



G U I D E - S P E C

WeatherBond PRO TPO Fleece® Mechanically Attached Roofing System

July 2015

This **GUIDE-SPEC** is a brief outline of WeatherBond PRO TPO Fleece Mechanically Attached Roofing System requirements and is intended for use as a submittal with a bid package. Specifiers and the WeatherBond Contractor must comply with the applicable Sections of WeatherBond's Installation Guide, prior to design or bid.

PART I GENERAL

1.01 DESCRIPTION

The **WeatherBond PRO TPO Fleece Mechanically Attached Roofing System** incorporates 45, 60 or 80-mil thick, 12' or 6' wide white, gray or tan WeatherBond PRO TPO membrane laminated to a 55-mil non-woven polyester fleece-backing. Without an underlayment, the membrane can be installed directly over a smooth surfaced BUR, mineral surfaced cap sheet or modified bitumen and mechanically fastened to an acceptable steel or wood deck with WeatherBond HPWX Fasteners and HPWX Plates spaced a maximum of 12" on center. Adjoining sheets of membrane are joined together with a minimum 1-1/2" wide hot air weld. Membrane securement to other types of decks will require an approval from WeatherBond depending upon pullout values achieved.

1.02 QUALITY ASSURANCE

- A. This roofing system should be installed by a WeatherBond Contractor in compliance with shop drawings as approved by WeatherBond.

1.03 SUBMITTALS

- A. To ensure compliance with WeatherBond's requirements, the following projects should be forwarded to WeatherBond for review prior to installation, preferably prior to bid.
 - 1. Air pressurized buildings, canopies, and buildings with large openings, cold storage buildings or freezer facilities, adhered roofing system projects over 100' in height or projects where the WeatherBond PRO TPO Fleece membrane is expected to come in direct contact with petroleum-based products, waste products (i.e., grease, oil, animal fats, etc) and other chemicals.

1.04 GENERAL DESIGN CONSIDERATIONS

- A. It is the responsibility of the building owner or his/her designated representative to verify structural load limitation. In addition, a core cut may be taken to verify weight of existing components when the roofing system is to be specified on an existing facility.
- B. On new construction projects, especially in cold climate regions, moisture generated due to the construction process could adversely impact various components within the roofing assembly if not addressed. Refer to Spec Supplement G-01-11 "Construction Generated Moisture" included in the WeatherBond Technical Manual.
- C. On structural concrete decks, when a vapor retarder is not used, gaps in the deck along the perimeter and around penetrations must be sealed along with vertical joints between tilt-up panels, if present, to prevent infiltration of hot humid air and possible moisture contamination resulting from condensation. This is specifically important when adhesive is used to attach the roof insulation.

CAUTION: If left unaddressed, collected moisture could weaken insulation boards and facers resulting in a blow-off or increase the probability of mold growth.

- D. Vapor Retarders
 - 1. WeatherBond does not require a vapor retarder for the protection of the membrane; however, it should be considered by the specifier for the protection of the roofing assembly (i.e. primarily insulation, underlayment and adhesives). The following criteria should be considered by the specifier:

- a. Use of a vapor retarder to protect insulation and reduce moisture accumulation within an insulated roofing assembly, should be investigated by the specifier.
- b. In the generally temperate climate of the United States, during the winter months, water vapor flows upward from a heated, more humid interior toward a colder, drier exterior. Vapor retarders are more commonly required in northern climates than in southern regions, where downward vapor pressure may be expected and the roofing membrane itself becomes the vapor retarder

1.05 WARRANTY

- A. A 15 or 20-Year Membrane Material Warranty for commercial buildings is available at no charge.
- B. A 15-year or Limited Lifetime Material Warranty is available for residential applications at no charge
- C. A 10 or 15-year Extended warranty is available for residential or commercial applications for a charge

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials to the job site in the original, unopened containers labeled with the manufacturer's name, brand name and installation instructions.
- B. Job site storage temperatures in excess of 90° F may affect shelf life of curable materials (i.e., adhesive, sealants and cleaners).
- C. WeatherBond PRO TPO Fleece Membrane should be stored in its original plastic wrap or be covered to protect from moisture. Any moisture absorbed by the fleece-backing must be removed by using a wet-vac system prior to membrane securement.

1.07 JOB CONDITIONS

- A. Refer to WeatherBond Installation Guide for applicable project specific Job Conditions.

PART II PRODUCTS

2.01 GENERAL

The components of this roofing system are to be products of WeatherBond or accepted by WeatherBond as compatible. The installation, performance or integrity of products by others, **when selected by the specifier and accepted as compatible by WeatherBond**, is not the responsibility of WeatherBond and is expressly disclaimed by the WeatherBond Warranty.

2.02 MEMBRANE

WeatherBond PRO TPO Fleece 100, 115 or 135 membrane incorporates 45, 60 or 80-mil thick Thermoplastic Polyolefin (TPO) membrane laminated to a 55-mil non-woven fleece backing resulting in a total finished sheet thickness of 100, 115 or 135- mils. Membrane sheets are available in rolls 12' or 6' wide by 50' or 100' long. WeatherBond PRO TPO Fleece Membrane is available in white, gray or tan in the 100 and 115.

2.03 RELATED MATERIALS

- A. WeatherBond PRO TPO Reinforced and Non-Reinforced Flashing, Peel & Stick Cover Strips, Cut-Edge Sealant, Weathered Membrane Cleaner, Termination Bars, Insulation Fasteners and Water Cut-Off Mastic. Other WeatherBond products such as insulation and edgings are also required when a System Warranty is specified.
- B. **Other Products:** Heat Weldable Walkway Pads, Pre-Molded Pipe Flashings, Split Pipe Seals, Curb Wraps, Inside and Outside Corners and Pourable or Molded Sealant Pockets.

PART III EXECUTION

3.01 GENERAL

- A. When feasible, begin the application at the highest point of the highest roof level and work to the lowest point to prevent moisture infiltration and minimize construction traffic on completed sections. This will include completion of all flashings and terminations.

3.02 ROOF DECK CRITERIA

- A. A proper substrate shall be provided by the building owner. The structure shall be sufficient to withstand normal construction loads and

live loads.

- B. Defects in the roof deck must be reported and documented to the specifier, general contractor and building owner for assessment. The WeatherBond Contractor shall not proceed unless the defects are corrected.
- C. Refer to WeatherBond Technical Manual for acceptable decks and the applicable Fasteners (when mechanical attachment of insulation is specified).

3.03 SUBSTRATE REQUIREMENTS

- A. The membrane shall be installed over an existing smooth surfaced asphalt built-up roof (Type III or IV Asphalt), modified bitumen or mineral surfaced cap sheet and mechanically fastened to the roof deck with WeatherBond HPWX Fasteners/HPWX Plates.
- B. The substrate must be dry, relatively smooth, free of protrusions, debris, sharp edges or foreign materials and must be free of accumulated water, ice and snow. Cracks or voids in the substrate greater than 1/4" must be filled with a suitable material.
- C. Cut and remove wet insulation as identified by the specifier and fill all voids with new insulation, so that it is relatively flush.

3.04 INSTALLATION

Refer to the applicable Material Safety Data Sheets and Product Data Sheets for cautions and warnings.

A. Membrane Installation

- 1. WeatherBond PRO TPO Fleece Membrane shall be positioned over the existing roof surface and mechanically fastened to the roof deck with WeatherBond HPWX Fasteners and Piranha Plates spaced a maximum of 12" on center.

- 2. **Perimeter Securement Requirements**

The membrane shall be secured around the building perimeter using additional rows of HPWX Fasteners and HPWX Plates positioned along the centerline of the 12' wide sheets as follows.

WeatherBond PRO TPO Peel & Stick Cover Strips (in conjunction with TPO Primer) or a minimum 6" wide WeatherBond PRO TPO Reinforced Membrane (hot air welded) shall be used to overlay the fasteners and plates.

- 3. Adjoining sheets of WeatherBond PRO TPO Fleece Membrane are overlapped approximately 5-1/2" along the length of the membrane (at the selvage edge) where fastening plates will be located. At end laps (along the width of the sheet), membranes shall be butted together which will be overlaid with minimum 6" wide WeatherBond PRO TPO reinforced membrane hot air welded on all edges.

- 4. **Membrane Splicing – Heat Welding**

- a. Along the length of the membrane (at selvage edges), heat weld membrane sheets a minimum of 1-1/2" with an Automatic Heat Welder or Hot Air Hand Welder and silicone roller. Refer to the WeatherBond Technical Manual for specific heat welding procedures.
- b. Membrane that has been exposed to the elements for approximately 7 days must be prepared by scrubbing the splice area with a Scotch Brite Pad and WeatherBond Weathered Membrane Cleaner. Clean all residue from the prepared splice area with a Splice Wipe or clean natural fiber (cotton) rag prior to welding.

B. Additional Membrane Securement

The membrane must be secured at the perimeter of each roof level, roof section, expansion joint, curb, skylight, interior wall, penthouse, etc., at any angle change which exceeds 2" in one horizontal foot and at all other penetrations in accordance with WeatherBond's Details published in the WeatherBond Installation instructions.

C. Membrane Flashing

- 1. Flash all walls and curbs with WeatherBond PRO TPO reinforced membrane. Non-Reinforced membrane shall be limited to inside and outside corners, field fabricated pipe seals, scuppers and Sealant Pockets where the use of pre-molded accessories are not practical.
- 2. On vertical surfaces, such as walls, curbs and pipes, Bonding Adhesive is not required when the flashing height is 12" or less and the membrane is terminated under a metal counterflashing (nailed). When a coping or termination bar is used for vertical terminations, Bonding Adhesive may be eliminated for flashing heights 18" or less.
- 3. When using the Peel and Stick Cover Strip to overlay metal edging flanges or fasteners/plates, Membrane Cleaner is used to clean

surfaces as needed. Apply WeatherBond TPO Primer prior to applying Peel and Stick Cover Strip.

4. Terminate the flashing in accordance with the appropriate WeatherBond Details above anticipated slush line.

Note: Fleece backing must be removed from the back of the membrane prior to completing compression seal terminations so Water Cut-Off Mastic is applied directly to the membrane surface. Apply heat to the fleece material and scrape to fully remove.

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