

# GUIDE SPECIFICATION FOR PRECON®: PRE-APPLIED/UNDERSLAB WATERPROOFING MEMBRANE

SECTION 07 13 00

SHEET WATERPROOFING

Revision Date: December 20, 2019

Specifier Notes: This guide specification is written according to Construction Specifications Institute (CSI) MasterFormat. The section must be carefully reviewed and edited by the architect or engineer to meet the requirements of the project. Coordinate this section with other specification sections and the drawings.

Specifier Notes: PRECON is a composite sheet membrane comprised of elastomeric membrane bonded to W. R. MEADOWS®' exclusive plasmatic matrix and a non-woven geotextile fabric. Once concrete is poured against PRECON and the concrete cures, a mechanical bond forms that tightly and permanently secures the concrete to the membrane.

PRECON is used as a waterproofing membrane where vertical positive-side waterproofing is required but access to the positive side is impossible due to the soil retention system. The membrane can also be used for horizontal applications for underslab waterproofing and vaporproofing.

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

- A. Surface preparation.
- B. Installation of a blindside sheet membrane.

### 1.02 RELATED SECTIONS

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

- A. Section 03 30 00 – Cast-in-Place Concrete.
- B. Section 07 13 26 – Self-Adhering Sheet Waterproofing.
- 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 50 00 – Excavation Support and Protection.
- G. Section 33 46 00 – Subdrainage.

### 1.03 REFERENCES

- A. ACI 302.1R.17 – Guide for Concrete Floor and Slab Construction.
- B. ASTM C836 - Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for Use with Separate Wearing Course.

- C. ASTM D412-06: Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension.
- D. ASTM D882: Standard Test Method for Tensile Properties of Thin Plastic Sheeting.
- E. ASTM D903: Standard Test Method for Peel or Stripping Strength of Adhesive Bonds.
- F. ASTM D1970-01 - Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roofing Underlayment for Ice Dam Protection.
- G. ASTM D5385-93: Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes.
- H. ASTM E96 (Method B): Standard Test Methods for Water Vapor Transmission of Materials.
- I. ASTM E154: Standard Test Methods for Water Vapor Retarders Used in Contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.
- J. ASTM F2130: Standard Test Method for Measuring Repellency, Retention, and Penetration of Liquid Pesticide Formulation Through Protective Clothing Materials.
- K. GSA-PBS 07115: General Services Administration, Public Building Service - Guide Specification for Elastomeric Waterproofing.

#### 1.04 QUALITY ASSURANCE

- A. Contractor will provide the proper equipment, manpower, and supervision at the jobsite to install the membrane in compliance with the project plans and specifications.
- B. Installation must be carried out by an experienced contractor with an adequate number of skilled personnel, experienced in the application of the blindside membrane applications.
- C. Maintain a record of the batch numbers of all materials supplied for this project.

#### 1.05 PRE-CONSTRUCTION MEETING

- A. Convene [one] [\_\_\_\_], week [\_\_\_\_] prior to commencing work of this section, in accordance with Section 1.04 - Quality Assurance, meeting with manufacturer's technical representative, general contractor and site engineer to review the installation procedures.

#### 1.06 SUBMITTALS

- A. Comply with Section 01 33 00 - Submittal Procedures.
- B. Submit manufacturer's product data and application instructions.

#### 1.07 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 adhesive at temperatures of 40° F (4.4° C) and above to facilitate handling.
- D. Do not store at temperatures above 90° F (32° C) for extended periods.
- E. Protect materials during handling and application to prevent damage or contamination.

## 1.08 ENVIRONMENTAL REQUIREMENTS

- A. Product not intended for uses subject to abuse or permanent exposure to the elements.
- B. Apply membrane when conditions are dry and rain is not imminent.
- C. Ensure concrete is poured within 60 days of membrane application.

## PART 2 PRODUCTS

### 2.01 MANUFACTURER

- A. W. R. MEADOWS, INC., PO Box 338, Hampshire, Illinois 60140-0338. (800) 342-5976. (847) 683-4500. Fax (847) 683-4544. Website: www.wrmeadows.com.

### 2.02 MATERIALS

- A. Blindsight Waterproofing Membrane: 73 mil (1.85mm) thick, composite sheet membrane comprised of an elastomeric membrane bonded to a seven-ply plasmatic matrix and a non-woven geotextile fabric.
  - 1. Performance Based Spec: Blindsight waterproofing membrane shall have the following properties as determined by laboratory testing:
    - a. Membrane Thickness: 73 mil (1.85 mm)
    - b. Low Temperature Flexibility, ASTM D1970: Pass
    - c. Resistance to Hydrostatic Head, ASTM D5385-93: 230' (70 m)
    - d. Elongation, ASTM D412-06: >400%
    - e. Tensile Strength (film), ASTM D882: 9,200 psi (63.4 MPa)
    - f. Crack Cycling, ASTM C836: Pass
    - g. Puncture Resistance, ASTM E154: >210 lb. (>934 N)
    - h. Peel Adhesion to Concrete, ASTM D903: 10 lb./in (1,754 N/m)
    - i. Moisture Vapor Transmission, ASTM E96 (Method B): 0.0011 perms
    - j. Resistance to Penetration by Pesticides, ASTM F2130, Percentage of Penetration: 0.0%
    - k. Resistance to Fungi in Soil, GSA-PBS 07115 – 16 weeks: No Effect
  - 2. Proprietary Based Spec:
    - a. PRECON Blindsight/Underslab Waterproofing Membrane by W. R. MEADOWS.

Specifier Notes: For temperatures that are below 40° F (5° C), PRECON LOW TEMP must be used. This product can be applied at temperatures down to 25° F (-4° C) and this temperature must be maintained for a period of 24 hours prior and post application. If site conditions are marginal and conditions less than optimal, PRECON LOW TEMP can be considered below 60° F (16° C). W. R. MEADOWS has a low temperature application bulletin with specific installation instructions that needs to be followed.

### 2.03 ACCESSORIES

- A. Rolled Matrix Drainage System: MEL-DRAIN™ by W. R. MEADOWS.
- B. Liquid Membrane for Fastener Details:
  - 1. MEL-ROL® LIQUID MEMBRANE (two-component) by W. R. MEADOWS.
  - 2. BEM by W. R. MEADOWS.
- C. Liquid Membrane for Overlap Detail: HYDRALASTIC™ 836 by W. R. MEADOWS.

Specifier Notes: HYDRALASTIC 836, MEL-ROL LIQUID MEMBRANE (two-component) and BEM (BUILDING ENVELOPE MEMBRANE) can be interchanged. It must be noted that HYDRALASTIC 836 and BEM can only be applied in temperatures above 30° F (-1° C). MEL-ROL LIQUID MEMBRANE may be used on end laps, penetrations and terminations down to 25° F (-4° C).

D. Detail Fabric for Terminations: DETAIL FABRIC by W. R. MEADOWS.

E. Detail Tape Adhesive: MEL-PRIME™ by W. R. MEADOWS.

## PART 3 EXECUTION

### 3.01 EXAMINATION

A. Examine surfaces to receive membrane. Notify architect if surfaces are not acceptable. Do not begin surface preparation or installation until unacceptable conditions have been corrected.

### 3.02 SURFACE PREPARATION

A. Inspect all surfaces for any conditions detrimental to the proper completion of the work.

B. Ensures surfaces are structurally sound.

C. Remove debris or any other foreign material that could damage the membrane.

### 3.03 INSTALLATION

#### A. Vertical Application

1. Install the membrane with the fabric side facing the interior side of the form to receive the concrete.
2. Mechanically fasten membrane across the top lagging at 12" (310 mm) on center, 1/2" (12 mm) from the top, with fasteners approved by the manufacturer.
3. Apply liquid membrane over the areas where the fasteners have been attached and carry over the top edge.
4. Remove release paper on 6" (152.4 mm) factory edge.
5. Mechanically fasten membrane vertically, 24" (620 mm) on center, into the exposed factory edge of the membrane if vertical fastening is required.
6. Install subsequent sheet of membrane and overlap onto the 6" (152.4 mm) factory edge and roll press into place.
7. For end-to-end overlap, overlap membrane 6" (152.4 mm).
8. Apply liquid detail membrane in this area to be lapped and roll press membrane into this liquid detail membrane.
9. Apply liquid detail membrane at terminations of membrane, 12" (310 mm) wide centered over the termination.
10. Embed detail fabric into this wet liquid detail membrane centered over the termination, 6" (152.4 mm) on each side of lap edge, and roll press into place.
11. Apply additional liquid detail membrane on all terminations of detail fabric.
12. Inspect membrane prior to pouring of concrete for any punctures or damage.
13. Repair damaged areas as directed by the manufacturer.

#### B. Horizontal Application

1. Prepare subgrade prior to membrane application according to ACI 302.1R.17.
2. Ensure the fabric side of the membrane is facing up.
3. Remove release paper on 6" (152.4 mm) selvedge edge and overlap edges of additional sheet. Roll press into place.
4. For end-to-end overlap, overlap membrane 6" (152.4 mm).

5. Apply liquid detail membrane in this area to be lapped and roll press membrane into this liquid detail membrane.
6. Apply liquid detail membrane at terminations of membrane, 12" (310 mm) wide centered over the termination.
7. Embed detail fabric into this wet liquid detail membrane centered over the termination, 6" (152.4 mm) on each side of lap edge, and roll press into place.
8. Apply additional liquid detail membrane on all terminations of detail fabric.
9. Inspect membrane prior to pouring of concrete for any punctures or damage.
10. Repair damaged areas as directed by the manufacturer.

#### 3.04 PROTECTION

- A. Ensure membrane is not damaged prior to concrete pour.
- B. Ensure concrete is poured within 60 days of membrane application.

END OF SECTION