SECTION 07 13 26

SELF-ADHERED SHEET WATERPROOFING

Display hidden notes to specifier. (Don't know how? [Click Here](https://www.arcat.com/sd/display_hidden_notes.shtml))

*Copyright 2023 - 2023 ARCAT, Inc. - All rights reserved*

\*\* NOTE TO SPECIFIER \*\* Polyguard Products, Inc.; Building Envelope Systems.  
This section is based on the products of Polyguard Products, Inc., which is located at:P. O. Box 755Ennis, TX 75120Tel: 214-515-5000Fax: 972-875-9425Email: [request info (polyguard@polyguard.com)](https://arcat.com/rfi?action=email&company=Polyguard%252BProducts%252C%252BInc.&message=RE%253A%2520Spec%2520Question%2520(07131pgd)%253A%2520&coid=34870&spec=07131pgd&rep=&fax=972-875-9425)  
Web: <https://www.polyguardproducts.com>   
 [ [Click Here](https://arcat.com/company/polyguard-products-inc-34870) ] for additional information.  
Polyguard Products specializes in products that protect surfaces and structures from moisture, water, and other undesired substances. Polyguard is currently operating under three "core" divisions with a number of growing divisions under the Polyguard umbrella.  
Polyguard's Architectural Division offers the Integrated Building Envelope System, with air barriers, masonry through wall and window flashings, below grade structural waterproofing systems, and composite drainage panels, all connected using engineered transition detailing assemblies which assure envelope integrity.  
Polyguard's Pipeline Division was the first coating manufacturer to highlight the cathodic shielding problem and the first to develop a coating to address the shielding problem. We have introduced a 2-part epoxy coating with 30% - 50% longer pot life than the competition.  
Our Mechanical Division offers weather and vapor barrier systems to keep pipe and duct insulation dry, as well as a unique RG-2400 coating to stop corrosion under insulation (CUI).  
Polyguard's Specialty Products Division is comprised of products for Highway, Residential, Flooring and Private Label applications.  
A new innovation from Polyguard is the TERM Barrier Systems. Backed by 18 years of university research and ICC Evaluation Report #3632, you can optimize building waterproofing by adding non-chemical termite and insect barriers.  
In May of 2016, Polyguard introduced a new business unit called Poly Wall Building Solutions - Moisture and Air Stop with Us.  
Polyguard's Residential Division manufactures a market-leading line of waterproofing and air barrier membranes designed to enhance the integrity of your structure. Our products are all made in the USA and have been tested to withstand the most rigorous requirements in the construction industry. With 60-plus years of manufacturing excellence and a culture only found in an employee-owned company.  
Think of Polyguard as an innovator and manufacturer of barriers - not just barriers against moisture and corrosion, but against contaminants like radioactive radon gas and methane. No sick buildings here.

1. GENERAL
   1. SECTION INCLUDES

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

* + 1. Self-Adhered sheet waterproofing (650 Membrane System) (PRM System).
       1. Accessory products
       2. Surface preparation
       3. Installation of blindside vertical sheet membrane system and accessories.
  1. RELATED SECTIONS

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

* + 1. Section 03 10 00 - Concrete Forming.
    2. Section 03 15 00 - Concrete Accessories.
    3. Section 03 20 00 - Concrete Reinforcing.
    4. Section 03 30 00 - Cast-in-Place Concrete.
    5. Section 04 20 00 - Unit Masonry.
    6. Section 07 11 00 - Dampproofing.
    7. Section 07 13 00 - Sheet Waterproofing.
    8. Section 07 21 00 - Thermal Insulation.
    9. Section 07 60 00 - Flashing and Sheet Metal.
    10. Section 07 92 00 - Joint Sealants.
    11. Section 07 95 00 - Expansion Control.
    12. Section 07 95 13 - Expansion Joint Cover Assemblies.
    13. Section 31 20 00 - Earth Moving.
    14. Section 31 62 00 - Driven Piles.
    15. Section 31 64 00 - Caissons.
    16. Section 33 46 00 - Subdrainage.
  1. REFERENCES

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

* + 1. ASTM International (ASTM):
       1. ASTM C836 - Standard Specification for High Solids Content, Cold Liquid Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course.
       2. ASTM D 146 - Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Fabrics Used in Roofing and Waterproofing.
       3. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.
       4. ASTM D570 - Standard Test Method for Water Absorption of Plastics.
       5. ASTM D882 - Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
       6. ASTM D903 - Standard Test Method for Peel or Stripping Strength of Adhesive Bonds.
       7. ASTM D1000 - Standard Test Methods for Pressure-Sensitive, Adhesive-Coated Tapes used for Electrical and Electronic Applications.
       8. ASTM D1434 - Test Method for Determining Gas Permeability Characteristics of Plastic Film and Sheeting.
       9. ASTM D1876 - Standard Test Method for Peel Resistance of Adhesives (T Peel Test).
       10. ASTM D1970 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
       11. ASTM D4632 - Standard Test Method for Grab Breaking Load and Elongation of Geotextiles.
       12. ASTM D4716 - Test Method for Determining the (In plane) Flow Rate per Unit Width and Hydraulic Transmissivity of a Geosynthetic Using a Constant Head.
       13. ASTM D5385 - Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes.
       14. ASTM D6574 - Test Method for Determining the (In Plane) Hydraulic Transmissivity of a Geosynthetic by Radial Flow.
       15. ASTM E96 (Method B) - Standard Test Methods for Water Vapor Transmission of Materials.
       16. ASTM E154 - Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.
    2. General Services Administration, Public Building Service (GSA-PBS):
       1. GSA-PBS-07115 Guide Specification for Elastomeric Waterproofing.
    3. Radon Reduction Technology Laboratory: Resistance to Permeance by Radioactive Radon Gas; Resistance to Diffusion by Radioactive Radon Gas.
  1. SUBMITTALS
     1. Submit under provisions of Section 01 30 00 - Administrative Requirements.
     2. 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. Certification of data indicating VOC (Volatile Organic Compound) content of all components of waterproofing system.

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

* + 1. Verification Samples: Two representative units of each type, size, pattern, and color.
       1. Sheet membrane.
       2. Fabric Tape and Accessories.
       3. Prefabricated Drainage Composite.
       4. Protection Board.
       5. Perimeter Drainage Composite.
    2. Shop Drawings: Include details of materials, construction, and finish. Include relationship with adjacent construction.
  1. QUALITY ASSURANCE
     1. Manufacturer Qualifications: Sheet Membrane Waterproofing Barrier System must be manufactured by a company with a minimum of ten years of experience in the production and sales of membrane waterproofing materials.
        1. Manufacturer's Representative: Arrange to have a trained representative of the manufacturer on site periodically to review installation procedures.
     2. Applicator Qualifications: A firm having at least three years of experience in applying these types of specified materials and specifically accepted in writing by the membrane system manufacturer.
     3. 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 might be specified. When deciding on the extent of the mock-up, consider all the major different types of work on the project.

* + 1. 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. The 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. PRE-INSTALLATION CONFERENCE
     1. Pre-Application Conference: Establish procedures and review conditions, installation procedures and coordination with other related work. The meeting agenda is to include review of special details and flashing.
  2. DELIVERY, STORAGE, AND HANDLING
     1. Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
     2. Store materials in a clean, dry area in accordance with manufacturer's instructions.
     3. Store adhesives at temperatures of 40 degrees F (5 degrees C) and above to facilitate handling.
     4. Store membrane cartons on pallets.
     5. Do not store at temperatures above 90 degrees F (32 degrees C) for extended periods.
     6. Keep away from sparks and flames.
     7. Completely cover when stored outside. Protect from rain.
     8. Protect materials during handling and application to prevent damage or contamination.
     9. Avoid use of products which contain tars, solvents, pitches, polysulfide polymers, or PVC materials that may come into contact with waterproofing membrane system.
  3. PROJECT CONDITIONS
     1. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
     2. Self-Adhered Sheet Waterproofing:
        1. Perform work when existing and forecasted weather conditions are within the limits established by the membrane manufacturer. Do not apply membrane if the temperature is below 25 degrees F (-4 degrees C) or to a damp, frost covered, or otherwise contaminated surface.
        2. Proceed with installation when substrate construction and preparation work is complete. If necessary, ensure subsoil is approved by Architect or geotechnical firm.
        3. Warn personnel against breathing vapors and contact with skin and eyes; wear appropriate protective clothing and respiratory equipment.
        4. Keep flammable products away from spark or flame. Post "No Smoking" signs. Do not allow use of spark-producing equipment during application and until all vapors have dissipated.
        5. Maintain work area in a neat and workmanlike condition. Remove empty cartons and rubbish from the site daily.
  4. WARRANTY
     1. Sheet Waterproofing Membrane:
        1. Manufacturer warrants that its products are free of defects, since many factors which affect the results obtained from this product are beyond the Manufacturer's control; such as weather, workmanship, equipment utilized and prior condition of the substrate. The Manufacturer will replace, at no charge, proven defective products within twelve (12) months of purchase, provided it has been applied in accordance with our written directions for uses we recommended as suitable for the 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.

1. PRODUCTS
   1. MANUFACTURERS
      1. Acceptable Manufacturer: Polyguard Products, Inc., which is located at:P. O. Box 755Ennis, TX 75120Tel: 214-515-5000Fax: 972-875-9425Email: [request info (polyguard@polyguard.com)](https://arcat.com/rfi?action=email&company=Polyguard%252BProducts%252C%252BInc.&message=RE%253A%2520Spec%2520Question%2520(07131pgd)%253A%2520&coid=34870&spec=07131pgd&rep=&fax=972-875-9425);Web: <https://www.polyguardproducts.com>

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

* + 1. Substitutions: Not permitted.
    2. Requests for substitutions will be considered in accordance with the provisions of Section 01 60 00 - Product Requirements.
  1. SELF-ADHERING SHEET WATERPROOFING

\*\* NOTE TO SPECIFIER \*\* Delete basis of design option not required.

* + 1. Basis of Design: Polyguard 650 Membrane as manufactured by Polyguard. A 60-mil rubberized-asphalt membrane consisting of a high-density polyethylene film bonded to a layer of rubberized-asphalt meeting or exceeding the following requirements:

\*\* NOTE TO SPECIFIER \*\* Delete film color option not required.

* + - 1. Film Color: Black.
      2. Film Color: White.
      3. Membrane Thickness per ASTM D1000: 60 mils (1.52 mm).
      4. Tensile Strengthof Membrane per ASTM D412 Modified Die CL: 370 psi (2551 kPa).
      5. Elongation, Ultimate Failure of Rubberized Asphalt per ASTM D412: 600 percent.
      6. Tensile Strength, Film per ASTM D882: 7294 psi (50290 kPa).
      7. Permeance per ASTM E96 Method B: 0.022 Perms.
      8. Crack Cycling per ASTM C836 Tested at-15 degrees F (-26 degrees C): No effect.
      9. Peel Adhesion to Concrete per ASTM D903: 17 lbs per inch (0.304 kg per mm) width.
      10. Peel Adhesion, Laps - Membrane to Membrane per ASTM D903: 19 lbs per inch (0.340 kg per mm) width.
      11. Lap Peel Adhesion per ASTM D1876: 8.0 lbs per inch (0.143 kg per mm) width.
      12. Low Temperature Flexibility at -15 degrees F (-26 degrees C) per ASTM D1970Modified: Pass.
      13. Pliability per ASTM D146 180 degree bend over 1 inch (25 mm) mandrel at -25 degrees F (-32 degrees C): No effect.
      14. Puncture Resistance, Membrane per ASTM E154: 69 lbs (31.3 kg).
      15. Resistance to Hydrostatic Head per ASTM D5385: 231 ft (70509 mm).
      16. Exposure to Fungi in Soil per GSA-PBS 07115 (16 weeks): No effect.
      17. Water Absorption per ASTM D570: 0.1 percent.
      18. System Accessories:

\*\* NOTE TO SPECIFIER \*\* Delete accessories items not required.

* + - * 1. Surface Primer Roller-Grade Adhesive:

Polyguard 650 LT Liquid Adhesive: A rubber-based, tacky adhesive formulated to provide excellent adhesion.

Polyguard 650 WB Liquid Adhesive: A water-based, rubber-based adhesive formulated to provide excellent adhesion.

Polyguard California Sealant: A rubber-based sealant formulated to provide excellent adhesion.

Volatile Organic Compound Content: Meets South Coast Air Quality Management District regulations established under the February 1, 1991, version of Rule 1168 (2) Adhesion and Sealant Applications.

Classified as an Architectural Sealant Primer Porous; VOC of 527 g/L. SCAQMD regulations for this type of sealant primer are 775 g/L.

* + - * 1. Detail Tape:

Polyguard Underseal Detail Tape: Rubberized-asphalt waterproofing membrane laminated to polypropylene backing. Wound onto a disposable, silicone-treated release sheet to prevent the membrane from sticking to itself while in the roll. Use for inside/outside corners, penetrating items, and patching damaged areas.

* + - * 1. Liquid Membranes: Polyguard LM-95 Liquid Membrane: A two-component, asphalt-modified, urethane.
        2. Detail Sealant: Polyguard Detail Sealant PW: A single-component, STPE, 100 percent solid moisture-cured, elastomeric sealant. Environmentally friendly, non-isocyanate. Replaces silicone and urethane sealants.

Low VOC/HAPS-free, cold-applied, self-adhesive, elastomeric sealant.

* + - * 1. Drainage Composite Mats:

Polyguard BD Drainage Mat: A sheet molded drainage for balcony decks with less than 3 inches (76 mm) of concrete and foot traffic only. Manufactured with a geocomposite of a formed impermeable polymeric core covered on one side with a non-woven filter fabric that allows water to flow to designated drainage exits.

Polyguard Polyflow 15 Drainage Mat: Two-part, prefabricated, geocomposite drain consisting of a formed polymeric core covered on one side with polymeric 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.

Polyguard Polyflow 18 Drainage Mat: Two-part, prefabricated, geocomposite drain consisting of a formed polymeric 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.

Polyguard Totalflow: A combination of Polyguard sheet drain products with our unique Totalflow product. In the Totalflow system, the sheet drain performs its normal function of water collection, while the Totalflow section provides both water collection and a high-profile section allowing for high-capacity water flow to designated drainage exits.

* + 1. Basis of Design: Polyguard Underseal PRM (Puncture Resistant Membrane) as manufactured by Polyguard. A strong, 65-mil self-adhering sheet membrane consisting of a double-thick, high-strength, cross-laminated, polyethylene backing laminated to a thick layer of rubberized asphalt compound meeting or exceeding the following requirements:
       1. Film Color: White.
       2. Membrane Thickness per ASTM D1000: 65 mils (1.65 mm).
       3. Pliability per ASTM D146 180 degree bend over 1 inch (25 mm) mandrel at -25 degrees F (-32 degrees C): No effect.
       4. Resistance to Hydrostatic Head per ASTM D5385: 231 ft (70509 mm).
       5. Elongation, Ultimate Failure of Rubberized Asphalt per ASTM D412: Greater than 850 percent.
       6. Tensile strength of 1 inch (25 mm) Width per ASTM D412 Modified Die C: 5000 psi (34474 kPa).
       7. Crack Cycling per ASTM C836 Tested at-15 degrees F (-26 degrees C): No effect.
       8. Puncture resistance, minimum per ASTM E154 Membrane Using 1 inch (24 mm) Rod: 127 lbs (57.6 kg).
       9. Peel Adhesion to Concrete per ASTM D903: 17 lbs per inch (0.304 kg per mm) width.
       10. Lap Peel Adhesion per ASTM D1876: 8.0 lbs per inch (0.143 kg per mm) width.
       11. Permeance to water vapor transmission per ASTM E96 Method B: 0.01 US grains per sq ft x inch of HG x degree F.
       12. Water Absorption per ASTM D570: 0.1 percent.
       13. Resistance to Permeance by Methane Gas per ASTM D1434 Tested using 99.99 percent pure methane: 6.3 x 10 -7 cu ft / sq ft x hour x psi.
       14. Resistance to Radioactive Radon Gas: Radon Reduction Technology Laboratory percent reduction in radon gas diffusion: 97.10 percent.
       15. Exposure to Fungi in Soil per GSA-PBS 07115 (16 weeks): No effect.
       16. System Accessories:

\*\* NOTE TO SPECIFIER \*\* Delete accessories items not required.

* + - * 1. Surface Primer Roller-Grade Adhesive:

Polyguard 650 LT Liquid Adhesive: A rubber-based, tacky adhesive formulated to provide excellent adhesion.

Polyguard 650 WB Liquid Adhesive: A water-based, rubber-based adhesive formulated to provide excellent adhesion.

Polyguard California Sealant: A rubber-based sealant formulated to provide excellent adhesion.

Volatile Organic Compound Content: Meets South Coast Air Quality Management District regulations established under the February 1, 1991, version of Rule 1168 (2) Adhesion and Sealant Applications.

Classified as an Architectural Sealant Primer Porous; VOC of 527 g/L. SCAQMD regulations for this type of sealant primer are 775 g/L.

* + - * 1. Detail Tape:

Polyguard Underseal Detail Tape: Rubberized-asphalt waterproofing membrane laminated to polypropylene backing. Wound onto a disposable, silicone-treated release sheet to prevent the membrane from sticking to itself while in the roll. Use for inside/outside corners, penetrating items, and patching damaged areas.

* + - * 1. Liquid Membranes:

Polyguard LM-85 SSL (Semi-Self-Leveling): A two-component, semi-self-leveling, asphalt-modified, urethane.

Polyguard LM-95 Liquid Membrane: A two-component, asphalt-modified, urethane.

* + - * 1. Detail Sealant: Polyguard Detail Sealant PW: A single-component, STPE, 100 percent solid moisture-cured, elastomeric sealant. Environmentally friendly, non-isocyanate. Replaces silicone and urethane sealants.

Low VOC/HAPS-free, cold-applied, self-adhesive, elastomeric sealant.

* + - * 1. Drainage Composite Mats:

Polyguard Polyflow 15 Vertical Drainage Mat: Two-part prefabricated geocomposite drain consisting of a formed polymeric core covered on one side with polymeric 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. Designed for vertical applications.

Polyguard Polyflow 15P Vertical Drainage Mat: Three-part, prefabricated, geocomposite drain consisting of a formed polymeric core covered on one side with polymeric 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. Designed for vertical applications.

Polyguard Polyflow 18 Horizontal Drainage Mat: Two-part, prefabricated, geocomposite drain consisting of a formed polymeric 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.

Polyguard Totalflow: A combination of Polyguard sheet drain products with our unique Totalflow product. In the Totalflow system, the sheet drain performs its normal function of water collection, while the Totalflow section provides both water collection and a high-profile section allowing for high-capacity water flow to designated drainage exits.

* + - * 1. Universal Fittings:

Totalflow Tee Outlet: A formed polymeric connection fitting to aid the collected water into a pipe drainage system.

Totalflow End Outlet: A formed polymeric connection fitting to aid the collected water into a pipe drainage system.

1. EXECUTION
   1. EXAMINATION
      1. Do not begin installation until the substrates have been properly constructed and prepared.
      2. If substrate preparation is the responsibility of another installer, notify Architect in writing of
   2. PREPARATION (650)
      1. Protect adjacent surfaces not designated to receive waterproofing.
      2. Clean surfaces to receive waterproofing in accordance with manufacturer's instructions.
      3. Do not apply waterproofing to surfaces unacceptable to manufacturer.
      4. Concrete surfaces must be clean, smooth, and free of standing water.
      5. Patch all holes and voids and smooth out any surface misalignments.
      6. Cast-In-Place Concrete:
         1. Concrete should be dry, frost free and cured a minimum of seven days prior to application of Polyguard membrane and Liquid Adhesive on vertical substrates. On horizontal structural concrete surfaces the cure time is 21 to 28 days with no additional rain or moisture.
            1. Fill all form tie holes.
            2. Finish flush with the surrounding surface.
         2. Fill and repair cracks, single bug holes of 1/2 inch(13 mm) or greater, or cavities in concrete with a Portland cement grout or concrete. Single bug holes can also be filled with Polyguard Detail Sealant PW or LM-95 Liquid Membrane.
            1. Finish flush with the surrounding surface.
         3. All cracks over 1/16 inch (1.6 mm) in width, and any moving cracks under 1/16 inch (1.6 mm), are to be routed out to a minimum of 1/4 inch (6 mm) width and sealed using a high-performance polyurethane sealant. Allow adequate curing time per the manufacturer's directions. Upon cure install an 8 inch (203 mm) wide strip of Polyguard 650 Membrane over the crack.
      7. Masonry Surfaces:
         1. Striking off joints flush with surface is also required. Concrete masonry walls or brick with deeply recessed mortar joints require a well-adhered parge coat before application of membrane.

\*\* NOTE TO SPECIFIER \*\* The article pertains to the PRM Sheet Membrane product only. Delete article if not required.

* 1. PREPARATION (PRM)
     1. Protect adjacent surfaces not designated to receive waterproofing.
     2. Clean surfaces to receive waterproofing in accordance with manufacturer's instructions.
     3. Do not apply waterproofing to surfaces unacceptable to manufacturer.
     4. Concrete surfaces must be clean, smooth, and free of standing water.
     5. Patch all holes and voids and smooth out any surface misalignments.
     6. Cast-In-Place Concrete:
        1. Normal weight structural concrete must be allowed to cure a minimum of seven days. For lightweight structural concrete, the minimum cure time is fourteen days. All concrete surfaces must be dry to the touch before proceeding with the installation of the waterproofing 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 (1.6 mm) wide and moving cracks under 1/16 inch (10.6 mm) wide, are to be routed-out to a minimum of 1/4 inch (6 mm) width and sealed using a high-performance polyurethane sealant. Allow adequate curing time per manufacturer's directions. Upon cure, install an 8 inch (203 mm) wide strip of Polyguard PRM over the crack.
     7. Masonry Surfaces:
        1. Apply waterproofing membrane over brick or CMU that has been parged using a cementitious parge coat to level surface and reduce porosity. Striking off joints flush with surface is also required.

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

* 1. INSTALLATION (650)
     1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
     2. Priming:
        1. Apply primer to a cleaned, dust free surface. Apply it by roller or spray. ApplyPolyguard 650 LT Liquid Adhesive or Polyguard California Sealant at a rate of 250 to 300 sq ft (23.22 to 27.87 sq m) per gallon or Polyguard 650 WB Liquid Adhesive at a rate of 350 to 400 sq ft (32.52 to 37.16 sq m) per gallon.Allow to dry per manufacturer's directions. Do not prime underneath Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane.
     3. Membrane Installation on Vertical Surfaces:
        1. All inside and outside corners are to be treated with a 12 inch (305 mm) wide strip of Detail Tape centered along the vertical axis, or by applying a 90 mil (2.29 mm) thick application of Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane.
        2. Install a 3/4 inch (19 mm), 45-degree angle cant (fillet) of Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane at all changes in plane including inside corners to 6 inch (152 mm) vertically and horizontally beyond the cant (fillet). Do not use wood or fiber cant strips.
        3. Waterproofing membrane should be applied vertically in sections of 8 ft (2438 mm) in length or less. When vertical walls sections of more than 8 ft (2438 mm) are to be waterproofed, apply 650 Membrane in sections no longer than 8 ft (2438 mm), starting from the lower foundation base and rising to the top with the 6 inches (152 mm) overlap, shingling down on each ply of membrane.
        4. Side laps should be 2-1/2 inches (64 mm) minimum and staggered end laps should be 6 inches (152 mm) minimum.
        5. Use a hard roller or firmly press in the material as it is placed on the vertical surface.
        6. At penetrations, posts, or projections, seal with Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane 6 inches (152 mm) onto concrete and 3 inches (76 mm) onto penetrating item; then apply a second flashing sheet over the penetration extending a minimum of 6 inches (152 mm) from the detail. The seal the cut edges of all terminations must be sealed with Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane.
        7. Pipes which are wired together and touching, cannot properly be waterproofed. Ensure all pipes have proper spacing. Recommended spacing for pipe penetrations is 2 inches (51 mm). The minimum allowed is 1 inch (25 mm).
        8. All terminations of the membrane should receive a troweled bead of Polyguard Detail Sealant PW, LM-95 Liquid Membrane to a flat surface approximately 1/8 inch(3 mm) thick by 3/4 inch (19 mm) wide.
        9. Inadequately lapped seams and damaged areas should be patched with Polyguard Detail Tape. Patched areas should extend at least 6 inches in each direction beyond the defect.
        10. Fish mouths and/or severe wrinkles should be slit, flaps overlapped, and repaired.
     4. Membrane Installation - Horizontal Surfaces:
        1. All inside and outside corners shall be treated either with 12 inch (610 mm) strips of membrane or a 12 inch (610 mm) wide by 90 mil (2.29 mm) thick application of Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane. The field membrane should be centered over the corner. All inside corners shall have a minimum 3/4 inch (19 mm) fillet of Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane or latex modified cement mortar.
        2. Apply waterproofing membrane to the primed surface starting at the low point and working to the high point in a shingling technique for maximum drainage.
        3. Side laps should be 2-1/2 inches (64 mm) minimum and staggered end laps should be 6 inches (152 mm) minimum. Refer to Polyguard slope and/or zero-slope applications for Balconies and proper lap adhesion requirements.
        4. Firmly roll the entire membrane with a minimum 75 lbs (34 kg). linoleum roller immediately after application. This will ensure excellent adhesion and minimize air pockets between the substrate and membrane.
        5. At penetrations, posts, or projections, seal with Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane 6 inches (152 mm) onto concrete and 3 inches (76 mm) onto penetrating item; then apply a second flashing sheet over the penetration extending a minimum of 6 inches (152 mm) from the detail. The seal the cut edges of all terminations must be sealed with Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane.
        6. At drains, apply Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane around the inside edge of the drain out onto substrate at least 6 inches (152 mm) then overlap with sheet membrane a minimum of 6 inches (152 mm). Seal all permanently exposed cut edge terminations with Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane.
        7. Membrane turned up on walls shall be terminated. Firmly press the terminated edge with a hand roller and protect with a troweled bead of Detail Sealant PW or LM-95 Liquid Membrane.
        8. Inadequately lapped seams and damaged areas should be patched with additional membrane. Extend patch at least 6 inches (152 mm) beyond the defect.
        9. Slit all "fish mouths," overlap the pieces, place patch over area and roll in place. Air blisters are typically caused by exposure and heat; this condition will subside as the sun no longer heats the membrane. This condition does not need attention unless blisters are large or excessive, softball size, and do not dissipate. Puncture large air blisters, expel the air, prime and cover with patch. Extend the patch material at a minimum of 6 inches (152 mm) in all directions beyond the repair area, then seal the patch edges with Detail Sealant PW or LM-95 Liquid Membrane.
        10. Upon completion of horizontal membrane application, Polyguard recommends a flood test or appropriate leak detection method be completed on the surface with 2 inches (51 mm) of water for 24 hours. Check with the structural engineer to make sure the deck structure will withstand the weight of the flood test. Mark any leak areas found during flood test and make repairs.
     5. Protection and Drainage Course:
        1. Apply protection board and/or drainage composite and perimeter drainage composite in accordance with manufacturer's written directions.

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

* 1. INSTALLATION (PRM)
     1. Install in accordance with manufacturer's instructions, approved submittals, and in proper relationship with adjacent construction.
     2. Priming:
        1. Apply primer by roller or spray to a cleaned, dust free surface to provide a tacky adhesive surface. Tack or cure for these primer products is totally dependent on relative humidity, ambient temperature, and substrate surface temperature. Apply Polyguard 650 LT Liquid Adhesive or Polyguard California Sealant at a rate of 250 to 300 sq ft (23.22 to 27.87 sq m) per gallon or Polyguard 650 WB Liquid Adhesive at a rate of 350 to 400 sq ft (32.52 to 37.16 sq m) per gallon. Allow to dry per manufacturer's directions. Re-prime the substrate if PRM is not applied to the Liquid Adhesive within the same working day. Do not prime underneath Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane.
     3. Membrane Installation - Vertical Surfaces:
        1. Waterproofing membrane should be applied vertically in sections of 8 ft (2438 mm) in length or less. On walls higher than 8 ft (2438 mm), apply two or more sections with the upper section overlapping the lower.
        2. Provide minimum 2-1/2 inch (64 mm) side laps and minimum 6 inch (152 mm) end laps.
        3. Use a hard hand-held roller to firmly adhere to the PRM material as it is placed on the vertical surface.
        4. All terminations of the membrane should receive a bead of Polyguard Detail Sealant PW or LM-95 Liquid Membrane to a flat surface of 1/8 inch (3 mm) thick by 3/4 inch (19 mm) wide.
        5. Inadequately lapped seams and damaged areas should be patched with Polyguard Detail Tape. Patched areas should extend at least 6 inches (152 mm) in each direction beyond the defect.
        6. Fish mouths and severe wrinkles should be slit, flaps overlapped and repaired.
        7. A termination (term) bar is required with the PRM. Apply Detail Sealant PW or LM-95 Liquid Membrane to all terminations.
     4. Membrane Installation - Horizontal Surfaces:
        1. All inside and outside corners shall be treated either with 12 inch (305 mm) strips of PRM or a 12 inch (305 mm) wide by 90 mil (2.29 mm) thick application of Polyguard Detail Sealant PW or Polyguard LM-95. The field membrane should be centered over the corner. All inside corners shall have a minimum 3/4 inch (19 mm) fillet of Polyguard Detail Sealant PW or Polyguard LM-95 or latex modified cement mortar.
        2. Apply PRM to the primed surface starting at the low point and working to the high point in a shingling technique for maximum drainage.
        3. Side laps should be 2-1/2 inches (64 mm) minimum and staggered end laps should be 6 inches (152 mm) minimum. Refer to Polyguard slope and/or zero-slope applications for Balconies and proper lap adhesion requirements.
        4. Firmly roll the entire membrane with a minimum 75 lbs (34 kg) linoleum roller immediately after application. This will ensure excellent adhesion and minimize air pockets between the substrate and membrane. Give special attention with the roller to membrane overlaps and ' T-Joints.'
        5. At penetrations, posts, or projections, seal with Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane 4 to 6 inches (102 to 152 mm) onto concrete and 4 to 6 inches (102 to 152 mm) onto penetrating item; then apply a second flashing sheet over the penetration extending a minimum of 6 inches (152 mm) from the detail. The seal the cut edges of all terminations must be sealed with Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane.
        6. At drains, apply Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane around the inside edge of the drain out onto substrate at least 6 inches (152 mm) then overlap with PRM a minimum of 6 inches (152 mm). Seal all permanently exposed PRM cut edge terminations with Polyguard Detail Sealant PW or Polyguard LM-95 Liquid Membrane.
        7. PRM turned up on walls shall be terminated. Firmly press the terminated edge with a hand roller and protect with a troweled bead of Detail Sealant PW or LM-95 Liquid Membrane.
        8. Inadequately lapped seams and damaged areas should be patched with additional membrane. Extend patch at least 6 inches (152 mm) beyond the defect.
        9. Slit all "fish mouths," overlap the pieces, place patch over area and roll in place. Air blisters are typically caused by exposure and heat; this condition will subside as the sun no longer heats the membrane. This condition does not need attention unless blisters are large or excessive, softball size, and do not dissipate. Puncture large air blisters, expel the air, prime and cover with patch. Extend the patch material at a minimum of 6 inches (152 mm) in all directions beyond the repair area, then seal the patch edges with Detail Sealant PW or LM-95 Liquid Membrane.
        10. Upon completion of horizontal membrane application, Polyguard recommends a flood test or appropriate leak detection method be completed on the surface with 2 inches (51 mm) of water for 24 hours. Check with the structural engineer to make sure the deck structure will withstand the weight of the flood test. Mark any leak areas found during flood test and make repairs.
     5. Protection and Drainage Course:
        1. Protection board is not required but an optional drainage board can be applied over membrane to expedite water dispersion prior to backfilling. Apply drainage composite in accordance with manufacturer's written directions.
  2. FIELD QUALITY CONTROL
     1. 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.

* + 1. Manufacturer's Services: Coordinate manufacturer's services in accordance with appropriate sections in Division 01.
  1. CLEANING AND PROTECTION
     1. Clean products in accordance with the manufacturers recommendations.
     2. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION