION

*TERM Foundation Barrier* is a “peel and stick” barrier membrane used on concrete or ICF (Insulated Concrete Form) foundation walls in instances where both waterproofing and termite exclusion is desired.

#### ADVANTAGES

*TERM Foundation Barrier* is a non-structural barrier which when properly constructed as part of the building envelope, acts as a barrier to **T**ermites and other insects, **E**nergy leaks, radioactive **R**adon gas, and **M**oisture. Documentation of these attributes can be found at [www.polyguardbarriers.com/techref.htm](http://www.polyguardbarriers.com/techref.htm).

#### DESCRIPTION OF COMPONENTS

*TERM Foundation 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.

*TERM Foundation Barrier* is formulated for low temperature application down to 30°F (-1°C) *TERM Foundation 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).

*Polyguard650 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.

*Polyguard Shur-Tac 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* 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

There are several ways in which LEED credits might be earned by incorporating *TERM Barrier System* components into the structure.

- Increasingly, LEED has incorporated Integrated Pest Management (IPM) into standards. LEED calls for IPM protocols in order to “*minimize pest problems and exposure to pesticides*”. A key IPM element is; “*Nonchemical pest preventative measures.....designed into the structure...*”. *TERM Barriers* are nonchemical pest preventative measures.
- LEED rating systems for homes incorporate (SSC5) *Non-toxic pest control*”. Two components found in the *TERM Barrier System* are mentioned; they are steel mesh and sand barriers. Both are used as termite barriers.
- Incorporation of *TERM Sealant Barriers* into the building envelope should be a strong candidate for Innovation credit.
- Finally, if the project site is former agriculture land with residual pesticide contamination, *TERM Barriers* may qualify under LEED IAQ Credit 5 - Indoor Chemical and Pollutant Source Control (below grade toxin barrier) or SS3 - Brownfield redevelopment.



Maui, HI



Used since 2002 to protect below grade ICF from subterranean termites  
Verdi, CA

## 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 Material Safety Data Sheet (MSDS) before use. MSDS sheets can be obtained at our website [www.polyguardproducts.com](http://www.polyguardproducts.com). Call *Polyguard* at 214-515-5000 if you have any questions.

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.

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

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.

### Priming

Priming can be done using *Shur-Tac 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 MSDS.

Stir *Liquid Adhesive* before use. *Liquid Adhesive* should be applied over the entire surface at a rate of 250-350 square feet, per gallon (6-8.5 m<sup>2</sup>/l). Primed surfaces must be re-primed if barrier is not applied to the *Liquid Adhesive* within the same working day. Use brush or lambs wool roller for application. *Shur-Tac 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.

### 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.

Pre-treat 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*.

### Sheet Barrier Application

*TERM Foundation 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 Foundation 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 Foundation Barrier* should be applied over the edge of the footing at the foundation base.

The upper terminating edge of *TERM Foundation 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*.

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 Foundation 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 application.

All intersections must be reinforced, including footings as well as projections, such as drains, pipe, conduit, etc.

### 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

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 650 Mastic.

### 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.

### Flashing

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

### Ultraviolet Protection

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

TERM Foundation 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 Protection

Protection from punctures and other damage is required over TERM Foundation Barrier. Polyflow 15P Drainage/Protection Mat, which is strongly recommended in termite barrier applications, has built in puncture protection which is adequate for vertical surfaces. 1/8" (3 mm) Asphalt Protection Board should be used to protect barrier on horizontal surfaces subject to normal construction traffic. 1/4" (6 mm) Asphalt Protection Board should be used to protect the barrier on horizontal surfaces subject to heavy construction traffic. Protection board systems are to be applied according to the manufacturer's application and guide specifications.

## PACKAGING INFORMATION

Product	Unit of Measure	Approximate Coverage	Weight / Unit	Palletization
TERM Foundation Barrier 39.4" x 61' (1.0 m x 18.6 m).	Carton (1 roll)	200 ft <sup>2</sup>	75	30 cartons
Polyguard Shur-Tac Water Base Liquid Adhesive	5 Gal Pail or 4-1 Gal Pail	250 – 350 ft <sup>2</sup> /gallon	50 lb. 37 lb.	36 Pails 54 Cartons
Polyguard 650 LT Liquid Adhesive	5 Gal Pail or 4-1 Gal Pail	250 – 350 ft <sup>2</sup> /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
Polyguard 650 Mastic	5 Gal Pail or Ctn with 12 30 oz. tubes	1/2" bead 65 LF/tube 1" bead 100 LF/gallon	48 lb./Pail	36 Pails 25 Cartons

## PHYSICAL PROPERTIES

Typical Properties of TERM Foundation 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 <a href="http://www.polyguardbarriers.com/techref.htm">www.polyguardbarriers.com/techref.htm</a>	ASTM D1758-06 Texas A&M 4 Sites over 5 years vs. controls	100% effective	100% effective
Elongation of Barrier Sealant – Percent 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 (Chlorodane, fipronil, permethrin)	ASTM F 2130	0%	0%
Permeance to Moisture / Water Vapor	ASTM E 96-B Grains/ft <sup>2</sup> /hr/in HGF (grains/hr/m <sup>2</sup> )	.03	.02
Tensile Strength – Film Backing	ASTM D 882 PSI / (N/mm <sup>2</sup> )	6500	44.82
Tensile Strength – Barrier Composite	ASTM D 412(Modified Die C)PSI / (N/mm <sup>2</sup> )	325	2.24
Peel Adhesion	ASTM D 1000lb/in width / (N/mm)	10.0	1.75
Overlap Bond	ASTM D 1000lb/in width / (N/mm)	8.0	1.4
Low Temperature Flexibility	ASTM D 146 180° bend over 1" mandral 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
Exposure to Fungi in Soil	GSA-PBS 07115 16 weeks	No effect	No effect

Barrier left exposed on top of foundation walls or parapets should be covered with weather resistant flashing

**Drainage Mat:** *Polyflow 15-P Drainage Protection/Drainage Mat* with built in protection for vertical surfaces is used to expedite water dispersion. This will help keep the structure dry, as well as making 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 a 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.

**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 can be said to be the most voracious insects in the United States measured in terms of property damage.

There are a number of 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. 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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