

SECTION 072800

FLASHING AND SEALING FRAMING WITH NON-CHEMICAL TERMITE BARRIERS

This section includes editing notes to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by one of the following methods:

Microsoft Word 2016, 2013, and 2010: Display the FILE tab on the ribbon, click OPTIONS, then select DISPLAY. Select or deselect HIDDEN TEXT.

Corel WordPerfect: From the pull-down menus select VIEW, then select or deselect the HIDDEN TEXT option.

PART 1 GENERAL

1.1 SUMMARY

A. Section Includes:

1. Sill moisture | termite barrier under wood sills placed on concrete at building perimeter.
2. Sill moisture | termite barrier under wood 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.

B. Related Sections:

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

1.2 REFERENCES

A. 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.

B. ICC AC 380 - Acceptance Criteria for Termite Physical Barriers.

1.3 SUBMITTALS

A. Submittals for Review:

1. Product Data: Manufacturer's product description and application instructions.

B. Sustainable Design Submittals: LEED v4

1. EA prerequisite and credit – Energy Performance
 - a. Indicate how this material can improve energy conservation

2. MR credit - Regional Materials and Recycling content:
 - a. Indicate percentage of materials recycled pre-consumer
 - b. Indicate percentage of materials recycled post-consumer
 - c. Indicate percentage of materials sourced within 100 miles of the manufacturing facility

3. MR credit – Building Product Disclosure and Optimization
 - a. 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 prerequisite and credit – Energy Performance
 - a. Indicate how this material can improve energy conservation.

5. MR credit: Construction and Demolition Waste Management
 - a. Indicate what portion of the building product is recyclable in areas where there is a facility to recycle.
 - b. For each recyclable material listed in 5.a above, list its weight.

6. EQ credit – Low Emitting Materials:
 - a. 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.
 - b. 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
 - a. Provide test results documenting ability of product to physically block termite access into structure, thus reducing the usage of pesticides.
 - b. 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:
 - a. 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 area(s) 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:
 - a. 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
 - a. Provide details of how the building product will reduce air infiltration to the structure.

1.4 QUALITY ASSURANCE

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

1.5 DELIVERY, STORAGE AND HANDLING

- A. Protect products from weather, sparks, flames, excessive heat, cold, and lack of ventilation.
- B. Store products on pallets, covered to prevent water damage.

- C. Store barriers between 50 and 75 degrees F prior to use.

1.6 PROJECT CONDITIONS

- A. Do not install barriers unless ambient and surface temperatures are above 30 degrees F and rising.
- B. Do not leave barriers exposed to ultraviolet light for longer than 30 days.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on products by Polyguard Products Inc., P.O. Box 755, Ennis, Texas 75120-0755, 214-515-5000, www.polyguardbarriers.com.
- B. Substitutions: [Under provisions of Division 01.] [Not permitted.]

2.2 MATERIALS

- A. Flashing Moisture | Termite Barrier:
 - 1. Product: TERM® Flashing Moisture | Termite Barrier.
 - 2. Description: 4 mil high density polyethylene film bonded to 36 mils of barrier sealant, minimum 12 inches wide.
 - 3. Physical properties:
 - a. Long term resistance to termite penetration: Submit International Code Council (ICC) ESR Evaluation Report showing compliance with ICC AC380 Standard for Termite Physical Barrier Systems.
 - b. Elongation of sealant: Minimum 1000 percent, tested to ASTM D412.
 - c. Tensile strength, film backing: 6500 PSI, tested to ASTM D882.
 - d. Tensile strength, barrier composite: 325 PSI, tested to ASTM D412 using modified Die C.
 - e. Peel adhesion: 10.0 pounds per inch width, tested to ASTM D1000.
 - f. Overlap bond: 8.0 pounds per inch width, tested to ASTM D1000.
 - g. Water vapor permeance: Maximum 0.035 grains per square foot per hour, tested to ASTM E96/E96M, Method B.
 - h. Water absorption: Maximum 0.1 percent, tested to ASTM D570.
 - i. Low temperature flexibility: No cracking or delamination, tested to ASTM D146/D146M, 180 degrees over 1 inch mandrel at minus 25 degrees F.
 - j. Puncture resistance: 50 pounds, tested to ASTM E154.
 - k. Pesticide repellency; chlorodane, fipronil, and permethrin: 0 percent penetration, tested to ASTM F2130.
- B. Sill Moisture | Termite barrier:
 - 1. Product: TERM® Sill Moisture | Termite Barrier.
 - 2. Description: Same composition and physical properties as flashing barrier except 68 mils thick.
 - 3. Width: As determined in widths [3.5] to [15.5] inches.
- C. Seam and Window Moisture | Termite | Air Barrier:
 - 1. Product: TERM Seam and Window Moisture | Termite | Air Barrier.
 - 2. Description: Same composition and physical properties as flashing barrier.
 - 3. Width: [4] [6] [9] inches.

2.3 ACCESSORIES

- A. Liquid Adhesive: [Polyguard 650 LT.] [Polyguard Shur-Tac Liquid Adhesive.] [Polyguard 343 Spray Adhesive.]
- B. Barrier Sealant: [TERM[®] Barrier Sealant]
- C. Mastic: Polyguard 650 Mastic.
- D. Detail Sealant: Polyguard Detail Sealant; solvent free, non-isocyanate adhesive sealant, low VOC and HAPS free.

PART 3 EXECUTION

3.1 INSTALLATION – SILL MOISTURE | TERMITE BARRIER - PERIMETER OF STRUCTURE

- A. Install in accordance with manufacturer's instructions
- B. Use correct width of sill barrier for perimeter
 - 1. Width of barrier should be (sill width) + (2 times sill height) + (minimum 2" onto concrete)
 - 2. If flooring underlayment with moisture | termite barrier is specified on the interior of the perimeter sill, add 1" for extension onto horizontal concrete.
- C. Prime the concrete using primer recommended by manufacturer
- D. Cut barrier to required length.
- E. Place barrier on concrete, beginning 1/4 inch before beginning of sill plate.
- F. Peel away one end of release sheet 1/2 to 1 inch, exposing face of adhesive.
- G. Adhere barrier to concrete at one end where sill plate will be positioned, leaving 1/4 inch of adhesive past end of sill plate. Keep barrier exactly in line with location of sill plate.
- H. 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.
- I. When barrier is positioned properly, peel away remainder of release liner and press barrier down against concrete.
- K. Apply a 1/2" bead of water | termite sealant barrier around all penetrations and at gaps.

3.3 INSTALLATION – SILL MOISTURE | TERMITE BARRIER – INTERIOR OF STRUCTURE

- A. Install in accordance with manufacturer's instructions.
- B. Use correct width of sill barrier.
 - 1. Width of barrier should be the width of the sill, plus 1" for each side of the sill where flooring underlayment will be installed.
- C. Cut barrier to required length.
- D. Place barrier on concrete, beginning 1/4 inch before beginning of sill plate.
- E. Peel away one end of release sheet 1/2 to 1 inch, exposing face of adhesive.
- F. Adhere barrier to concrete at one end where sill plate will be positioned, leaving 1/4 inch of adhesive past end of sill plate. Keep barrier exactly in line with location of sill plate.

- G. Without peeling away additional release sheet, place barrier along full length of sill plate location. Leave 1 inch exposed in rooms where flooring underlayment with moisture | termite barrier is being installed.
- H. If barrier is out of line with sill plate, cut off and restart to place barrier in line.
- I. 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 square feet per gallon.
- C. Cut pieces of flashing to length as needed and apply to substrate. once liquid adhesive has become tacky
- ~~D.~~ Cut pieces of flashing to length as needed and apply to substrate once liquid adhesive has become tacky.
- E. Place flashings with horizontal portion, tied into sill barrier and extending no closer than 1/2 inch from outside edge of horizontal surface.
- F. Overlap adjacent sheets 2 inches minimum. Lap end joints 2 inches minimum.
- G. Weatherlap flashings on vertical surfaces.
- H. Roll flashings firmly into place using hand roller.
- I. 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 square feet per gallon.
- 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; weatherlap joints.
 - 2. Place seam and window barrier centered 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 minimum.
- G. Roll barrier firmly into place using hand roller.

END OF SECTION