polyguard

TERM™ BARRIER

SECTION 07280 (07 28 00)

FLASHING AND SEALING FRAMING WITH NON-CHEMICAL MOISTURE AND TERMITE BARRIERS

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** NOTE TO SPECIFIER ** TERM Waterproofing and Termite Barriers; Waterproofing + Physical Termite Barriers.

This section is based on the products of TERM Waterproofing and Termite Barriers, which is located at:

4101 South Interstate 45 Highway
Ennis, TX 75119
Phone: 214-515-5000
Fax: 972-875-9425
Email: info@polyguardproducts.com
Web: http://www.polyguardproducts.com/term

[Click Here] for additional information.
Polyguard's history began with corrosion protective coatings in 1951, In 1970 structural waterproofing was added.

Now we add TERM non-chemical termite barrier which is integrated into waterproofing. This results from 20+ years of work with entomology scientists.

Water and termites “leak" into the structure through the building envelope. Around most of the envelope, both types of leaks can now be stopped.

Concrete floors and walls have joints; through which water and termites enter. Concrete slabs crack, creating new entry points. It cannot be predicted where cracks will appear in the slab, so full protection should include 100% underslab and foundation wall coverage with TERM® Barriers.

The objective is first to block water, and second to block termites trying to find gaps as small as 1/50th of an inch. Since keeping termites out means keeping virtually all other insects out, you will see a variety of health, comfort, and environmental benefits.

Above the slab, TERM Sill Barrier is installed and tied into flashing at the base of the exterior sheathing, providing protection from moisture, termite, and air leaks.

Several non-waterproofing TERM barriers, which protect against termites at points of drainage, ventilation, and exposed perimeters, are also part of the TERM System. These protect areas where TERM Barrier waterproofing cannot be installed.

PART 1 GENERAL

1.1 SECTION INCLUDES

** NOTE TO SPECIFIER ** Delete items below not required for project.

A. Section Includes:
   1. Sill moisture | termite barrier under wood or steel sills placed on concrete at building perimeter.
   2. Sill moisture | termite barrier under wood or steel sills placed on interior of building.
   3. Flashing barrier at juncture of horizontal concrete and exterior wall sheathing.
   4. Seam and window barrier over joints in exterior wall sheathing and as exterior window flashing.

1.2 RELATED SECTIONS

** NOTE TO SPECIFIER ** Delete any sections below not relevant to this project; add others as required.

A. Division 01: Administrative, procedural, and temporary work requirements.

B. Section 03 30 00 - Cast-in-Place Concrete.

C. Section 07 21 00 – Thermal Insulation.

D. Section 07 60 00 – Flashing and Sheet Metal.

E. Section 07 92 00 – Joint Sealants.

F. Section 31 31 16 - Pest Control Barriers.

1.3 REFERENCES

** NOTE TO SPECIFIER ** Delete references from the list below that are not actually required by the text of the edited section.

A. International Code Council (ICC):
   1. AC 380 - Acceptance Criteria for Termite Physical Barriers – Evaluation Report demonstrating five year multi-site field trial against Formosan termites, with zero failures, plus other criteria.

B. ASTM International (ASTM):
   1. D146/D146M - Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing.
   2. D412 - Standard Specification for Vulcanized Rubber and Thermoplastic Rubbers and Thermoplastic Elastomers - Tension.
   3. D570 - Standard Test Method for Water Absorption of Plastics.
   4. D882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
   5. D1000 - Standard Test Methods for Pressure-Sensitive Adhesive-Coated Tapes Used for Electrical and Electronic Applications.
   6. E96/E96M - Standard Test Method for Water Vapor Transmission of Materials.
   7. E154 - Standard Test Method for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.
   8. F2130 - Standard Test Method for Measuring Repellency, Retention, and Penetration of Liquid Pesticide Formulation Through Protective Clothing Materials.

1.4 SUBMITTALS

A. Submit under provisions of Section 01300.

B. Product Data:
   1. Manufacturer's data sheets on each product to be used.
   2. Preparation instructions and recommendations.

3. Storage and handling requirements and recommendations.
4. Typical installation methods.
5. Include certification of data indicating VOC (Volatile Organic Compound) content of all components of waterproofing system.

Include the following for submission of sustainable design submittals.

C. Proof of long term termite resistance. Submit a copy of ICC ESR Evaluation Report showing compliance with AC 380 – International Code Council - Acceptance Criteria for Termite Physical Barriers demonstrating five year multi-site controlled field trial against Formosan termites with zero failures, plus other criteria.

** NOTE TO SPECIFIER ** Delete if not applicable to product type.

D. Verification Samples: Two representative units of each type, size, pattern, and color.

E. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.

Include the following for submission of sustainable design submittals

F. Sustainable Design Submittals: LEED v4:

1. EA perquisite and credit – Energy Performance.

Indicate how this material can improve energy conservation.

2. MR credit - Regional Materials and Recycling content:

Indicate percentage of materials recycled pre-consumer.

Indicate percentage of materials recycled post-consumer.

Indicate percentage of materials sourced within 100 miles of the manufacturing facility.

3. MR credit – Building Product Disclosure and Optimization:

Indicate whether the building product(s) have published a complete Health Product Declaration (HPD) with full disclosure of known hazards to at least 0.1% (1000 ppm) in compliance with the Health Product Declaration Open Standard addressing all components of the system.

4. EA perquisite and credit – Energy Performance:

Indicate how this material can improve energy conservation.

5. MR credit: Construction and Demolition Waste Management:

Indicate what portion of the building product is recyclable in areas where there is a facility to recycle.

For each recyclable material listed in 5.a above, list its weight.

6. EQ credit – Low Emitting Materials:

For each building product material used on the interior of the structure, and applied on site, list the VOC content and where the material is applied.

For each building product material used on the exterior of the structure, and applied on site, list the VOC content and where the material is applied.

7. IN credit - Innovation – Interior Wellness and Comfort:

Provide test results documenting ability of product to physically block termite access into.

structure, thus reducing the usage of pesticides.

Provide details of why the product can increase long term comfort or interior wellness of the building occupants.

8. IN credit – Innovation - Indoor Integrated Pest Management:
LEED v4 standards call out the implementation of IPM (Integrated Pest Management). Typical LEED wording in IPM guidelines is “Nonchemical pest preventive measures, either designed into the structure or implemented as part of pest management activities.” Describe the areas of the building envelope where this building product will provide protection against entry of insects.

9. LEED v4 for Homes – SS credit - Nontoxic Pest Control - Pest Control Alternatives:
Provide documentation of the ability of product to physically block termite or other pest access into structure.

10. LEED v4 for Homes – EA credit – Air Infiltration:
Provide details of how the building product will reduce air infiltration to the structure.

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with a minimum five years documented experience.
   1. Manufacturer’s Representative:
      a. Arrange to have trained representative of the manufacturer on site periodically to review installation procedures.
      b. Will assist with construction of any mockups required by the Architect.
      c. Will represent the Manufacturer at the preconstruction conference.

B. Installer Qualifications: Trained by manufacturer in proper installation of products.

C. Source Limitations: Provide each type of product from a single manufacturing source to ensure uniformity.

** NOTE TO SPECIFIER ** Include mock-up if the project size or quality warrant the expense. The following is one example of how a mock-up on might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

D. Mock-Up: Construct a mock-up with actual materials in sufficient time for Architect’s review and to not delay construction progress. Locate mock-up as acceptable to Architect and provide temporary foundations and support.
   1. Intent of mock-up is to demonstrate quality of workmanship and visual appearance.
   2. If mock-up is not acceptable, rebuild mock-up until satisfactory results are achieved.
   3. Retain mock-up during construction as a standard for comparison with completed work.
   4. Do not alter or remove mock-up until work is completed or removal is authorized.

1.6 PRE-INSTALLATION CONFERENCE

A. Convene a conference approximately two weeks before scheduled commencement of the Work. Attendees shall include Architect, Manufacturer’s Representative, Contractor, and trades involved. Agenda shall include schedule, responsibilities, critical path items, approvals, and to establish procedures and to review conditions, installation procedures and coordination with other related work. Review the details and waterproofing specifications.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.

B. Store materials in a clean, dry area in accordance with manufacturer's instructions.

C. Store adhesives at temperatures of 40 degrees F (5 degrees C) and above to facilitate handling.

D. Store barrier cartons on pallets.

E. Do not store at temperatures above 90 degrees F (32 degrees C) for extended periods.

F. Keep away from sparks and flames.

G. Completely cover when stored outside. Protect from rain.

H. Protect materials during handling and application to prevent damage or contamination.

I. Avoid use of products which contain tars, solvents, pitches, polysulfide polymers, or PVC materials that may come into contact with waterproofing and insect barrier system.

1.8 PROJECT CONDITIONS

A. Do not install barriers unless ambient and surface temperatures are above 30 degrees F (0 degrees C) and rising, and surface is dry.

B. Do not leave barriers exposed to ultraviolet light for longer than 30 days.

C. Maintain work area in a neat and workmanlike condition. Remove empty cartons and rubbish from the site daily.

1.9 WARRANTY

A. Product will be replaced at no charge if proved to be defective within 12 months of purchase, provided it has been applied in accordance with manufacturer written directions for uses recommended as suitable for this product. Proof of purchase must be provided. A five (5) year material or system warranty may be available upon request. Contact Polyguard Products, Inc. for further details.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: TERM Waterproofing and Termite Barriers, which is located at:3801 South Interstate 45 Highway; Ennis, TX 75119 South Interstate 45 Highway; Ennis, TX 75119; Phone: 214-515-5000; Fax: 972-875-9425; Email: info@polyguardproducts.com; Web: http://www.polyguardproducts.com/term.

** NOTE TO SPECIFIER ** Delete one of the following two paragraphs; coordinate with requirements of Division 1 section on product options and substitutions.

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 PERFORMANCE REQUIREMENTS

A. Physical Properties: Applies to all non-accessory products in this specification.
1. Long Term Termite Penetration Resistance: Submit International Code Council (ICC) ESR Evaluation Report showing compliance with ICC AC380 Acceptance Criteria for Termite Physical Barrier Systems.

2. Elongation of Sealant Tested to ASTM D412: 500 percent.
3. Tensile Strength, Film Backing Tested to ASTM D882: 6500 psi.
4. Tensile Strength, Barrier composite Tested to ASTM D412 using modified Die C: 325 psi.
5. Peel Adhesion Tested to ASTM D903: 17.0 lbs per inch width.
6. Overlap Bond Tested to ASTM D1876: 8.0 lbs per inch width.
7. Water Vapor Permeance Tested to ASTM E96/E96M, Method B: Maximum 0.035 grains per sq ft per hr.
8. Water Absorption Tested to ASTM D570: 0.1 percent maximum.
9. Low Temperature Flexibility Tested to ASTM D146/D146M, 180 degrees over 1 inch mandrel at minus 25 degrees F: No cracking or delamination,
10. Puncture resistance tested to ASTM E154: 50 lbs.
11. Pesticide repellency; chlordane, fipronil, and permethrin tested to ASTM F2130: 0 percent penetration.

** NOTE TO SPECIFIER ** Delete article not required.

2.3 FLASHING; MOISTURE AND TERMITE BARRIER

A. Product: TERM Flashing Moisture and Termite Barrier. A high density polyethylene film bonded to 36 mils (0.91 mm) of barrier sealant, minimum 12 inches (305 mm) wide.

2.4 SILL; MOISTURE AND TERMITE BARRIER

A. Product: TERM Sill Moisture and Termite Barrier. A high density polyethylene film bonded to 68 mils (1.73 mm) of barrier sealant.

Edit the following to indicate desired width, which should be of a correctly calculated width. Anywhere from 3.5 to 15.5 inches (89 to 394 mm)

1. Width: ___ inches (___ mm); to be determined using manufacturer's instructions.

2.5 SEAM AND WINDOW; MOISTURE, TERMITE, AND AIR BARRIER

A. Product: TERM Seam and Window Moisture, Termite, and Air Barrier. A high density polyethylene film bonded to 36 mils (0.91 mm) of barrier sealant, 12 inches (305 mm) wide.

Edit the following to indicate desired width.

1. Width: 4 inches (102 mm).
2. Width: 6 inches (152 mm).
3. Width: 9 inches (229 mm).

2.6 ACCESSORIES

In the following paragraph select Polyguard 650 LT for standard installations.

A. Liquid Adhesive:
1. Polyguard 650 LT.
2. Polyguard 650 WB Water base Liquid Adhesive.
3. Polyguard 343 Spray adhesive.

B. Barrier Sealant: TERM Termite Sealant

C. Mastic: Polyguard 650 Mastic.

D. Detail Sealant: Polyguard Detail Sealant; solvent free, non-isocyanates adhesive sealant, low VOC, and HAPS free.

PART 3 EXECUTION

3.1 EXAMINATION

A. Do not begin installation until substrates have been properly constructed and prepared.

B. If substrate preparation is the responsibility of another installer, notify Architect in writing of unsatisfactory preparation before proceeding.

3.2 PREPARATION

A. Clean surfaces thoroughly prior to installation.

B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION OF SILL MOISTURE AND TERMITE BARRIER

A. Exterior Perimeter of Structure:
1. Install in accordance with manufacturer's instructions.
2. Pre-order correct width of sill barrier for perimeter.
3. Width of Barrier: Sill Width + (2 x Sill Height) + (2 inch (51 mm) onto concrete)
4. If flooring underlayment with moisture and termite barrier is specified on the interior of the perimeter sill, add 1 inch (25 mm) for extension onto horizontal concrete.
5. Prime the concrete using primer recommended by Manufacturer.
6. Cut barrier to required length.
7. Place barrier on concrete, beginning 1/4 inch (6 mm) before beginning of sill plate.
8. Peel away one end of release sheet 1/2 to 1 inch (13 to 25 mm), exposing face of adhesive.
9. Adhere barrier to concrete at one end where sill plate will be positioned, leaving 1/4 inch (6 mm) of adhesive past end of sill plate. Keep barrier exactly in line with location of sill plate.
10. Continue to peel away release sheet, adhering several inches of barrier at a time. If barrier is out of line with sill plate, cut off and restart to place barrier in line.
11. When barrier is positioned properly, peel away remainder of release liner and press barrier down against concrete.
12. Apply a 3/4 inch (19 mm) face bead of termite sealant around all penetrations and at gaps.

B. Interior of Structure:
1. Install in accordance with manufacturer's instructions.
2. Use correct width of sill barrier.
3. Width of Barrier: Width of the sill, plus 1 inch (25 mm) for each side of the sill where flooring underlayment will be installed.
4. Prime the concrete using water base primer recommended by Manufacturer.
5. Cut barrier to required length.
6. Place barrier on concrete, beginning 1/4 inch (6 mm) before beginning of sill plate.
7. Peel away one end of release sheet 1/2 to 1 inch (13 to 25 mm), exposing face of adhesive.
8. Adhere barrier to concrete at one end where sill plate will be positioned, leaving 1/4 inch (6 mm) of adhesive past end of sill plate. Keep barrier exactly in line with location of sill plate.
9. Without peeling away additional release sheet, place barrier along full length of sill plate location. Leave 1 inch (25 mm) exposed in rooms where flooring underlayment with moisture | termite barrier is being installed.
10. If barrier is out of line with sill plate, cut off and restart to place barrier in line.
11. When barrier is positioned properly, peel away remainder of release liner and press barrier down against concrete.

3.4 INSTALLATION, FLASHING BARRIER

A. Install in accordance with manufacturer's instructions.

B. Apply liquid adhesive to surfaces to receive flashing barrier at 250 to 300 sq ft per gal.

C. Cut pieces of flashing to length as needed and apply to substrate once liquid adhesive has become tacky.

D. Place flashings with horizontal portion, tied into sill barrier and extending no closer than 1/2 inch (13 mm) from outside edge of horizontal surface.

E. Overlap adjacent sheets 2 inches (51 mm) minimum. Lap end joints 2 inches (51 mm) minimum.

F. Weatherlap flashings on vertical surfaces.

G. Roll flashings firmly into place using hand roller.

H. Apply mastic or detail sealant to horizontal terminating edges on walls, pipes, and other protrusions.

3.5 INSTALLATION, SEAM, AND WINDOW BARRIER

A. Install in accordance with manufacturer's instructions.

B. Apply liquid adhesive to surfaces to receive seam and window barrier at 250 to 300 sq ft per gal.

C. Cut pieces of seam and window barrier to length as needed and apply to substrate 30 to 60 minutes after liquid adhesive has been applied.

D. Sheathing Joints:
1. Start application at bottom of wall and work up; weather lap joints.
2. Center seam and window barrier over joints.

E. Windows:
1. Ensure that sheathing seams intersecting bottom of window are sealed before window is flashed.
2. Do not tape seams above window until window flashing is completed.
3. Install horizontal strip on sill.
4. Set window frame.
5. Adhere vertical strips to jamb flanges and sheathing.
6. Adhere horizontal strip to straight head flange and sheathing.

F. Lap end joints 2 inches (51 mm) minimum.

G. Roll barrier firmly into place using hand roller.

3.6 FIELD QUALITY CONTROL

A. Field Inspection: Coordinate field inspection in accordance with appropriate sections in Division 01.

** NOTE TO SPECIFIER ** Include if manufacturer provides field quality control with onsite personnel for instruction or supervision of product installation, application, erection, or construction. Delete if not required.

B. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.

3.7 CLEANING AND PROTECTION

A. Clean products in accordance with the manufacturers recommendations.

B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION