



WEATHERBOND ROOFING SYSTEMS

G U I D E - S P E C Fully Adhered Roofing System

January 2024

This **GUIDE-SPEC** is a brief outline of WeatherBond's Adhered Roofing System requirements and is intended for use as a submittal with a bid package. Specifiers and WeatherBond Authorized Roofing Contractors must comply with the WeatherBond Specification prior to design or bid.

PART I GENERAL

1.01 DESCRIPTION

The **WeatherBond Adhered Roofing System** incorporates maximum 10' wide, 50-mil, 60-mil or 80-mil thick Polyester or Fiberglass reinforced WeatherBond Polyvinyl Chloride (PVC) membrane (white, gray, light gray, slate gray and tan). WeatherBond Insulation is mechanically fastened to the roof deck or secured with an approved adhesive and the membrane is fully adhered to the substrate with WeatherBond Low VOC Bonding Adhesive or Aqua Base 120 Bonding Adhesive or CAV-GRIP PVC Aerosol Contact Adhesive. Adjoining sheets of membrane are overlapped and joined together with a minimum 1-1/2" wide heat weld.

A KEE enhanced (white only) WeatherBond PVC membrane with Polyester Reinforcement is available in 10' width.

1.02 QUALITY ASSURANCE

- A. This roofing system must be installed by a WeatherBond Authorized Contractor in compliance with shop drawings as approved by WeatherBond.
- B. Upon request, an inspection shall be conducted by a Field Service Representative of WeatherBond to ascertain that the membrane roofing system has been installed according to WeatherBond's published specifications and details applicable at the time of bid. It is not intended as a final inspection for the benefit of the owner.
- C. For specific code approvals achieved with this system, refer to WeatherBond's PVC Code Approval Guide, DORA (Directory of Roof Assemblies), FM Approvals or UL Fire Resistance Directory for Roofing Materials and Systems.

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 PVC membrane is expected to come in direct contact with petroleum-based products, waste products (i.e., grease, oil, animal fats, etc) and other chemicals.
- B. Shop drawings must be submitted to WeatherBond by the WeatherBond Authorized Roofing Contractor along with a completely executed Copy-A – Job Approval Request for approval. Approved shop drawings are required for inspection of the roof and on projects where on-site technical assistance is requested.

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.

1.06 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. Store WeatherBond membrane on provided pallets in original undisturbed plastic wrap.
- C. Job site storage temperatures in excess of 90°F may affect shelf life of curable materials (i.e., adhesives and sealants).
- D. When liquid adhesives and sealants are exposed to lower temperatures, restore to a minimum of 60°F before use.
- E. Do not store adhesive containers with opened lids due to loss of solvent, which will occur from flash off.

1.07 JOB CONDITIONS

- A. Refer to WeatherBond Technical Manual 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 by WeatherBond**, is not the responsibility of WeatherBond.

2.02 MEMBRANE

WeatherBond (white, gray, light gray, slate gray or tan) 50-mil (100' long), 60-mil (80' long) or 80-mil (65' long) reinforced Polyvinyl Chloride (PVC) OR WeatherBond KEE HP (white, gray, light gray, slate gray and tan) 50-mil (100' long), 60-mil (80' long) or 80-mil (65' long) polyester reinforced membranes is used for this system. Membrane sheets are 81" wide. For physical properties of the membrane, refer to Thermoplastic Specification.

2.03 RELATED MATERIALS

WeatherBond Flexible DASH/FAST Adhesive, WeatherBond Non-Reinforced Flashing, Reinforced Cover Strips, Cut Edge Sealant, Water Cut-Off Mastic, PVC Membrane Cleaner, One-Part Pourable Sealer, Heat Weldable Walkway Pads, Pre-Molded Inside/Outside Corners, Pipe Flashings and 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 to minimize construction traffic on completed sections. This will include completion of all flashings, terminations and

daily seals.

- B. Follow criteria outlined in the WeatherBond Specification to prepare the roof deck or the existing substrate prior to application of the new roofing system.

3.02 ROOF DECK CRITERIA

- A. The 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 Authorized Contractor shall not proceed with installation unless the defects are corrected.
- C. Refer to WeatherBond Technical Manual for acceptable decks and the applicable WeatherBond Fasteners (when mechanical attachment of insulation is specified).

3.03 SUBSTRATE PREPARATION

- A. On retrofit-recover projects, cut and remove wet insulation, as identified by the specifier, and fill all voids with new insulation so it is relatively flush with the existing surface.
- B. For all projects, substrate must be even without noticeable high spots or depressions, and must be free of accumulated water, ice or snow.
- C. Clear the substrate of debris and foreign material. Fresh bitumen based roof cement must be removed or concealed.

3.04 INSTALLATION

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

A. Insulation Attachment

- 1. WeatherBond Flexible DASH/FAST Adhesive may be specified for insulation securement in full spray or beads with spacing as outlined in the WeatherBond Technical Manual.
- 2. WeatherBond Fasteners may be used, when specified, to secure WeatherBond Insulation at the specified density outlined in the WeatherBond Technical Manual.

B. Membrane Installation and Heat Welding

- 1. Sweep loose debris from the substrate.
- 2. Position WeatherBond Membrane over acceptable substrate and fold membrane back so half the underside is exposed.
- 3. For WeatherBond PVC, apply membrane bonding adhesive as follows:
 - a. Apply Sure-Flex Low VOC Bonding Adhesive to the exposed underside of the membrane and the corresponding substrate area with a plastic core medium nap paint roller at the appropriate coverage rate. Allow adhesive to flash-off and roll coated membrane into coated substrate. Avoid wrinkling.
 - b. Apply Hydrobond Water-Based Adhesive to the exposed substrate with a roller or airless sprayer at the appropriate coverage rate. HydroBond is designed as a one-sided, “wet” lay-in adhesive with no flash-off time and the adhesive must not dry during the application process. Once the adhesive is applied, roll the membrane in place. Avoid wrinkling.
 - c. Apply CAV-GRIP PVC Aerosol Contact Adhesive to the exposed substrate area with supplied spray gun at the appropriate coverage rate. Allow to flash-off and roll membrane into coated substrate. Avoid wrinkling WeatherBond PVC Bonding Adhesive, Aqua Base 120 Bonding Adhesive or Hydro bond Adhesive to the exposed underside of the membrane and the corresponding substrate area with a plastic core medium nap paint roller at the appropriate coverage rate.
- 4. For WeatherBond KEE HP PVC, apply Low-VOC PVC Bonding Adhesive to the exposed underside of the membrane and the corresponding substrate area with a plastic core medium nap paint roller at the appropriate coverage rate. Allow adhesive to flash-off and roll coated membrane into coated substrate. Avoid wrinkling.
- 5. Brush down the bonded section of membrane immediately with a soft bristle push broom.

6. Fold back the unbonded half of the sheet and repeat the bonding procedure.
7. Install adjoining membrane sheets in the same manner, overlapping edges a minimum of 2 inches to provide for a minimum 1-1/2" hot air weld. It is recommended that all splices be shingled to avoid bucking of water.
8. Heat weld the membrane sheets a minimum of 1-1/2" with an Automatic Heat Welding Machine.

C. 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" per horizontal foot and at all other penetrations in accordance with WeatherBond's published details.

D. Membrane Flashing

Flash all walls and curbs with WeatherBond 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. Terminate the flashing in accordance with an appropriate WeatherBond Termination Detail.

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**Physical properties of WeatherBond Membrane can be referenced in Part II, "Products" of the Thermoplastic Specification.
Attach copies of the applicable WeatherBond Details that pertain to the individual project to complete a bid package submittal.**