SECTION 071326

SELF-ADHERING SHEET WATERPROOFING WITH TERMITE BARRIER

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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.

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This guide specification has been prepared by Polyguard Products Inc., in printed and electronic media, as an aid to specifiers in preparing written construction documents for self-adhering sheet with waterproofing and termite barrier systems. Polyguard® TERM® Water |Termite Barrier is a strong pliable, self-adhesive sheet consisting of a 4 mil, high density, polyethylene film bonded to 64 mils of barrier sealant. Factory bonding assures uniform barrier thickness of 68 mils. Polyguard® TERM® Water | Termite Barrier is formulated for low temperature applications down to 30°F (-1°C). Polyguard® TERM® Water | Termite Barrier is wound on a disposable treated release sheet to prevent blocking in the rolls. Standard roll size is 39.4" x 61' (1.0m x 18.6m).

Edit entire master to suit project requirements. Modify or add items as necessary. Delete items which are not applicable. Words and sentences may contain a choice to be made regarding inclusion or exclusion of a particular item or statement. This section may include performance, proprietary and descriptive type specifications. Edit to avoid conflicting requirements. Editor notes to guide the specifiers are included between lines of asterisks to assist in choices to be made. Remove these notes before final printing of specification.

This guide specification is written around the Construction Specifications Institute (CSI) Section Format standards.

For specification assistance on specific product applications, please contact our offices above or any of our local product representatives throughout the country.

Polyguard Products Inc. reserves the right to modify these guide specifications at any time. Updates for this guide specification will be posted on the manufacturer's web site and/or in printed matter as they occur. Manufacturer makes no expressed or implied warranties regarding content, errors, or omissions in the information presented.

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PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation.

B. Application of self-adhering waterproofing and termite barrier system.

C. Accessory Products

1.02 RELATED SECTIONS

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Specifiers Notes: Edit the list of related sections as required for the project. List other sections dealing with work directly related to this section.

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

B. Section 33 46 00 - Subdrainage

C. Section 04 20 00 - Unit Masonry

D. Section 07 11 00 - Dampproofing

E. Section 07 60 00 - Flashing and Sheet Metal

F. Section 07 92 00 – Joint Sealants

G. Section 07 95 00 - Expansion Control

1.03 REFERENCES

A. ICC AC 380 - Standard for Acceptance Criteria for Termite Physical Barriers

B. ASTM D 146 - Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Fabrics Used in Roofing and Waterproofing.

C. ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.

D. ASTM D 570 - Standard Test Method for Water Absorption of Plastics.

E. ASTM E 96 (Method B) - Standard Test Methods for Water Vapor Transmission of Materials.

F. ASTM D 1970 - Standard Specification for Self Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection

G. ASTM D 882 – 02 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting

H. ASTM E 154 - Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.

I. ASTM D 5385 - 93(2006) Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing.

J. General Services Administration, Public Building Service: GSA-PBS-07115 Guide Specification for Elastomeric Waterproofing.

K. ASTM D 903 - Standard Test Method for Peel or Stripping Strength of Adhesive Bonds.

L. Radon Reduction Technology Laboratory – Resistance to Permeance by Radioactive Radon Gas; Resistance to Diffusion by Radioactive Radon Gas

M. ASTM F 2130 – Measuring Repellency, Retention, and Penetration of Liquid Pesticide Formulation Through Protective Clothing Materials

1.04 SUBMITTALS

A. Product Data: Submit manufacturer's product data, installation instructions, use limitations and recommendations. Include certification of data indicating VOC (Volatile Organic Compound) content of all components of barrier system.

B. Samples: Submit representative samples of the following for approval:

1. Sheet barrier
2. Protection Board
3. Prefabricated Drainage Composite
4. Perimeter Drainage Composite

C. Proof of long term termite resistance. Submit a copy of ICC ESR Evaluation Report showing compliance with ICC AC 380 – International Code Council - Acceptance Criteria for Termite Physical Barriers

D. Sustainable Design Submittals: LEED v4

1. EA perquisite 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

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4.. EA perquisite 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 product will reduce air infiltration to the structure.

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1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: Barrier System must be manufactured by a company with a minimum of 10 years of experience in the production and sales of barrier materials.

B. Applicator Qualifications: A firm having at least 3 years of experience in applying these types of specified materials and specifically accepted in writing by the barrier system manufacturer.

C. Materials: For each type of material required to complete the work of this section, provide primary materials which are the products of a single manufacturer.

D. Pre-Applicator Conference: A pre-applicator conference shall be held to establish procedures and to review conditions, installation procedures and coordination with other related work. Meeting agenda shall include review of special details and flashing.

E. Manufacturer's Representative: Arrange to have trained representative of the manufacturer on site periodically to review installation procedures.

1.06 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° F (5° C) and above to facilitate handling.

D. Store barrier cartons on pallets.

E. Do not store at temperatures above 90° F (32° 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 termite barrier system.

1.07 PROJECT CONDITIONS

A. Work should be performed only when existing and forecasted weather conditions are within the limits established by the barrier manufacturer. Barrier should only be installed when temperature is 40°F (4.44°C) and rising. Consult manufacturer for information concerning cooler temperatures.

B. Proceed with installation only when substrate construction and preparation work is complete. Ensure that subsoil is approved by architect or geotechnical firm.

C. Warn personnel against breathing of vapors and contact with skin and eyes; wear appropriate protective clothing and respiratory equipment.

D. Keep flammable products away from spark or flame. Post "No Smoking" signs. Do not allow spark producing equipment to be used during application and until all vapors have dissipated.

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

1.08 WARRANTY

A. Provide a written 10-year material warranty from the manufacturer against water and termite penetration upon completion and acceptance of the installation.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Polyguard Products Inc. P.O. Box 755 Ennis, TX 75120-0755; Phone: 214-515-5000 Fax: 972-875-9425 Email: info@polyguardproducts.com

2.02 SYSTEM MATERIALS

A. Self-adhesive Waterproofing and Termite Barrier: Shall be *Polyguard® TERM®Water | Termite Barrier*, a 68-mil rubberized asphalt barrier consisting of a high density polyethylene film bonded to a layer of rubberized asphalt meeting or exceeding the following requirements:

Required Physical Property Table			
Property	Test Method	English	*Metric*
Color	--	Pink with white printing	*Pink with white printing*
Barrier Thickness	ASTM D 1000 inch *(mm)*	.068	*1.67*
Long Term Testing against Termite Penetration	ICC AC 380 - Acceptance Criteria for Termite Physical Barriers	Furnish ICC ESR Evaluation showing compliance	*Furnish ICC ESR Evaluation showing compliance*
Elongation of Barrier Sealant – Percent Stretch Before Failure	ASTM D 412	> 500%	*> 500%*
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/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	*1.75*
Overlap Bond	ASTM D 1876 lb/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 5385 Ft / *M*	231/70.4	*70.4*
Exposure to Fungi in Soil	GSA-PBS 07115 16 weeks	No effect	*No effect*
Water Absorption	ASTM D 570	.1	*.1*

2.03 SYSTEM ACCESSORIES

A. Surface Primer Roller Grade Adhesive: do not use on ICF surfaces

1. Polyguard® 650 LT Liquid Adhesive: A rubber based adhesive in solvent solution which is specifically formulated to provide excellent adhesion with the Polyguard® TERM® Water | Termite Barrier to prime all structural concrete, masonry, or wood surfaces. Designed to be used on applications down to 30°F. (-1ºC).

2. Polyguard® California Sealant: A rubber based sealant in solvent solution which is specifically formulated to provide excellent adhesion with the Polyguard® TERM® Water | Termite Barrier. The VOC (Volatile Organic Compound) content meets the South Coast Air Quality Management District regulations established under the February 1, 1991 version of Rule 1168 ©) (2) Adhesion and Sealant Applications. Polyguard California Sealant is classified as an Architectural Sealant Primer Porous; with VOC of 521 g/L. Current SCAQMD regulations for this type sealant primer are 775 g/L.

3. Use this adhesive on ICF surfaces
Polyguard® Shur-Tac Water based Liquid Adhesive: Roller-grade, polymer emulsion based adhesive. It is used to prime all structural concrete, masonry, insulation, or wood surfaces. Designed to be used on applications down to 30 degrees F (-1 C.)

B. Mastic

1. Polyguard 650 Mastic is an asphalt/rubber based mastic which provides adhesion to membranes, structural concrete, masonry, and wood. It is designed to protect termination edges, overlaps, patches, and any additional detailing area

C. Detail Sealant:

1. Polyguard® Detail Sealant PW™: Single component elastomeric sealant. It is environmentally friendly, non-isocyanate product that replaces silicone and urethane sealants. They are low VOC/HAPS free, high performance, flexible sealant that is solvent free. Used on substrates including: Rigid PVC, bare aluminum, stainless steel, galvanized steel, anodized aluminum, tile, wood, concrete, FRP, polystyrene, molded polyurethane, polyester and ABS.

D. Polyguard® TERM® Water|Termite Sealant Barrier: a caulkable sealant containing the base formula which is used on all TERM® Barrier Products.

E. Drainage Composite:

Vertical Surface Only

1. Polyguard® LowFlow™ Protection and Drainage Mat – a two layer composite material fabricated from 100% post-industrial recycled geotextiles. OR Polyflow® 15P Drainage Mat: Three-part prefabricated geocomposite drain consisting of a formed polystyrene core covered on one side with polypropylene filter fabric. The fabric allows water to pass into the drain core while restricting the movement of soil particles which might clog the core. The core allows water to flow to designated drainage exits.

Horizontal Surfaces **Only**

2. Polyguard® Polyflow® 18H Drainage Mat: Two part prefabricated geocomposite drain consisting of a formed polystyrene core covered on one side with woven mono-filament filter fabric. The fabric allows water to pass into the drain core while restricting the movement of soil particles which might clog the core. The core allows the water to flow to designated drainage exits.

E. Perimeter Drainage System:

1. Polyguard Totalflow Perimeter Drainage System - the Totalflow™ section provides both water collection and a high-profile section allowing for high-capacity water flow to designated drainage exits.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine surfaces to receive barrier. Notify General Contractor if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

3.02 SURFACE PREPARATION

A. Protect adjacent surfaces not designated to receive barrier

B. Prepare surfaces to receive barrier in accordance with manufacturer's Instructions.

C. Do not apply barrier to surfaces unacceptable to manufacturer.

D. Concrete surfaces must be clean, smooth, and free of standing water

E. ICF surfaces must be clean and dust free..

F. Patch all holes and voids and smooth out any surface misalignments.

G. Cast-In-Place Concrete:

1. Normal weight structural concrete must be allowed to cure a minimum of 7 days. For lightweight structural concrete, the minimum cure time is 14 days. All concrete surfaces must be dry to the touch before proceeding with the installation of the barrier system.

2. Fill all form tie holes. Finish flush with the surrounding surface.

3. Fill and repair bug holes in concrete. Finish flush with the surrounding surface.

4. All cracks over 1/16 inch in width and any moving cracks under 1/16 inch shall be routed out to a minimum of ¼ inch width and sealed using a high performance polyurethane sealant. Allow adequate curing time per the manufacturer’s directions. Once cured, install an 8” wide strip of Waterproofing | Termite Barrier over the crack.

G. Masonry Surfaces:

1. Apply Waterproofing | Termite Barrier over brick or CMU that has been parged using a cementitious parge coat to level surface and reduce porosity.

3.03 APPLICATION

A. Priming:

1. Apply liquid adhesive to a clean dust free surface by roller following manufacturer’s instructions.

B. Barrier Installation - Vertical Surfaces:

1. All inside and outside corners shall be treated either with 12 inch wide moisture | termite flashing barrier strip or by applying a 90 mil thick application of detail sealant. The 12 inch wide barrier should be centered over outside corners.

2. Install a ¾ inch, 45-degree angle cant of detail sealant at all changes in plane including inside corners.

3. Waterproofing | Termite Barrier should be applied vertically in sections of 8 feet in length or less. On walls higher than 8 feet, apply two or more sections with the upper section overlapping the lower.

4. Side laps should be a minimum of 2 ½ inches and end laps should be a minimum of 6 inches.

5. Use a hard roller and firmly press in the material as it is placed on the vertical surface. All seams and terminations should be firmly rolled with a hard roller.

6. All terminations of the Waterproofing | Termite Barrier should be secured by a termination bar and receive a bead of detail sealant. The bead should be troweled to a flat surface approximately 1/8 inch thick by 3/4 inches wide. The sealant should be worked into cut edge terminations.

7. Inadequately lapped seams and damaged areas should be patched with Waterproofing | Termite Barrier. The patched area should extend a least 6 inches in each direction beyond the defect.

8. Fishmouths and severe wrinkles should be slit, flaps overlapped and repaired as above.

C. Barrier Installation – Horizontal Surfaces:

1. At penetrations, posts, or projections, seal the penetration with Water | Termite ier sealant, then apply a second flashing sheet over the penetration extending a minimum of 6 inches from the detail. The cut edges of all terminations must be sealed with detail sealant.

2. All inside and outside corners shall be treated either with 12 inch strips of Waterproofing | Termite Barrier or a 12 inch wide by 90 mil thick application of detail sealant. The field barrier should be centered over the corner. All inside corners shall have a minimum 3/4 inch fillet of detail sealant.

3. Waterproofing | Termite Barrier should be applied to the prepared surface starting at the low point and working to the high point in a shingling technique.

4. Side laps should be a minimum of 2 ½ inches and end laps a minimum of 6 inches.

5. The entire barrier should be firmly rolled with a linoleum roller weighing approximately 75 pounds. This will insure excellent adhesion and minimize air pockets between the substrate and barrier.

6. At drains, apply detail sealant around the inside edge of the drain out at least 6 inches then overlap with barrier a minimum of 6 inches. All permanently exposed cut edge terminations must be sealed with detail sealant.

7. Barrier turned up on walls shall be terminated into a reglet or under a counter flashing. The barrier may also be rolled firmly to the wall and sealed with a troweled bead of detail sealant.

8. Inadequately lapped seams and damaged areas should be patched with small section of barrier. The patch area should extend a least 6 inches beyond the defect.

9. Fishmouths and severe wrinkles should be slit, flaps overlapped and repaired as above.

10. Upon completion of horizontal barrier application, flood test the surface with 2 inches of water for 24 hours. Check with the structural engineer to make sure the deck structure will withstand the weight of the flood test.

11. Mark any leak areas found during flood test and make repairs.

D. Protection and Drainage Course:

1. Apply protection board and/or drainage composite and perimeter drainage composite in accordance with manufacturer's written directions.

END OF SECTION

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