



# WEATHERBOND ROOFING SYSTEMS

## Spec Supplements

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January 2024

*The information contained in these Supplements are to serve as recommendations for Specifiers and Contractors regarding the design and installation of WeatherBond Roofing Systems and related products. Additional information essential for the design and installation of the roof systems mentioned herein are also included in the respective Specification for each Roof System and in the Design Reference Section of the Specification. Specifiers and Contractors are advised to reference all applicable sections.*

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**G-02-23**

## **Insulation Attachment with Flexible DASH Adhesive**

**January 2024**

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### **A. General**

Flexible DASH Adhesive may be used to attach the following roof insulations to an approved roof deck/substrate:

1. 1" (Min.) Polyisocyanurate, 1/2" XFP HD Cover Board, 1/2" XFP HD Plus, 1.5" XP-NB, 1/2" Recovery Board, 1/4" Securock or minimum 1/4" Dens-Deck, Dens-Deck Prime or Dens-Deck StormX. If tapered Polyisocyanurate insulation is used, 1/2" minimum thickness is acceptable.
2. Expanded Polystyrene (EPS) insulation overlaid with XFP HD Cover Board, XFP HD Plus, Recovery Board, Securock or Dens-Deck/Dens-Deck Prime/Dens-Deck StormX. A composite board can be used to eliminate the need for an additional layer of Flexible DASH Adhesive.
3. Extruded Polystyrene insulation overlaid with XFP HD Cover Board, XFP HD, Recovery Board, Securock, or Dens-Deck/Dens-Deck Prime/Dens-Deck StormX.
4. When oriented strand board (OSB) is proposed as the membrane underlayment, a polyisocyanurate/OSB composite board (XP-NB) may be used since attachment of individual OSB panels is not recommended due to board stiffness and potential bowing on uneven surfaces.

Insulation board sizes up to 4' x 8' may be used providing full attachment (4" or 6" o.c. extrusions) is achieved. Trimming or slitting of boards may be required on uneven surfaces. If necessary, use maximum 4' x 4' boards so full embedment of boards may be achieved.

### **B. Cautions and Warnings**

1. Do not apply Flexible DASH Adhesive when surface and/or ambient temperatures are below 25° F and rising when using heated spray equipment.
2. The temperature of Flexible DASH Adhesive must be at a minimum of 70° F at the time of use. Use drum band heaters or power blankets when necessary.
3. When using Flexible DASH Adhesive in non-heated spray equipment, substrate and/or ambient temperatures must be between 25°F (-4°C) and 120°F (49°C).
4. Dual Tank Splatter application not approved for application over 5,000 feet above sea level. Contact Versico for all bead applications over 5,000 feet above sea level.
5. **Bead Adhesive Spacing** – Beads must be applied following spacing approved for specific project conditions (i.e. height, wind zone, and wind speed coverage).

- a. 12-inch on-center bead spacing is accepted in the field of the roof. Projects with higher wind speed coverage will require narrower spacing between beads.
- b. Perimeter bead spacing is typically at 6-inches on-center except for those projects with higher wind speed coverage where narrower bead spacing of 4-inches on-center may be required.
- c. Substrate irregularity, which is commonly associated with gravel surfaced built-up roofing, must be compensated to ensure insulation boards are fully embedded. Do not apply thin beads of adhesive (less than ½-inch diameter), and if necessary increase diameter of the adhesive bead in uneven areas.



## 6. Residual Asphalt

- a. **Incompatibility of the Substrate (Residual Un-Weathered Asphalt)** – While urethane adhesive is compatible with existing asphaltic roofs that have been exposed and weathered, it is difficult to adhere to **slick, smooth and un-weathered asphalt**. This condition may be encountered when an existing roof is removed, exposing an asphaltic vapor barrier or leaving asphalt residue.
- b. To ensure proper adhesive attachment, one of the following options may be followed:
  - 1) Prime the surface with CAV-GRIP III, CCW-702, CCW-702LV or CCW-702WB Primer for splatter and bead application.
  - 2) Switch to Full Spray of Flexible DASH Adhesive applied from heated spray rig to increase surface contact. 100% coverage is required. Splatter applications are not accepted.
  - 3) Install VapAir Seal 725TR Air & Vapor Barrier with CAV-GRIP III, CCW-702, CCW-702LV or CCW-702WB Primer over the existing asphalt.
  - 4) Use mechanical securement to attach the first layer of insulation in lieu of adhesive.

## 7. Air Infiltration

- a. On structural concrete decks, gaps between the structural deck and walls and those around penetrations, allows hot humid air from within the building to infiltrate the roofing assembly and possibly condense during the cold season. Lower membrane temperature, especially those associated with white membranes, increase the probability of condensation and promote freezing during low temperatures. Collected frozen moisture trapped above the structural deck when thawed, will eventually lead to weakening of the bottom insulation facer. Weakening of the bottom of the insulation facer can subsequently lead to separation of the foam during a wind event.

It is important to seal gaps around the perimeter and around penetrations, refer to Spec Supplement DR-01-22 “Construction Generated Moisture”, to eliminate moisture infiltration.

- b. The same phenomenon with migrating moisture could occur on steel decks, where gaps are not sealed or vapor retarders are not used. In such a case, condensed moisture could result in insulation gapping, rusting of metal fasteners or steel decks and cause insulation to become wet. Refer to Spec Supplement DR-01-22 “Construction Generated Moisture”.

## C. Roof Deck/Substrate Criteria

Flexible DASH Adhesive can be used to attach insulation to new or tear-off construction over structural concrete, fibrous cement (i.e., Tectum), gypsum, cellular or perlite lightweight insulating concrete (min. 200 psi compressive strength), wood and steel decks.

Flexible DASH Adhesive may also be used to attach insulation to an existing asphalt or coal tar pitch, modified bitumen or mineral surfaced cap sheets as follows:

1. On tear-off projects, the existing roof deck must be investigated and all wet and deteriorated material must be replaced. All loose base sheet material or asphalt must be removed prior to Flexible DASH Adhesive application.
2. The deck surface must be cleaned using compressed air, vacuum equipment or hand/power brooms to remove dust, loose dirt or debris. If excessive dust or dirt is present, a primer may be required prior to application of the adhesive. Contact WeatherBond for specific primer requirements.
3. For new galvanized steel decks, power washing is required to remove finishing oils, if present.
4. For projects with existing Type III or IV asphalt, coal tar pitch, modified bitumen or mineral surface cap sheets, the existing roof must be inspected to determine if moisture is present within the existing assembly. Wet insulation and membrane shall be removed and replaced with compatible materials.
  - a. Blisters, buckles, wrinkles and fishmouths shall be cut out or mechanically fastened.
  - b. Remove loose gravel, dust and residue from a gravel surfaced BUR by using a Hydro-Vac (wet vacuum equipment). Power vacuum equipment or a power sweeper followed by air blowing or another suitable means are also acceptable. Care shall be exercised in areas where evidence of ponding is obvious (remove residue from low areas prior to proceeding).

**CAUTION:** On coal tar pitch, when using white membrane, minimum 1" thick polyisocyanurate is the required membrane underlayment. If gray or tan membrane is used, minimum 1.4" thick polyisocyanurate is required.

**D. Adhesive Coverage Rates**

1. The overall coverage rate for Flexible DASH Adhesive will vary depending on jobsite conditions, product container size, and the substrate as follows:

<b>Flexible Dash Adhesive Coverage Rates</b>					
Approximate Coverage Rate (Sq. Ft.)					
<b>Package Type</b>	<b>Full Spray</b>	<b>Splatter</b>	<b>4" o.c.</b>	<b>6" o.c.</b>	<b>12" o.c.</b>
Dual Cartridges	N/A	N/A	100-200	200-300	400-600
Dual Tanks	N/A	2,600-2,800	1,100-1,300	1,700-1,900	3,500-3,700
5-Gallon Jugs	1,000	1,800-2,000	670-900	1,000-1,250	2,000-2,500
15-Gallon Jugs	1,800-3,000	5,400-6,000	2,110-2,700	3,000-3,750	6,000-7,500
50-Gallon Jugs	5,000-10,000	18,000-20,000	6,700-9,000	10,000-12,500	20,000-25,000



**Fig 1. Full Spray Application**

**2. Full Spray Application and Coverage Rates** (See Figure 1 above)

- a. Flexible DASH is to be dispensed by the appropriate spray rig and gun to achieve 100% coverage of the substrate at a rate of 1 gallon per 100 square feet. Substrate irregularity, which is commonly associated with gravel surface, built-up roofing, may take up to 2 gallons per square to compensate so the insulation boards are fully embedded in tot the Flexible DASH.
- b. To achieve proper coverage, spray in a horizontal, sweeping motion, overlapping each new pass with the previous pass by 50%.



**Fig 2. Bead Application**

**3. Bead Application and Coverage Rates** (See Figure 2 above)

- a. Flexible DASH is to be dispensed in ribbons or beads to achieve spacing approved for specific project conditions (i.e. height, wind zone).



**Fig 3.** Correct Coverage – Splatter Application



**Fig 4.** Light Coverage – Splatter Application

**4. Splatter Application and Coverage Rates** (See Figures 3 and 4 above)

a. Spray Rig and Gun

- 1) Flexible DASH is to be dispensed by the appropriate spray rig and gun to achieve 50% coverage of the substrate at a rate of 1/2 gallon per 100 square feet.
- 2) To achieve proper coverage, spray in a horizontal, sweeping motion, from a minimum 24" height, overlapping each new pass with the previous pass by 50%.
- 3) Adhesive should be applied in large droplets, not a fine mist. Air pressure is too high if the adhesive is in a fine mist.

b. Dual Tanks

- 1) Flexible DASH is to be dispensed using Dual Tanks to achieve 50% coverage of the substrate at a rate of 3.75 lbs per 100 square feet.
- 2) To achieve proper coverage, spray in a horizontal, sweeping motion, from a minimum of 24" height, overlapping each new pass with the previous pass by 50%.
- 3) When applying, the 14" extension nozzle should NOT be used.

**E. Installation Criteria**

1. Check to ensure the substrate is dry. Flexible DASH Adhesive cannot be applied to a wet or damp surface.
2. Dispense Flexible DASH Adhesive over the dry substrate area at the coverage rate indicated previously to allow for full coverage, splatter or proper bead spacing.





3. Allow the adhesive to rise up approximately 1/4" to 3/4", depending on dispensing method, and develop strings prior to setting insulation boards into adhesive.

**Note:** String-time is measured by touching the adhesive with a splice wipe and looking for development of "strings" of adhesive as you pull the splice wipe out of the adhesive. With Flexible DASH Adhesive, string time is generally around 1-1/2 – 2 minutes after application at room temperature.

4. Walk the boards into the adhesive and roll using the 30" wide, 150 lb weighted segmented steel roller to ensure full embedment. The proper roller can be purchased from Rooftop Equipment or one of their distribution partners. Optimal set up time should be approximately 5 to 7 minutes.

**CAUTION:** Walking on the boards immediately after placement in adhesive can cause slippage/movement until the adhesive has started to set up. On roofs with a slope greater than 1/2" in 12", begin adhering insulation at the low point and work upward to avoid slippage. One person should be designated to walk/roll in all boards and trim/slit or apply weight as needed to ensure adequate securement.

**CAUTION:** If boards easily slide, string time has not been achieved.

5. Position all edges of the boards on the top flutes of steel decks for adequate support.
6. If multiple layers of insulation are specified or required, spray, splatter or bead-apply Flexible DASH Adhesive over the base layer once fully secured and follow procedures noted above for attachment of each insulation layer.

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**G-03-23**

## **Fully Adhered Applications Over Lightweight Insulating Concrete For EPDM, TPO and Fleece Membranes**

**January 2024**

*This supplement is to serve as criteria for Specifiers and Contractors regarding Direct Application Over Lightweight Insulating Concrete. For installation details Specifiers and Contractors are advised to reference all applicable specification manuals/details.*

When specified, the EPDM and TPO membranes or Fleece (TPO, PVC or KEE HP) membrane may be fully adhered directly to an approved **cellular or perlite lightweight insulating concrete** with a minimum compressive strength of 225 psi.

- A. EPDM membrane can be fully adhered with WeatherBond's EPDM Bonding Adhesive. WeatherBond's TPO Bonding Adhesive shall be used when using TPO membrane.
- B. Flexible DASH Adhesive must be used when Fleece (TPO, PVC or KEE HP) membrane is specified.
- C. For direct application over **cellular** lightweight insulating concrete, Aqua Base120 can be used as a two-sided contact adhesive with Non-Fleece (EPDM, TPO or PVC) membrane. When Aqua Base 120 Bonding adhesive is specified refer to Spec Supplement G-09-22 "Aqua Base 120 Bonding Adhesive" for Warranty information.

**Note: Use of Fleece membranes in conjunction with Water Based adhesives over lightweight insulating concrete is not permitted.**

Non-Fleece membranes are not to be fully adhered directly to **vermiculite lightweight insulating concrete**. When a Fleece membrane is to be fully adhered directly to **vermiculite lightweight insulating concrete**, Versico must be contacted to determine applicable requirements pertaining to priming, venting, warranty duration and wind speed coverage.

Projects where the Fleece membrane has been approved will be limited to a wind speed coverage of 55 mph peak gust wind speed unless otherwise approved by WeatherBond.

The Authorized Contractor must provide WeatherBond with a copy of a certification letter from the lightweight insulating concrete manufacturer (on new construction projects), which references the project name and location and contains the manufacturer's brand name, minimum compressive strength, average wet and air-dry densities.

### **Application Cautions**

1. The substrate must be dry, free of debris, fins, frost, loose and foreign materials. Fill any gaps in the substrate greater than 1/4" with Flexible DASH Adhesive or VapAir Seal 725TR or VapAir Seal MD (when Fleece membrane is to be used or other appropriate material).
2. Do not proceed with membrane installation until the lightweight insulating concrete has cured a minimum of 48 hours. If necessary, consult with the lightweight insulating concrete manufacturer concerning additional drying time.
3. After rain or other precipitation, follow the manufacturer's requirements concerning proper visual inspection and additional drying time prior to adhering the membrane.

4. Prior to membrane installation, darker areas, especially along hairline cracks in the concrete, may serve as an indication of moisture entrapment and possible standing water beneath the surface. If this condition is found, consult with the lightweight insulating concrete manufacturer for proper corrective measures.
5. Except when lightweight insulating concrete is poured over slotted steel decks, the authorized roofing contractor must conduct core cuts at the minimum rate of 1 every 2,000 square feet. The core cuts should be located around hairline cracks (if present) where darker areas are visible. After core cuts have been taken, the substrate must be examined for evidence of moisture above the structural deck and, if found, a wet/dry vacuum system, as recommended by the lightweight insulating concrete manufacturer, must be utilized to remove standing water from beneath the surface of the concrete.
  - a. To ensure the efficient operation of the vacuum system, a tight seal must be provided between the nozzle of the vacuum and the lightweight concrete substrate.
  - b. WeatherBond's Non-Weldable or Weldable, One-Way Pressure Relief Breather vents, must be installed over each core cut in accordance with WeatherBond Detail. See Spec Supplement P-01-22 "Related Products" for more information.

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# WEATHERBOND ROOFING SYSTEMS

**G-04-23**

## **Flashing Considerations / Metal Work**

**January 2024**

*This supplement is to serve as criteria for Specifiers and Contractors regarding flashing of walls, curbs, metal work, pipes, drains and other penetrations for EPDM and Thermoplastic membranes. For individual roofing system information, Specifiers and Contractors are advised to reference the appropriate roofing system specification and associated roofing details.*

### **A. General Flashing Considerations**

1. WeatherBond's Termination Bar in conjunction with Water Cut-Off Mastic, should be specified under all metal counterflashings.
2. The height of the new wall flashing and termination must extend above the anticipated water level (due to heavy rain) or slush line (due to water under accumulated snow).
3. All existing loose flashing must be removed prior to the application of new membrane. New membrane flashing must extend above all existing intact flashing but must not conceal weep holes or cover existing through wall counterflashing.
4. Install surface mounted reglets and compression bar terminations directly to the wall surface.
5. Bitumen based roof cement must be removed or concealed with an acceptable underlayment.

**CAUTION:** Residual asphalt left on walls and curbs could cause discoloration of white membrane.

6. Deck to wall joints, vertical joints between tilt up panels, and any gaps in metal walls must be sealed to prevent any infiltration and possible condensations beneath the membrane.
7. The Specifier must examine structural supports for rooftop equipment to determine if reasonable access to the membrane beneath the equipment is provided.
8. When sleepers are used for mounting rooftop equipment, they must be designed to provide adequate support. An appropriate detail must be selected to prevent depression of the insulation and possible damage to the membrane.
9. Depending on the type of the existing roofing system, the tie in method will vary. Total isolation between the two roofing systems or weep holes may be required to address moisture migration from one roofing system to the other. For PVC membrane total isolation between the two roofing systems is required.
10. Flexible penetrations (braided cables, conduits, wires, etc.) must be enclosed in a stable gooseneck.
11. Hot pipes exceeding the temperatures greater than those included in the "chart" below must be insulated with metal collars and rain hoods. Ensure that rain hood does not fit snug around insulated collars to allow for adequate air circulation.

Hot Pipe Limitations	
Membrane	Temperature
EPDM	180°F
TPO	160°F
PVC	140°F

12. On Mechanically Attached assemblies, additional membrane securement is required around pipes and sealant pockets as shown on applicable details. Fastening plates must be positioned a maximum of 12" away from the penetration, spaced a maximum of 12" on center and flashed in accordance with the applicable WeatherBond Detail.

## B. Application of Bonding Adhesive

Use appropriate adhesive for the membrane selected.

1. Membrane shall be fully adhered to vertical surfaces with appropriate bonding adhesive. The Bonding Adhesive shall be applied continuously, without globs or puddles.
2. After the Bonding Adhesive has properly dried, roll the membrane into the adhesive.
3. Care must be taken when setting the flashing to avoid bridging greater than 3/4 inch at angle changes (i.e., where a parapet or roof penetration meets the roof deck). This can be accomplished by creasing the membrane into the angle change.
4. Terminate the edges of the installed membrane in accordance with WeatherBond's applicable Termination Details.

## C. Roof Drains

1. Provide a smooth transition from the roof surface to the drain clamping ring. Prepare the substrate around each roof drain to avoid membrane bridging in excess of 2" at the sump area and possible distortion at the drain clamping ring.
2. For drain sumps with slopes greater than 3" in 12":
  - a. When reinforced EPDM membrane is specified a separate piece of cured non-reinforced EPDM membrane must be extended into the drain sump as shown on the applicable detail.
  - b. When thermoplastic membrane has been specified, a separate piece of appropriate thermoplastic reinforced membrane must be extended into the drain sump as shown on the applicable detail.
3. The mating surfaces between the clamping ring and drain base must be clean and have a smooth finish.
4. Field splices at roof drains must be located at least 6" outside the drain sump.
5. Cut membrane so it extends approximately 1/2" beyond the attachment points of the clamping ring. The hole in the membrane must not restrict water flow or be smaller than the drain pipe.
6. Remove all existing flashing material to prepare for the membrane seal (application of Water Cut-Off Mastic).
7. All bolts and/or clamps must be in place to provide compression on the Water Cut-Off Mastic.
8. Use drain strainers, which have been approved by the specifier in accordance with applicable codes.

## D. Metal Work

1. WeatherBond recommends Metal Edging/Coping, Termination Bar or Drip Edge for membrane termination.

**Note:** Refer to Tables in applicable membrane system specification for metal edge requirements for projects with extended peak gust wind speed coverage greater than 80 miles per hour.

2. When specified, shop fabricated coated metal configured and installed as shown in Thermoplastic Edge Details will achieve ES-1 Compliance.

3. Metal work by others must be fastened to prevent metal from pulling free or buckling and sealed to prevent moisture from entering the roofing system or building. Unless supplied by WeatherBond, metal work securement is not included in this specification. Refer to Spec Supplement G-10-11 "Metal Edging" for recommended design parameters.
4. On retrofit projects, existing counterflashing, edging, expansion joint covers, copings, etc., shall not be reused unless investigated by the specifier to determine its compliance to WeatherBond's current details.

## E. EPDM Flashing Installation Criteria

### 1. General

- a. **Peel & Stick Uncured EPDM Flashing** must be limited to the overlayment of vertical seams (as required at angle changes), or to flash inside/outside corners, vent pipes, scuppers and other unusually shaped penetrations where the use of Pre-molded Pipe Seals, cured EPDM membrane or Peel & Stick Cured Cover Strip is not practical.

**Note:** Even when working in warmer temperatures, in most cases a heat gun will be required to elevate the temperature of Peel & Stick Uncured EPDM Flashing between 105°F and 110°F (40°C and 43°C) to permit proper forming of the uncured flashing.

- b. **Peel & Stick Cured Cover Strip** is used to overlay Seam Fastening Plates or metal edging flanges, etc., **Primer** must be used to clean the membrane and metal flanges.

### 2. Walls, Parapets, Curbs, Skylights, etc.

- a. Continuous deck membrane for wall flashing.
  - 1) When using Peel & Stick RPS (Reinforced Perimeter Strip) secure with proper seam fastening plates and fasteners at a rate of 12-inches on center at the base of the wall. Adhere flashing to Peel & Stick RPS and the wall. Terminate the membrane in accordance with the applicable Termination Details.
  - 2) When securing the membrane at the base of the wall with proper seam fastening plates and fasteners through the continuous deck membrane, use minimum 6" wide Peel & Stick Cured Cover Strip to overlay fasteners and plates.
- b. When the use of continuous deck membrane for wall flashing is not feasible, a separate piece of cured EPDM membrane may be used.
  - 1) When Peel & Stick **Seam Tape** is used, the **membrane and flashing** (Cured EPDM Flashing) must be cleaned with **Primer**.
- c. All vertical field splices at the base of a wall or curb must be overlaid with Peel & Stick "T" Joint Covers or a 6" by 6" section (with rounded corners) of Peel & Stick Uncured EPDM Flashing centered over the field splice.

### 3. Other Penetrations

**CAUTION:** The WeatherBond appropriate flashing detail should be referenced for specific requirements.

- a. Flash pipes and round supports with Molded Pipe Seals or Peel & Stick Pipe Seals, when feasible, in accordance with the applicable detail.
- b. Form Field Fabricated Pipe Seals using Peel & Stick Uncured EPDM Flashing around pipes, round supports and structural steel tubing with corner radius greater than 1/4".
- c. When flashing seamless metal posts, maximum 4" by 4", with a corner radius less than 1/4", apply a field fabricated pipe flashing with a double vertical wrapping.
- d. For pipe clusters or unusually shaped penetrations, a pourable sealer pocket must be utilized.

## F. Thermoplastic Flashing Installation Criteria

### 1. General

- a. Where feasible, Pre-Molded Accessories should be used for corners, pipes, curbs, and sealant pockets. Refer to Spec Supplement P-01-11 Related WeatherBond Products.
- b. Non-reinforced thermoplastic membrane can be used for flashing pipe penetrations, Sealant Pockets and scuppers as well as inside and outside corners when the use of Pre-Molded Accessories is not feasible.
- c. Care must be taken when setting the flashing to avoid bridging greater than 3/4 inch at angle changes (i.e., where a parapet or roof penetration meets the roof deck). This can be accomplished by creasing the membrane into the angle change.
- d. For Thermoplastic membranes, when possible, all reinforced membrane splices are heat welded with the Automatic Heat Welder. The Hand Held Hot Air Welder should be utilized in hard to reach areas, smaller curbs, vertical splices and when using non-reinforced membrane.
- e. Cut edges of TPO membrane, where scrim reinforcement is exposed, must be sealed with Cut-Edge Sealant (not required on vertical surfaces). Cut edges of PVC membrane are not required to be sealed with Cut-Edge Sealant, however, it is recommended.
- f. When flashing walls with PVC membrane, bitumen based roof cement must be removed or concealed with an acceptable underlayment. Bitumen based roof cement and asphaltic-based flashing material, if allowed to remain in contact with a PVC membrane, will cause severe membrane discoloration and promote plasticizer migration.

### 2. Walls, Parapets, Curbs, Skylights, etc.

- a. For Thermoplastic membranes, flashing of parapets, curbs, expansion joints and other parts of the roof must be the appropriate thermoplastic reinforced membrane.
- b. For Thermoplastic membranes, the flashing height must be calculated so that the membrane flashing includes a minimum 1-1/2 inch heat weld beyond the Fastening Plates.
- c. Fasten at angle change as with the required WeatherBond Fastener and plate.
- d. Flash the fasteners/plates with a separate piece of thermoplastic reinforced membrane; apply heat and crease the flashing into the angle change before attaching it to the vertical surface.

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# WEATHERBOND ROOFING SYSTEMS

**G-05-23**

## **Roof Walkway Installation**

**January 2024**

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### **A. Roof Walkways**

Walkways are to be specified at all traffic concentration points (i.e., roof hatches, access doors, rooftop ladders, etc.), and if regular maintenance (once a month or more) is necessary to service rooftop equipment.

#### 1. Walkway types:

- a. **WeatherBond Peel & stick Molded Walkway Pads:** WeatherBond molded walkway pads with Factory-Applied Seam Tape are used to provide protection for areas of EPDM membrane that are exposed to regular rooftop maintenance.

**CAUTION:** Molded Walkway pads not recommended within 10 feet of the perimeter of the roof on ballasted systems to avoid discontinuation of the primary membrane securement (ballast). In lieu of molded walkway pads, concrete pavers can be used when walkway is to be extended into the perimeter area. Refer to paragraph A.1.e. below.

- b. **WeatherBond TPO Heat Weldable Walkway Rolls** are required when walkway pads are to be specified. The Walkway Rolls are heat welded to the WeatherBond TPO membrane using an Automated Heat Welder or Hand-Held Heat Welder. Walkway Rolls are 34 inches wide by 50 feet long and are nominal 80 mils thick. Available in white, gray or tan.
  - c. **WeatherBond PVC Heat Weldable Walkway Rolls** are required when walkway pads are to be specified. The Walkway Rolls are heat welded to the WeatherBond PVC membrane using an Automated Heat Welder or Hand-Held Heat Welder. Walkway Rolls are 36 inches wide by 60 feet long and are nominal 90 mils thick. Available in gray only.
  - d. **WeatherBond Interlocking Pavers**, 24" X 24" X 2", weighing approximately 6 pounds per square foot, may be specified loose laid directly over the membrane. Installation Instruction sheets are available from WeatherBond.
  - e. **Smooth concrete pavers**, when specified in conjunction with insulation that is mechanically attached, must be loose laid over a slip sheet of membrane or 2 layers of HP Protective Mat. When insulation is attached with Flexible DASH Adhesive, concrete pavers may be placed over one layer of HP Protective Mat. Pavers cannot weigh more than 80 pounds per paver for ease of removal. For other applicable WeatherBond products refer to Technical Data Bulletins for information.
2. Pavers are not recommended for use as walkways on projects where the roof slope exceeds 2 inches per horizontal foot.

3. Window washing equipment will require special maintenance. Runways or window washing tracks must be utilized to prevent damage to membrane or insulation. Such details must be reviewed by WeatherBond to determine reasonable access to the membrane and associated insulation/underlayment components.

**NOTE:** Pavers are not recommended for use as walkways where slippery conditions may be encountered. Paver slippage may occur due to the lower membrane surface temperature and the presence of frost or ice.

## B. Walkway Installation

1. Install walkways in those locations as designated by the specifier.
2. WeatherBond Peel & stick Molded Walkway Pads
  - a. Use Weathered Membrane Cleaner to remove dirt or other contaminants from the area.
  - b. Adhere Walkway Pads using WeatherBond EPDM Primer. Apply primer to deck surface where tape will contact deck surface.
  - c. Allow a 1" wide break between Walkway Pads. Discontinue Walkways over field splices allowing a minimum 1" space.
3. WeatherBond TPO/WeatherBond PVC Heat Weldable Walkway Rolls
  - a. Use Weathered Membrane Cleaner (TPO) or PVC Membrane Cleaner (PVC) to remove dirt or other contaminants from the area to be welded to the walkway material.
  - b. Position the walkway material and cut the Walkway Rolls into maximum 10' lengths (when positioned parallel to field splices) and position with a minimum 1" gap between adjacent pieces to allow for water drainage. When walkways are to be installed perpendicular to field splices, adjust walkway length to provide a 4" - 6" minimum gap at field splices. (Because the attachment of the walkway to the membrane is permanent, this will allow access to the field seams).
  - c. Using an Automatic Heat Welder, weld all 4 sides of the walkway material to the membrane. (Typically the same speed and temperature settings will be used for this procedure as for welding membrane to membrane. A test weld is always recommended prior to performing welds to the installed membrane). A hand held welder may be utilized however, productivity will be decreased.  
  
If, possible, allow the walkway to warm by the sun prior to welding so distortion will not occur due to expansion.
4. Concrete Paver Blocks
  - a. Install a slip-sheet of roofing membrane under all concrete pavers for the protection of the deck membrane. The protective layer must extend a minimum of 2" on each side of the walkway.
5. Interlocking Rubber Pavers can be loose laid directly over the membrane.

**NOTE:** Pavers are not recommended for walkways when slopes exceed 2" per horizontal foot. Slippage could be encountered during colder seasons.

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**G-06-23**

## **Daily Seal & Clean Up**

**January 2024**

*The information contained in this supplement serves as a criteria for Specifiers and Contractors regarding the design and installation of WeatherBond Roofing Systems and related products. Additional information essential for the design and installation of the Roof Systems mentioned herein are also included in the respective Specification for each Roof System and in the Design Reference Section of the WeatherBond Specification. Specifiers and Contractors are advised to reference all applicable sections.*

### **A. Daily Seal**

1. On phased roofing, when the completion of flashings and terminations is not possible by the end of each workday, provisions must be taken to temporarily close the membrane to prevent water infiltration.
2. Temporarily seal any loose membrane edge down slope using WeatherBond Two Part Pourable Sealer (EPDM only), Flexible DASH Adhesive, hot asphalt, or a similar product so that the membrane edge will not buck water. Caution must be exercised to ensure positive draining during installation, temporary seal locations should be designated so that drainage is not restricted during construction by partially installed roof sections.
  - a. When applying Flexible DASH Adhesive or other sprayed urethane foam, prime the surface of the membrane with WeatherBond Primer to ensure proper adhesion
  - b. WeatherBond Pourable Sealer, when utilized, shall be applied as follows:
    - 1) The two Pourable Sealer components must be mixed in accordance with the instructions on the container labels.
    - 2) Apply the Pourable Sealer along the loose edge of the EPDM membrane. If necessary, use a trowel to spread Pourable Sealer to achieve complete coverage.
3. When tie-in to existing built-up roofs, remove the gravel. The surface must be clean and dry.
4. After embedding membrane in daily seal material, CHECK FOR CONTINUOUS CONTACT. Provide continuous pressure over the length of the temporary seal with 15' lengths of 2-1/2" diameter Lay Flat Tubing filled with dry sand. Provide weight evenly distributed along the length of the daily seal to reduce the wind effect on the continuous temporary seal.

**Note:** The use of rigid wood nailers is not recommended due to warping. Constant compression cannot be achieved on an uneven substrate.

5. When work is resumed, pull the imbedded membrane free; trim and remove daily seal material from membrane before continuing installation of adjoining sections.

## B. Clean Up

1. If required by the specifier to ensure the aesthetics of the surface of the membrane, hand prints, footprints, general traffic grime, industrial pollutants and environmental dirt may be cleaned from the surface of the membrane by scrubbing with soapy (non-abrasive soap) water and rinsing the area completely with clean water.
  - a. For WeatherBond EPDM membrane (black or white) or WeatherBond TPO membrane, Weathered Membrane Cleaner can be used to clean the surface of the membrane.
  - b. For WeatherBond PVC membrane, PVC Membrane Cleaner can be used to clean the surface of the membrane.
2. Bonding Adhesive and Flexible DASH Adhesive residue may be cleaned by using the following procedures:
  - a. Saturate a clean Splice Wipe with Weathered Membrane Cleaner (EPDM and TPO) or PVC Membrane Cleaner (PVC).
  - b. Scrub exposed adhesive with the saturated Splice Wipe until all residue is removed from the membrane. For easier removal, it may be necessary to change Splice Wipes frequently.

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G-07-23

## Application Procedures for 725TR Air and Vapor Barrier

January 2024

*The information contained in this supplement serves as a criteria for Specifiers and Contractors regarding the design and installation of WeatherBond Roofing Systems and related products. Additional information essential for the design and installation of the Roof Systems mentioned herein are also included in the respective Specification for each Roof System and in the Design Reference Section of the WeatherBond Specification. Specifiers and Contractors are advised to reference all applicable sections.*

### A. General

1. **725TR Air and Vapor Barrier** A 40-mil thick composite consisting of 35-mil self-adhering rubberized asphalt membrane laminated to an 5-mil UV resistant poly film with an anti-skid surface which is fully compatible with DASH Adhesive. 725TR can also function as a temporary roof for up to 120 days. Available in rolls 39" wide by 75' long (244 square feet).
2. **CAV-GRIP III Low-VOC Aerosol Contact Adhesive/Primer:** a low-VOC, spray-applied aerosol contact adhesive and primer used for a variety of applications: adhering standard WeatherBond TPO and WeatherBond EPDM membranes to horizontal and vertical surfaces, adhering WeatherBond Fleece membranes to vertical surfaces, as a primer for VapAir Seal 725TR, and as an unexposed asphalt primer for Flexible DASH for insulation attachment.
3. **CCW 702 Primer and 702LV Primer (Low VOC)** - A single component, solvent based, high tack primer used to provide maximum adhesion between 725TR Air and Vapor Barrier and an approved substrate. Applied by spray or long nap roller with a coverage rating ranging from approximately 300 to 350 square feet per gallon on smooth finishes (i.e., concrete) to 75 square feet per gallon on porous surfaces (i.e., Dens-Deck Prime gypsum board). Available in 5-gallon containers. CCW 702LV Primer contains less than 250g/L VOCs and meets South Coast Air Quality Management District (SCAQMD) and Leadership in Energy and Environmental Design (LEED) Requirements for Volatile Organic Compounds.

### B. Approved Substrates

725TR Air and Vapor Barrier, in conjunction with either CAV-GRIP III or 702 Primers, can be used over structural concrete, gypsum and wood decks. In addition, Securock/Dens-Deck Prime (typically used over steel deck construction) is a suitable substrate providing it is mechanically attached to the deck at the minimum rate of 1 per 2 per square foot or adhered to the deck with Flexible DASH Adhesive per WeatherBond Specifications.

**CAUTION:** Use of standard Dens-Deck is not recommended due to excessive primer absorption. When the use of standard Dens-Deck is specified, two coats of CAV-GRIP III Primer will be required along with a trial test to verify adequate adhesion of the 725TR Air and Vapor Barrier.

### C. Limitations

1. Do not apply primer or vapor barrier to frozen substrates. Best results are obtained when temperature is above 40°F (4°C).
2. Do not apply primer or vapor barrier to damp or contaminated surfaces.
3. 725TR Air and Vapor Barrier is not recommended for use over sealants containing coal tar or polysulfides. If these materials are present, they must be removed and the surfaces thoroughly cleaned.

## D. Installation

1. **Surface Preparation:** Concrete shall be in place for 7 days minimum and the substrate must be dry. The surface shall have a smooth finish and be free of voids, spalled areas, sharp protrusions, loose aggregate, laitance and form release agents. In the event of rain, concrete must be allowed to dry before primer is applied.
2. **Primer:** Surfaces to receive 725TR Air and Vapor Barrier must be clean and dry. Prime with CAV-GRIP III, 702 or 702LV Primer. Apply Primer by spray, brush or with a long nap roller at the applicable coverage rate noted above. At 75° F allow primer to dry 1 hour minimum. Primer has a satisfactory cure when it will not transfer when touched. Prime only areas to be waterproofed the same day. Re-prime if area becomes dirty.
3. **Application:** Apply 725TR Air and Vapor Barrier from low to high point, in a shingle fashion, so that laps will shed water. Overlap all edges at least 2-1/2". End laps shall be staggered. Place membrane carefully so as to avoid wrinkles and fishmouths. Immediately after installation, roll with a 100-150 pound weighted steel roller.
4. **Repairs:** Following application, inspect 725TR membrane for tears, punctures, fishmouths, air bubbles and voids due to misalignment at seams. Remove damaged membrane. Prime exposed substrate and allow primer to dry. Apply a new section of 725TR Air and Vapor Barrier to primed substrate, extending onto adhered membrane 6" on all sides. Firmly press air and vapor barrier repair section to ensure a good seal. Slit fishmouths and overlap the edges. Place a section of 725TR over the repair and extend 6" in all directions. Firmly press repair section to ensure a good seal.
5. **Insulation Installation:** Ensure surface of 725TR Air and Vapor Barrier is dry prior to installing insulation. Place insulation over the surface and mechanically attach to the roof deck or adhere to the vapor barrier with Flexible DASH Adhesive in accordance with this WeatherBond Specification.

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Securock is a Trademark of USG Corporation

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# WEATHERBOND ROOFING SYSTEMS

G-08-23

## Insulation Attachment and Details

January 2024

*The information contained in this supplement serves as a criteria for Specifiers and Contractors regarding the design and installation of WeatherBond Roofing Systems and related products. Additional information essential for the design and installation of the Roof Systems mentioned herein are also included in the respective Specification for each Roof System and in the Design Reference Section of the WeatherBond Specification. Specifiers and Contractors are advised to reference all applicable sections.*

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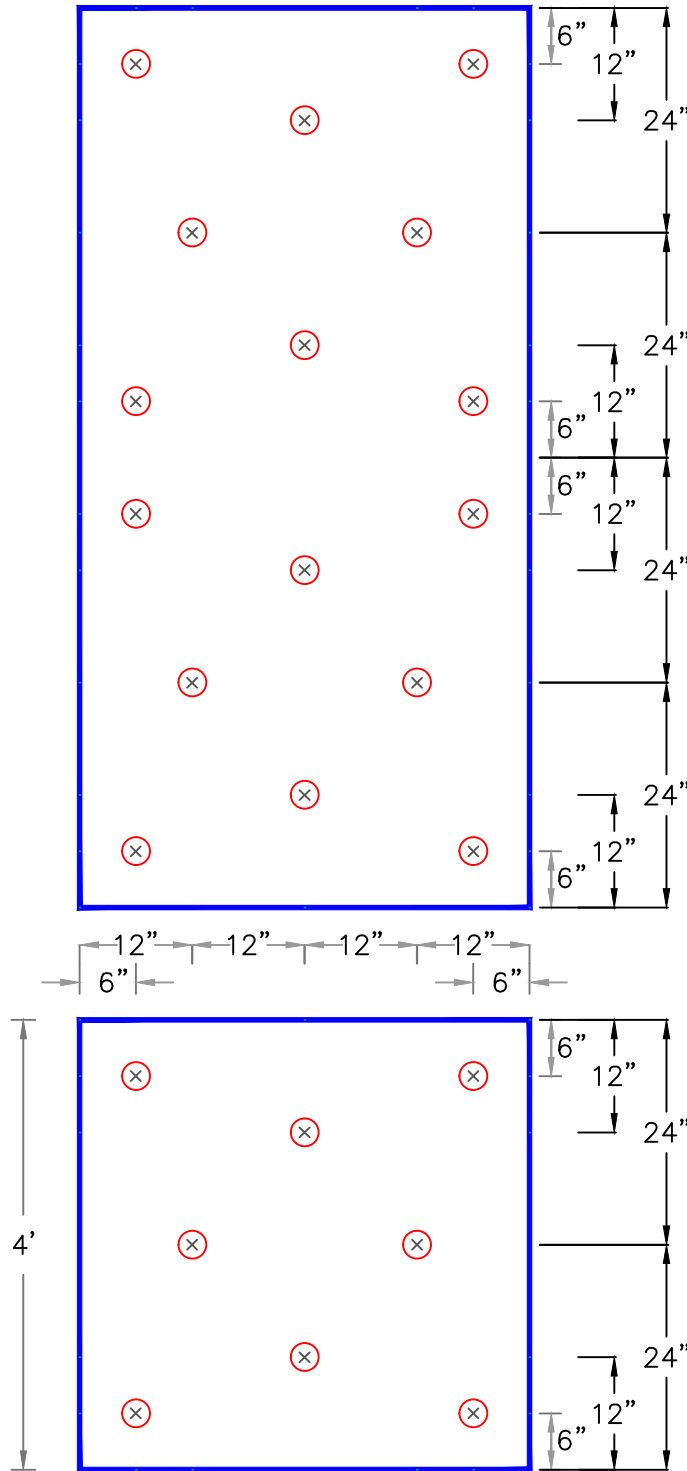
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NOTES:

1. WHEN ENHANCED INSULATION FASTENING IS REQUIRED AS PRESCRIBED IN FACTORY MUTUAL LOSS PREVENTION DATA SHEET 1-29, ANSI/SPRI WD-1, OR MIAMI-DADE COUNTY, REFER TO [WEATHERBOND'S DESIGN REFERENCE DR-05-11](#).
2. FOR CRITERIA ON INSULATION FASTENERS AND PLATES, REFER TO WEATHERBOND SPECIFICATIONS.

FEET TO CENTIMETERS		INCHES TO CENTIMETERS																				
4'	8'	inch	1/8"	1/4"	15/32"	1/2"	5/8"	3/4"	1"	1.5"	2"	2.5"	3"	4"	6"	8"	9"	11"	12"	18"	24"	36"
120	240	cm	0.5	1	1.2	1.5	1.6	2	2.5	4	5	6.5	7.5	10	15	20	23	28	30	46	61	91

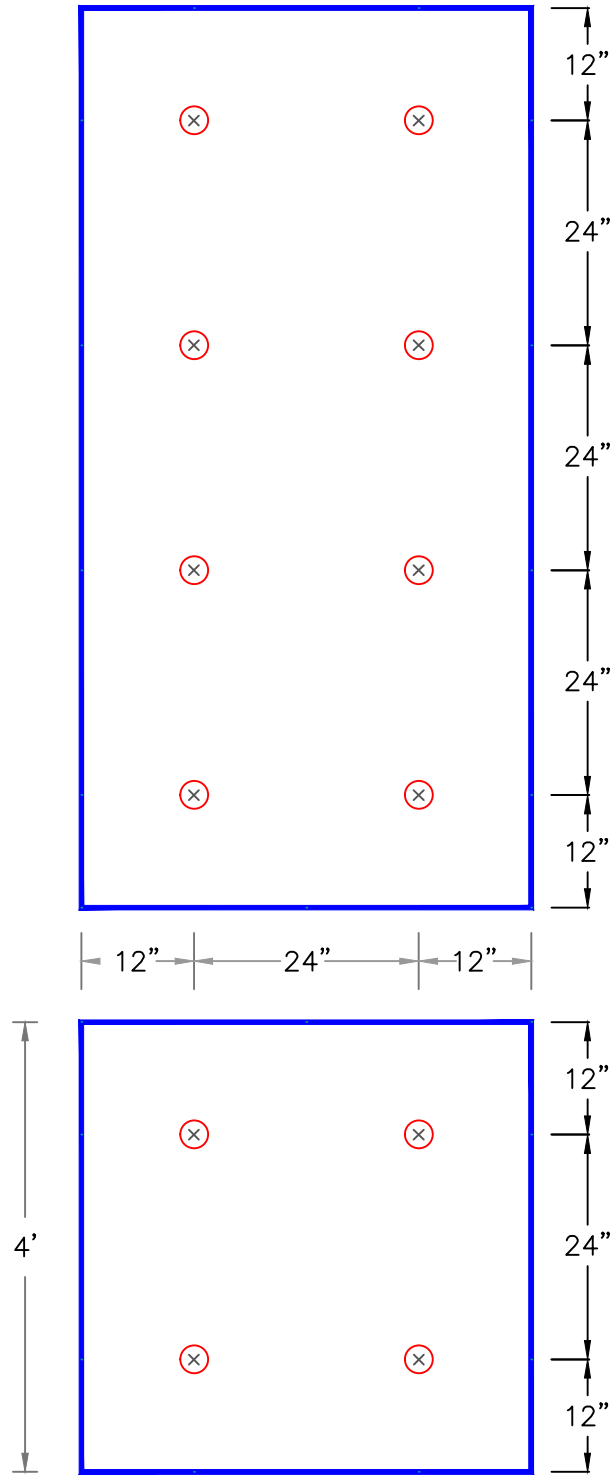


**WEATHERBOND INSULATION/ COVER BOARD ATTACHMENT**

 → MEMBRANE  
 → APPROVED SUBSTRATE  
 → SEE NOTE(S)

SPEC. SUPPLEMENT

A-27.1






NOTES:

- THIS DETAIL APPLIES TO MIN. 2" (51mm) THICK (SINGLE OR TOP LAYER) WEATHERBOND POLYISOCYANURATE INSULATION WHEN FASTENED INTO 22-GAUGE (0.8mm) STEEL, STRUCTURAL CONCRETE, MINIMUM 15/32" (12mm) PLYWOOD OR 1-1/2" (38mm) THICK WOOD PLANK ROOF DECKS.
- WHEN ENHANCED INSULATION FASTENING IS REQUIRED AS PRESCRIBED IN FACTORY MUTUAL LOSS PREVENTION DATA SHEET 1-29, ANSI/SPRI WD-1 OR MIAMI-DADE COUNTY, REFER TO [WEATHERBOND'S DESIGN REFERENCE DR-05-11.](#)
- FOR CRITERIA ON INSULATION FASTENERS AND PLATES, REFER TO WEATHERBOND SPECIFICATIONS.
- DETAIL NOT FOR USE OVER ORIENTED STRAND BOARD, GYPSUM, CEMENTITIOUS WOOD FIBER (TECTUM), LIGHTWEIGHT INSULATING CONCRETE OR STEEL ROOF DECK THINNER THAN 22-GAUGE (0.8mm), [REFER TO DETAIL A-27A](#) FOR ACCEPTABLE FASTENING.

FEET TO CENTIMETERS		INCHES TO CENTIMETERS																				
4'	8'	inch	1/8"	1/4"	15/32"	1/2"	5/8"	3/4"	1"	1.5"	2"	2.5"	3"	4"	6"	8"	9"	11"	12"	18"	24"	36"
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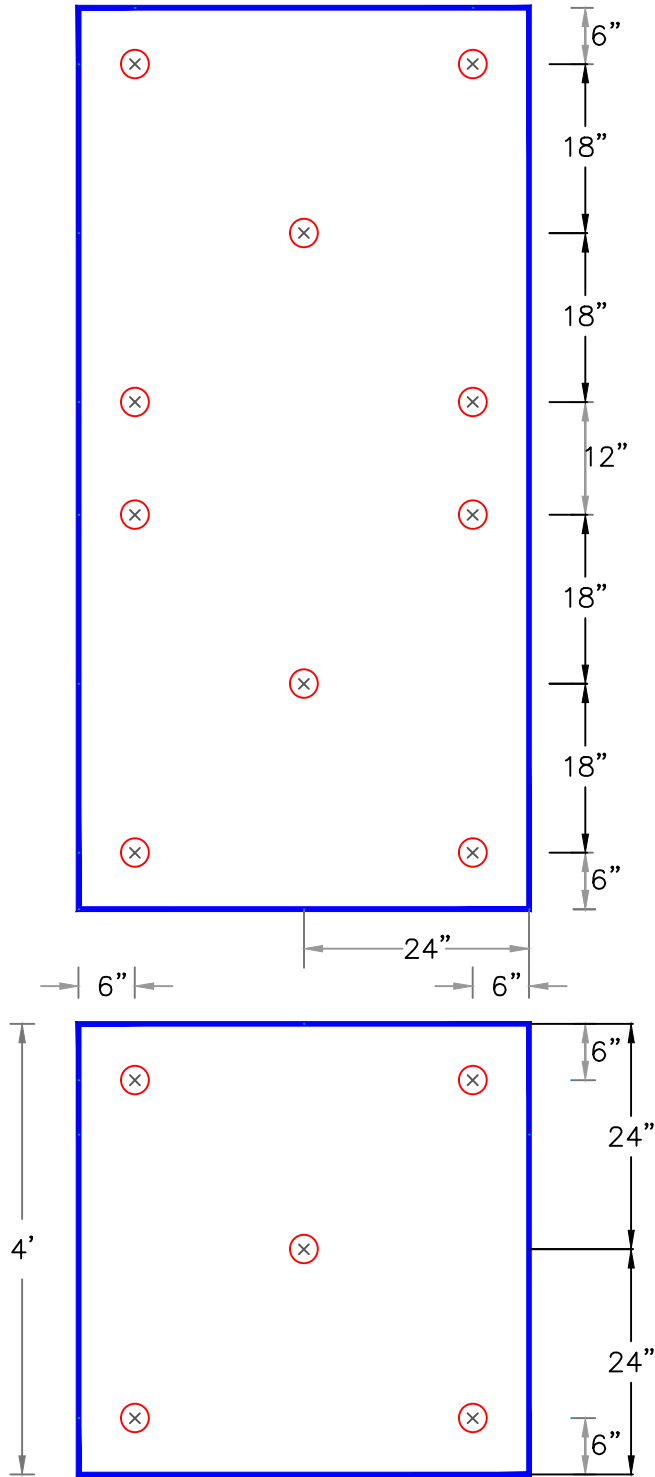


**MINIMUM 2" THICK WEATHERBOND HP-H / INSULBASE / SECUREFIELD POLYISOCYANURATE INSULATION**

 → MEMBRANE  
 → APPROVED SUBSTRATE  
 → SEE NOTE(S)

SPEC. SUPPLEMENT

A-27.2






NOTES:

1. THIS DETAIL APPLIES TO MIN. 1-1/2" (38mm) THICK (SINGLE OR TOP LAYER) WEATHERBOND POLYISOCYANURATE INSULATION WHEN FASTENED INTO 22-GAUGE (0.8mm) STEEL, STRUCTURAL CONCRETE, MINIMUM 15/32" (12mm) PLYWOOD OR 1-1/2" (38mm) THICK WOOD PLANK ROOF DECKS.
2. WHEN ENHANCED INSULATION FASTENING IS REQUIRED AS PRESCRIBED IN FACTORY MUTUAL LOSS PREVENTION DATA SHEET 1-29, ANSI/SPRI WD-1 OR [WEATHERBOND'S DESIGN REFERENCE DR-05-11.](#)
3. FOR CRITERIA ON INSULATION FASTENERS AND PLATES, REFER TO WEATHERBOND SPECIFICATIONS.
4. THIS DETAIL NOT FOR USE OVER ORIENTED STRAND BOARD, GYPSUM, FIBROUS CEMENT (TECTUM), LIGHTWEIGHT INSULATING CONCRETE OR STEEL ROOF DECK THINNER THAN 22-GAUGE (0.8mm), [REFER TO DETAIL A-27.1](#) FOR ACCEPTABLE FASTENING.

FEET TO CENTIMETERS		INCHES TO CENTIMETERS																				
4'	8'	inch	1/8"	1/4"	15/32"	1/2"	5/8"	3/4"	1"	1.5"	2"	2.5"	3"	4"	6"	8"	9"	11"	12"	18"	24"	36"
120	240	cm	0.5	1	1.2	1.5	1.6	2	2.5	4	5	6.5	7.5	10	15	20	23	28	30	46	61	91

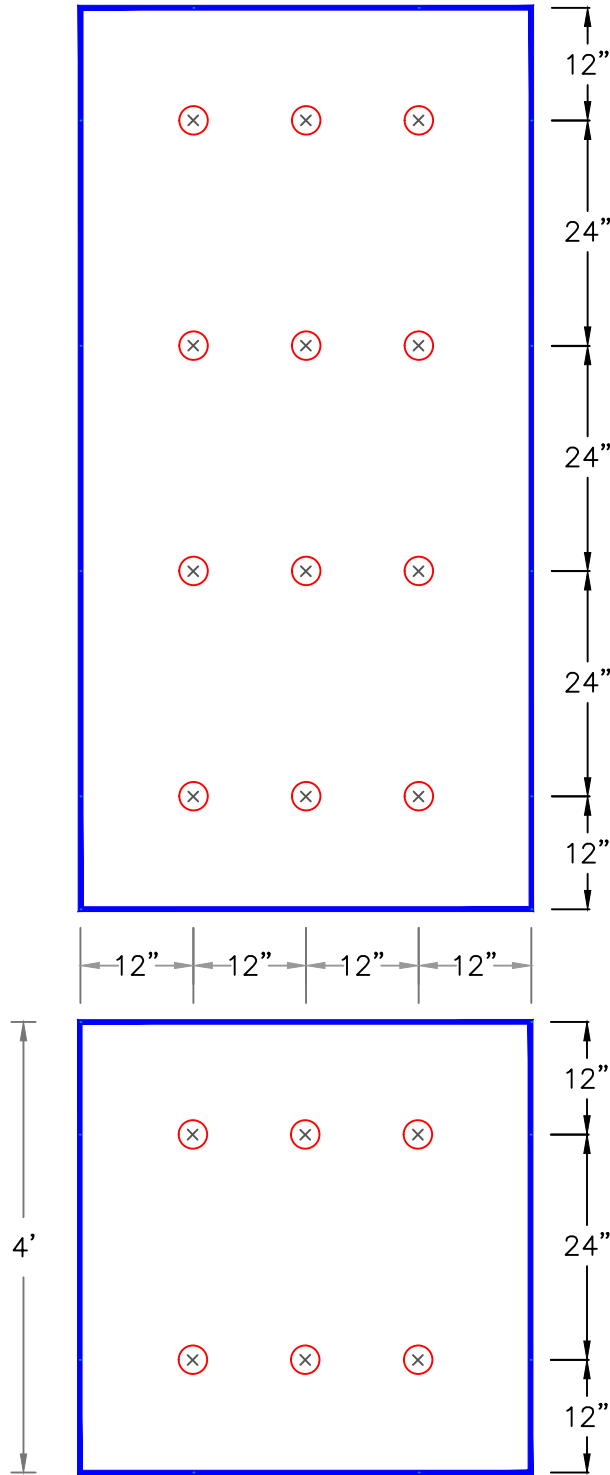


**MINIMUM 1-1/2" THICK WEATHERBOND HP-H / INSULBASE / SECURSHIELD POLYISOCYANURATE INSULATION**

 → MEMBRANE  
 → APPROVED SUBSTRATE  
 → SEE NOTE(S)

SPEC. SUPPLEMENT

A-27.3






NOTES:

1. THIS DETAIL APPLIES TO 1/4" (6mm) AND 1/2" (13mm) THICK SECUROCK OR DENS DECK PRIME (OVER AN APPROVED INSULATION) WHEN FASTENED INTO 22-GAUGE (0.8mm) STEEL, STRUCTURAL CONCRETE, MINIMUM 15/32" (12mm) PLYWOOD OR 1-1/2"(38mm) THICK WOOD PLANK ROOF DECKS.
2. WHEN ENHANCED FASTENING IS REQUIRED AS PRESCRIBED IN FACTORY MUTUAL LOSS PREVENTION DATA SHEET 1-29, ANSI/SPRI WD-1 OR MIAMI-DADE COUNTY, REFER TO [WEATHERBOND'S DESIGN REFERENCE DR-05-11](#).
3. FOR CRITERIA ON INSULATION FASTENERS AND PLATES, REFER TO WEATHERBOND SPECIFICATIONS.
4. DETAIL NOT FOR USE OVER ORIENTED STRAND BOARD, GYPSUM, FIBROUS CEMENT (TECTUM), LIGHTWEIGHT INSULATING CONCRETE OR STEEL ROOF DECK LESS THAN 22-GAUGE (0.8mm), [REFER TO DETAIL A-27.1](#) FOR ACCEPTABLE FASTENING.
5. WHEN INSTALLED OVER COMBUSTIBLE WOOD DECKS OR INSULATIONS, ALL JOINTS SHALL BE STAGGERED.
6. LONG UNINTERRUPTED RUNS GREATER THAN 200' (>61 METERS) OF SECUROCK MAY REQUIRE SLIGHT GAPPING DUE TO THERMAL EXPANSION.

FEET TO CENTIMETERS		INCHES TO CENTIMETERS																				
4'	8'	inch	1/8"	1/4"	15/32"	1/2"	5/8"	3/4"	1"	1.5"	2"	2.5"	3"	4"	6"	8"	9"	11"	12"	18"	24"	36"
120	240	cm	0.5	1	1.2	1.5	1.6	2	2.5	4	5	6.5	7.5	10	15	20	23	28	30	46	61	91

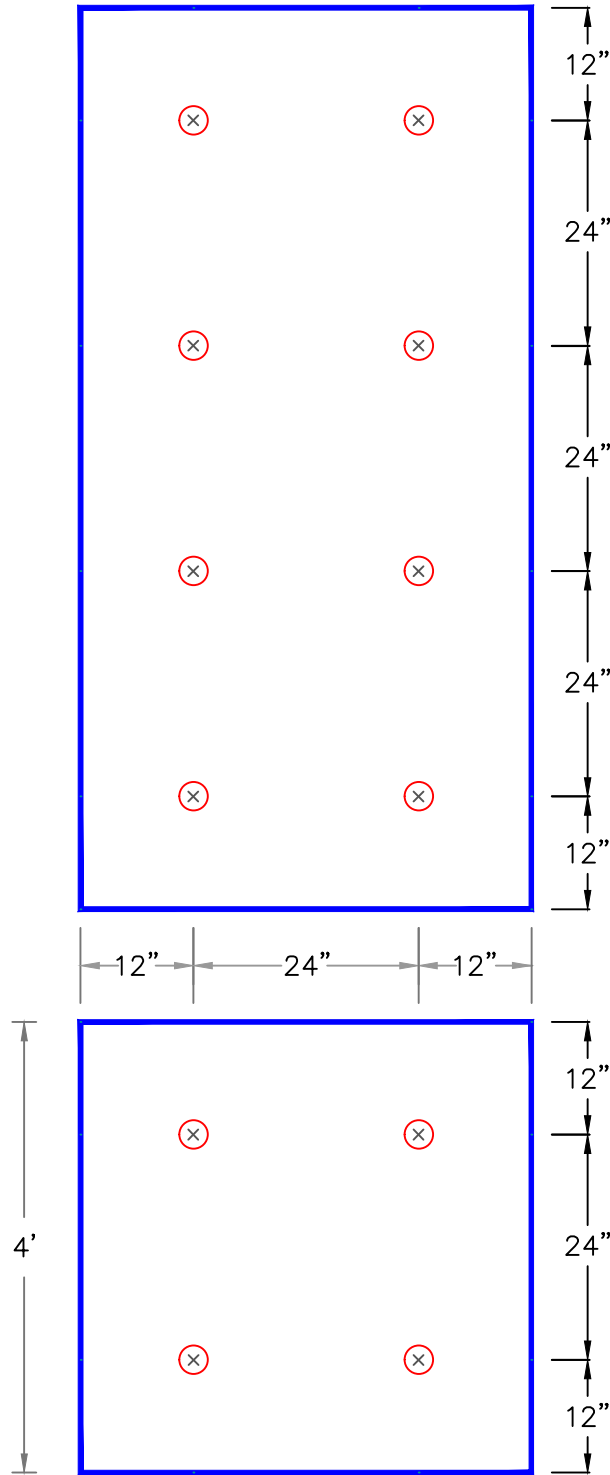


**1/4" OR 1/2" THICK SECUROCK OR DENS DECK PRIME**

 → MEMBRANE  
 → APPROVED SUBSTRATE  
 → SEE NOTE(S)

SPEC. SUPPLEMENT

**A-27.4**






NOTES:

1. THIS DETAIL APPLIES TO 5/8" (16mm) THICK SECUROCK OR DENS DECK PRIME (OVER AN APPROVED INSULATION) WHEN FASTENED INTO 22-GAUGE STEEL, STRUCTURAL CONCRETE, MINIMUM 15/32" (12mm) PLYWOOD OR 1-1/2" (38mm) THICK WOOD PLANK ROOF DECKS.
2. WHEN ENHANCED FASTENING IS REQUIRED AS PRESCRIBED IN FACTORY MUTUAL LOSS PREVENTION DATA SHEET 1-29, ANSI/SPRI WD-1 OR MIAMI-DADE COUNTY, REFER TO [WEATHERBOND'S DESIGN REFERENCE DR-05-11](#).
3. FOR CRITERIA ON INSULATION FASTENERS AND PLATES, REFER TO WEATHERBOND SPECIFICATIONS.
4. DETAIL NOT FOR USE OVER ORIENTED STRAND BOARD, GYPSUM, FIBROUS CEMENT (TECTUM), LIGHTWEIGHT INSULATING CONCRETE OR STEEL ROOF DECK LESS THAN 22-GAUGE (0.8mm), [REFER TO DETAIL A-27.1](#) FOR ACCEPTABLE FASTENING.
5. WHEN INSTALLED OVER COMBUSTIBLE WOOD DECKS OR INSULATIONS, ALL JOINTS SHALL BE STAGGERED.
6. LONG UNINTERRUPTED RUNS GREATER THAN 200' (> 61M) OF SECUROCK MAY REQUIRE SLIGHT GAPPING DUE TO THERMAL EXPANSION.

FEET TO CENTIMETERS		INCHES TO CENTIMETERS																				
4'	8'	inch	1/8"	1/4"	15/32"	1/2"	5/8"	3/4"	1"	1.5"	2"	2.5"	3"	4"	6"	8"	9"	11"	12"	18"	24"	36"
120	240	cm	0.5	1	1.2	1.5	1.6	2	2.5	4	5	6.5	7.5	10	15	20	23	28	30	46	61	91



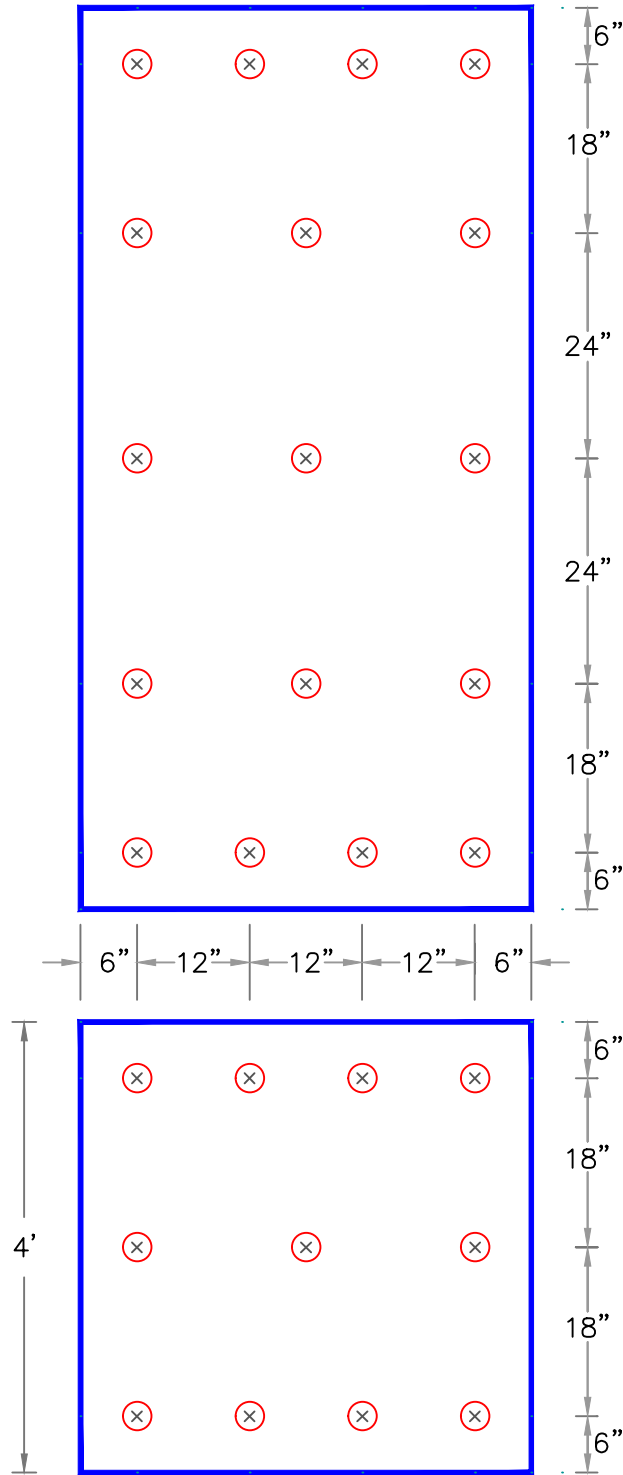
**5/8" THICK SECUROCK OR DENS DECK PRIME**

 → MEMBRANE  
 → APPROVED SUBSTRATE  
 → SEE NOTE(S)

SPEC. SUPPLEMENT

**A-27.5**







NOTES:

1. WHEN ENHANCED FASTENING IS REQUIRED AS PRESCRIBED IN FACTORY MUTUAL LOSS PREVENTION DATA SHEET 1-29, ANSI/SPRI WD-1 OR MIAMI-DADE COUNTY, REFER TO [WEATHERBOND'S DESIGN REFERENCE DR-05-11.](#)
2. FOR CRITERIA ON INSULATION FASTENERS AND PLATES, REFER TO WEATHERBOND SPECIFICATIONS.
3. OSB (ORIENTED STRAND BOARD) MUST BE POSITIONED WITH AN 1/8" (3mm) GAP BETWEEN BOARDS.
4. WHEN SPECIFIED, JOINTS IN OSB (ORIENTED STRAND BOARD) MUST BE STAGGERED WITH JOINTS IN INSULATION BELOW.

FEET TO CENTIMETERS		INCHES TO CENTIMETERS																				
4'	8'	inch	1/8"	1/4"	15/32"	1/2"	5/8"	3/4"	1"	1.5"	2"	2.5"	3"	4"	6"	8"	9"	11"	12"	18"	24"	36"
120	240	cm	0.5	1	1.2	1.5	1.6	2	2.5	4	5	6.5	7.5	10	15	20	23	28	30	46	61	91



**OSB (ORIENTED STRAND BOARD) ATTACHMENT**

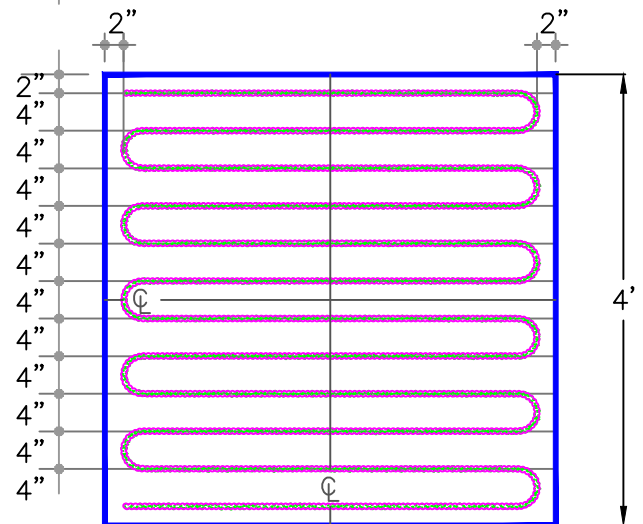
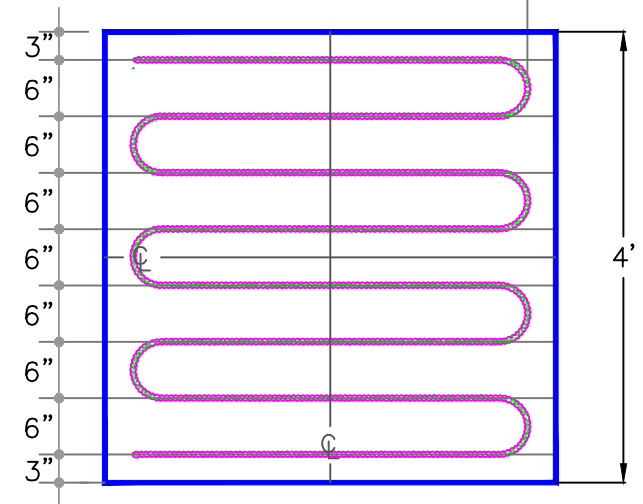
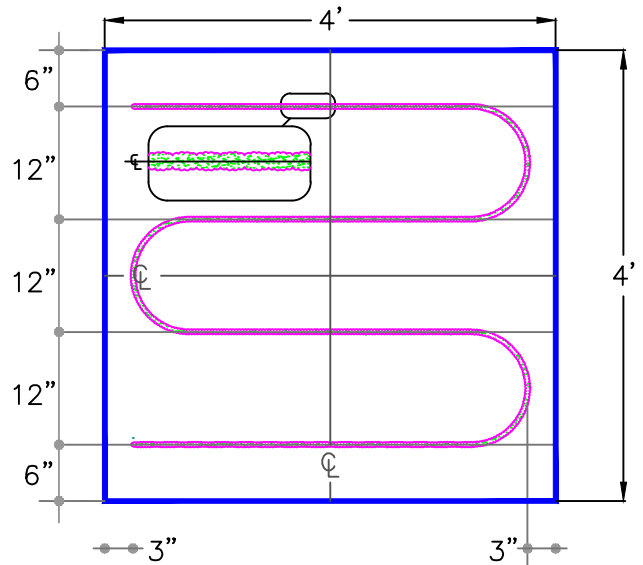
 → MEMBRANE  
 → APPROVED SUBSTRATE  
0 → SEE NOTE(S)

SPEC. SUPPLEMENT

A-27.6

NOTES:

1. REFER TO WEATHERBOND SPECIFICATIONS FOR PRODUCT DATA SHEETS FOR APPROPRIATE BEAD SPACING BASED UPON THE BUILDING HEIGHT.
2. THE SURFACE TO WHICH ADHESIVE IS TO BE APPLIED SHALL BE DRY, FREE OF DUST, FINES, PROTRUSIONS, SHARP EDGES, LOOSE AND FOREIGN MATERIALS, OIL AND GREASE. AREA SHOULD BE CLEANED WITH AN AIR BLOWER.
3. PREVIOUSLY UNEXPOSED ASPHALT OR RESIDUE MUST BE PRIMED WITH WEATHERBOND CAVGRIP, 702 OR 702LV PRIMER.
4. SEAL ALL GAPS IN THE CONCRETE DECK WITH WEATHERBOND 725TR OR OTHER SUITABLE MATERIAL TO AVOID CONDENSATION ISSUES OR FILL WITH WEATHERBOND INSULATION ADHESIVE.
5. AT THE BEGINNING OF THE INSULATION ATTACHMENT PROCESS AND PERIODICALLY THROUGHOUT THE DAY, CHECK THE ADHESION OF BOARDS TO ENSURE A TIGHT BOND IS CREATED AND MAXIMUM CONTACT IS ACHIEVED.
6. ALL BOARDS SHOULD BE IMMEDIATELY WEIGHED DOWN AT CORNERS & CENTER. SLIT THE BOARD TO CONFORM TO THE CONTOURS OF THE SUBSTRATE AS NEEDED.



FEET TO CENTIMETERS		INCHES TO CENTIMETERS																				
4'	8'	inch	1/8"	1/4"	15/32"	1/2"	5/8"	3/4"	1"	1.5"	2"	2.5"	3"	4"	6"	8"	9"	11"	12"	18"	24"	36"
120	240	cm	0.5	1	1.2	1.5	1.6	2	2.5	4	5	6.5	7.5	10	15	20	23	28	30	46	61	91



**INSULATION/ COVER BOARD ATTACHMENT USING BEAD ADHESIVE**

→ MEMBRANE

→ APPROVED SUBSTRATE

0 → SEE NOTE(S)

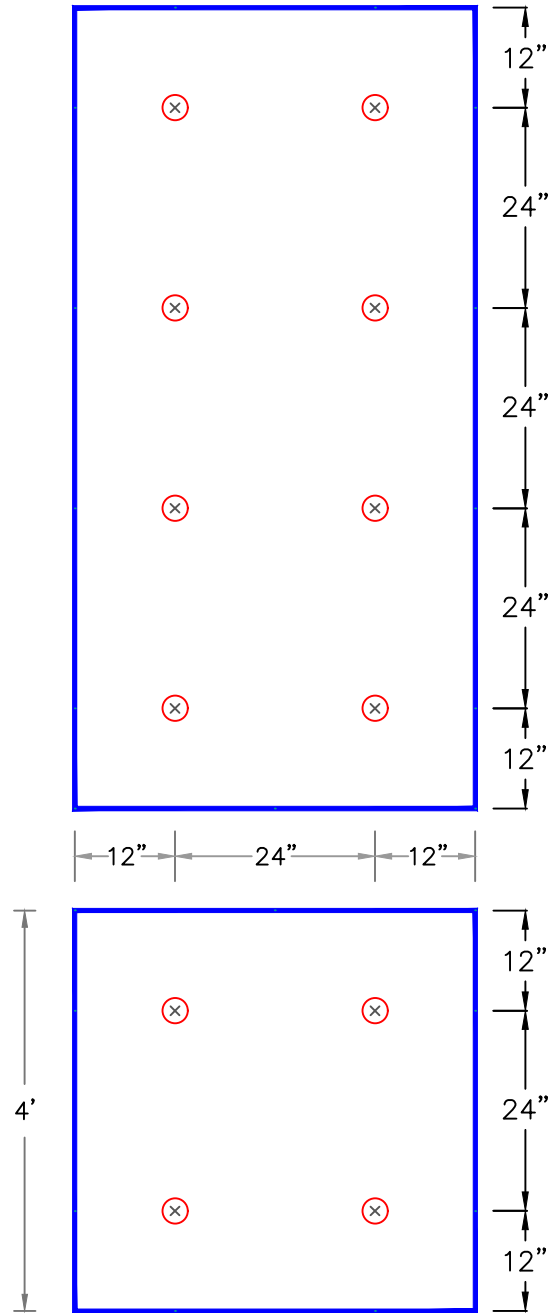
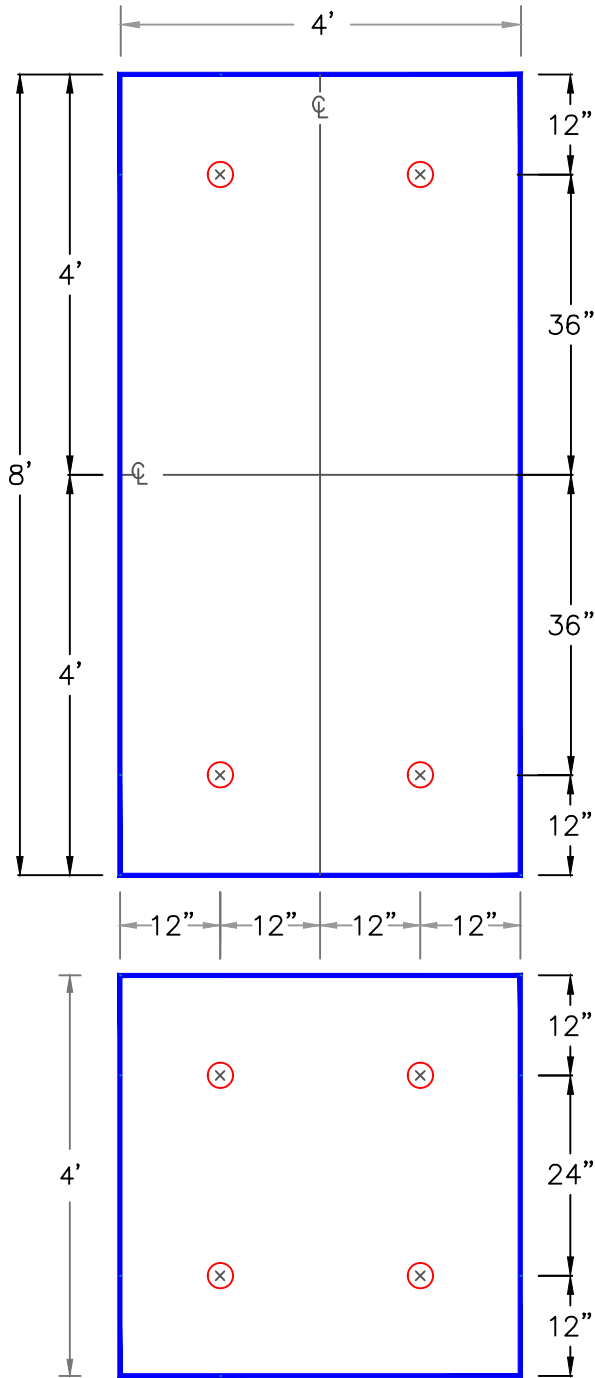
SPEC. SUPPLEMENT

A-27.7

# ATTACHMENT DETAIL

NEW CONSTRUCTION OR RE-ROOF/TEAR OFF PROJECTS WITH SecurShield HD, SECUROCK, DENS-DECK, HP RECOVERY BOARD OR ANY WEATHERBOND APPROVED INSULATION

RE-ROOF/NO TEAR OFF PROJECTS WITH POLYISOCYANURATE LESS THAN 1-1/2" (38mm) THICK



NOTE:

FOR CRITERIA ON INSULATION FASTENERS AND PLATES, REFER TO WEATHERBOND SPECIFICATIONS.

FEET TO CENTIMETERS		INCHES TO CENTIMETERS																				
4'	8'	inch	1/8"	1/4"	15/32"	1/2"	5/8"	3/4"	1"	1.5"	2"	2.5"	3"	4"	6"	8"	9"	11"	12"	18"	24"	36"
120	240	cm	0.5	1	1.2	1.5	1.6	2	2.5	4	5	6.5	7.5	10	15	20	23	28	30	46	61	91

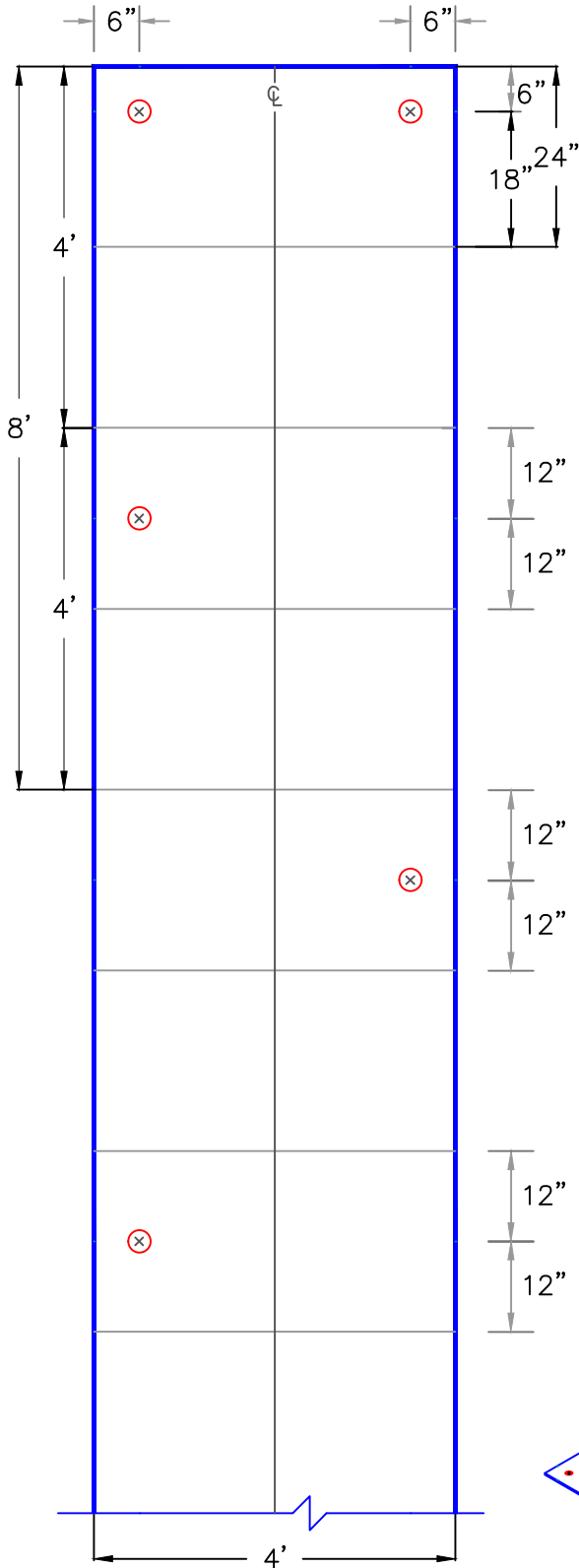


**INSULATION/ COVER BOARD ATTACHMENT**

- MEMBRANE
- APPROVED SUBSTRATE
- SEE NOTE(S)

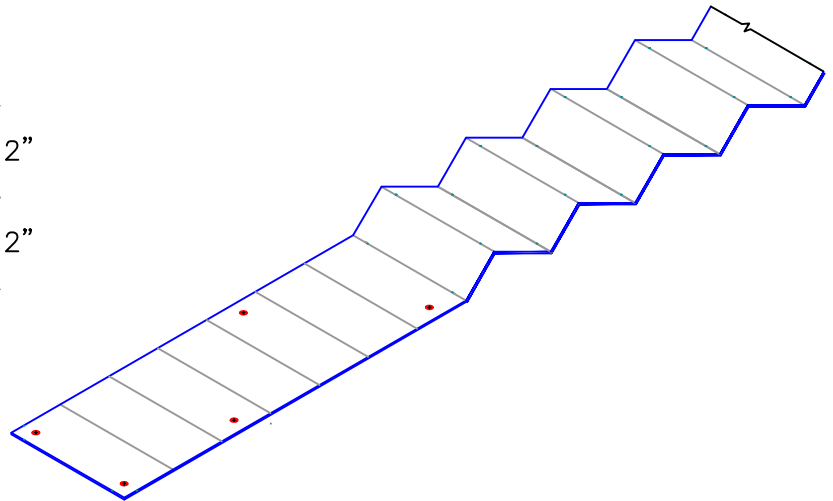
SPEC. SUPPLEMENT  
**MA-27.1**

# ATTACHMENT DETAIL



## NOTES:

1. INSTALL R-TECH RECOVER BOARD WITH CONTINUOUS SIDE JOINTS AND END JOINTS STAGGERED SO THEY ARE OFFSET BY A MINIMUM OF 12" (305mm) FROM THE END JOINTS IN ADJACENT ROWS.
2. INSULATION SHOULD ABUT TIGHTLY AGAINST ADJACENT BOARDS.
3. IF R-TECH FANFOLD RECOVER BOARD IS BEING INSTALLED OVER AN EXISTING LAYER OF INSULATION, ALL JOINTS MUST BE OFFSET A MINIMUM OF 6" (152mm) BETWEEN LAYERS.
4. FASTENERS SHOULD NEVER BE CLOSER THAN 6" (152mm) FROM THE EDGES OF THE BOARD.
5. CARE MUST BE TAKEN TO AVOID OVERDRIVING OR UNDER-DRIVING THE FASTENER AND PLATE ASSEMBLY.
6. METALLIC FACER PERMITS THE USE OF R-TECH RECOVER BOARD UNDER EPDM MECHANICALLY FASTENED ASSEMBLIES IN NORTHERN CLIMATES (CONTACT WEATHERBOND FOR ACCEPTANCE).



### FEET TO CENTIMETERS

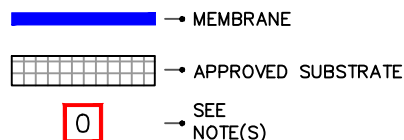
4'	8'
120	240

### INCHES TO CENTIMETERS

inch	1/8"	1/4"	15/32"	1/2"	5/8"	3/4"	1"	1.5"	2"	2.5"	3"	4"	6"	8"	9"	11"	12"	18"	24"	36"
cm	0.5	1	1.2	1.5	1.6	2	2.5	4	5	6.5	7.5	10	15	20	23	28	30	46	61	91



## R-Tech FANFOLD ROOF UNDERLAYMENT



SPEC. SUPPLEMENT

MA-27.3



**G-09-23**

## **Aqua Base 120 Bonding Adhesive**

**January 2024**

*The information contained in this supplement serves as a criteria for Specifiers and Contractors regarding the design and installation of WeatherBond Roofing Systems and related products. Additional information essential for the design and installation of the Roof Systems mentioned herein are also included in the respective Specification for each Roof System and in the Design Reference Section of the WeatherBond Specification. Specifiers and Contractors are advised to reference all applicable sections.*

**Aqua Base 120 Bonding Adhesive** may be used as a two-sided contact adhesive with standard EPDM, TPO or PVC membranes.

### **A. General Cautions and Warnings**

1. Review the applicable Material Safety Data Sheet for complete safety information prior to use.
2. This adhesive is designed to be applied when the ambient temperature is 40°F (4°C) and rising. Do not apply if ambient temperature will drop below 32°F (0°C) before adhesive dries. Do not allow to freeze. Do not store below 40°F (4°C).
3. **Extended drying times can be expected in cool, overcast, humid, shaded or late day applications. The adhesive must be dry to avoid permanent blisters from trapped moisture.**
4. Opened containers of Aqua Base 120 Bonding Adhesive should be used within 48 hours. The adhesive will form a thick surface skin that will not re-dissolve. Adhesive can be used once the skinned layer is removed.
5. Aqua Base 120 Bonding Adhesive is not acceptable over existing roof systems or decks with residual adhesive or asphalt. A porous substrate is required for Aqua Base to work properly.
6. Immediately roll the bonded portion of the sheet with a 100-150 lb weighted roller to achieve maximum contact. **Rolling is critical.**
7. When selecting an approved underlayment from the Table included in this specification supplement, the corresponding specification should be referenced to determine the acceptable underlayment attachment method.
8. Tables included in the appropriate Roofing System Specification contain various fastening densities which shall be referenced.

### **B. Considerations**

Projects incorporating the use of **Aqua Base 120 Adhesive** are limited to peak gust wind speed coverage of **55 mph**, see “**Aqua Base Criteria**” Table.

## Aqua Base Criteria

Membranes	Membrane Adhesion Method	Minimum Underlayments
		(3) <b>EPDM, TPO and PVC</b>

(1) Application over insulation only.

(2) Over Vented Steel Deck

(3) Regardless of wind speeds, mechanical securement must be provided at the perimeter of each roof level, penthouse, etc., at any inside angle change where slope exceeds 2" in one horizontal foot.

### C. Application

1. Stir the Aqua Base 120 Bonding Adhesive until settled material or phased liquid is redistributed and the adhesive is uniform in color.
2. Apply adhesive to the membrane and the substrate (at the recommended rate) in a uniform manner avoiding globs, puddles, and uncoated areas.
3. The typical application rate is approximately 100-120 square feet per gallon/ finished surface. (Applied to membrane and substrate when used as contact adhesive). Refer to Technical Data Bulletin for additional information.
4. Application methods:
  - a) Roller Application – Use a medium nap roller.
  - b) Mechanical Roller Application – Follow the manufacturer’s safety and use procedures.
  - c) Mechanical Spray Application – Follow the manufacturer’s safety and use procedures.
    - 1) Tip sizes between .019" to .023" in a Graco 510 gun.
    - 2) A minimum fluid pressure of 2,500 psi is required for a fair pattern.
    - 3) Back rolling is recommended.
    - 4) Flush with water at the end of the day.
5. **Two-sided Contact Method:**
  - a) Apply Aqua Base 120 Bonding Adhesive to the membrane and the substrate at the recommended rate.
    - 1) The adhesive must be allowed to dry until it turns translucent and does not transfer to a dry finger touch or pull away from the membrane. The dried adhesive should remain tacky before assembly.
    - 2) Mate the membrane with the adhesive-coated substrate, while avoiding wrinkles.

- 3) Immediately roll the bonded portion of the sheet with a 100-150 lb weighted roller to achieve maximum contact.

**CAUTION:** Pay particular attention to rolling the membrane along the insulation joints due to the slight step-off of the facer. The adhesive contains no solvents to react with the membrane, and therefore rolling the sheet is critical.

**NOTE:** Extended drying times can be expected in cool, overcast, humid, shaded or late day applications. The adhesive must be dry to avoid permanent blisters from trapped moisture.

- 4) Coated areas exposed to moisture shall be allowed to dry and then recoated.

- 5) All adhesive residues in the splice area must be removed.

- b) **For vertical walls,** Let the wall flashing membrane relax and warm to minimize the natural tendency of the membrane to curl.

- 1) Apply a medium to heavy coat of adhesive to the wall first and then a standard coat to the flashing membrane and allow thorough drying. Adhesive will turn translucent in color when dry.

**CAUTION:** Not allowing the adhesive to dry completely will result in poor adhesion strength or blisters occurring over time.

- 2) Mate the membrane with the adhesive-coated wall, while avoiding wrinkles.

- 3) Immediately broom the bonded portion of the sheet with a stiff-bristle push-broom and roll the membrane, starting in the angle change and working the membrane up the wall, using a 3"-wide "J" roller (preferred) to achieve maximum contact. Roll up from the base evenly and work in small sections gaining good attachment at the lower portions before moving up to the top of the membrane.

**NOTE:** Temporary pinning or taping the top membrane edge to the wall may be necessary to prevent membrane curl back until the termination detail can be completed.

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# WEATHERBOND ROOFING SYSTEMS

**G-10-23**

## **Metal Edging and Details**

**January 2024**

*The information contained in this supplement serves as a criteria for Specifiers and Contractors regarding the design and installation of WeatherBond Roofing Systems and related products. Additional information essential for the design and installation of the Roof Systems mentioned herein are also included in the respective Specification for each Roof System and in the Design Reference Section of the WeatherBond Specification. Specifiers and Contractors are advised to reference all applicable sections.*

### **Introduction**

One of the leading causes of wind related disturbances is improperly designed, manufactured or installed metal fascia systems.

Countless studies, many initiated by hurricanes, have pointed to metal edge components as a major contributor to roof failures. These components are vulnerable since the building edge is first hit, with winds and uplift pressures are always greatest at perimeters and especially roof corners.

### **General**

When metal edging or coping is to be installed (particularly when shop fabricated), it is strongly advised that the design conforms with the Factory Mutual recommendations identified in Loss Prevention Data Bulletin 1-49 and with SMACNA (Sheet Metal and Air Conditioning National Association) specifications. To ensure such compliance, specify FM 1-90 approved metal edge systems should be specified.

The securement of perimeter wood nailers, play an equally important role in the overall performance of metal fascia systems. Design Criteria for the attachment of wood nailers and associated metal edge components are also identified in the FM 1-49 Bulletin and summarized in the Design Reference DR-08-11 "Wood Nailers and Securement Criteria". This information should be referenced when selecting an appropriate attachment method.

Often, metal edging costs are solely judged on the material linear foot cost itself alone. Significant savings can be realized when closer attention is given to overall installed costs, where labor and associated material savings are factored in. Edge systems that minimize flashing material and reduce installation time can be of significant benefit when looking at overall roof edge costs. Products reusability (for the purpose of repairs and eventual roof replacement) is also seldom accounted for, although the owner can recognize overall life cycle cost savings if properly evaluated.

### **WeatherBond Edging**

1. **Drip Edge:** Designed for use on Fully Adhered and Mechanically Attached Roofing Systems. Includes a 22 gauge continuous 12' pre-punched 90-degree angle cleat and 12' long fascia sections. Incorporates concealed joint covers and strong 1-1/4" ring shank nails to provide long-term holding power. A selection of colors in 24 gauge steel, Kynar<sup>®</sup> 500 and 32-mil aluminum finish or Kynar 500 is available.
2. **Heat-Weldable Drip Edge:** Pre-fabricated PVC or TPO-coated metal edging. Heat-weld membrane directly to edge. Available in sizes up to 8" fascia height and in colors: white, gray or tan.

## Shop Fabricated Edging

### A. Supplied by WeatherBond

1. **WeatherBond TPO Coated Metal:** A 24-gauge galvanized steel sheet coated with a layer of non-reinforced WeatherBond TPO Flashing. The sheet is cut to the appropriate width and used to fabricate metal drip edges or other roof perimeter edging profiles. WeatherBond TPO Membrane may be heat welded directly to the coated metal. Coated metal is available in sheets 4' x 10' and comes packaged 25 sheets per pallet (also available packaged 10 sheets per pallet on a direct ship basis). Available in white, gray or tan.
2. **WeatherBond PVC Coated Metal:** A 24-gauge galvanized steel sheet coated with a layer of non-reinforced WeatherBond PVC Flashing. The sheet is cut to the appropriate width and used to fabricate metal drip edges or other roof perimeter edging profiles. WeatherBond PVC Membrane may be heat welded directly to the coated metal. Coated metal is available in sheets 4' x 10' and comes packaged 10 sheets per pallet. Available in white, gray or tan.

### B. Supplied by Others

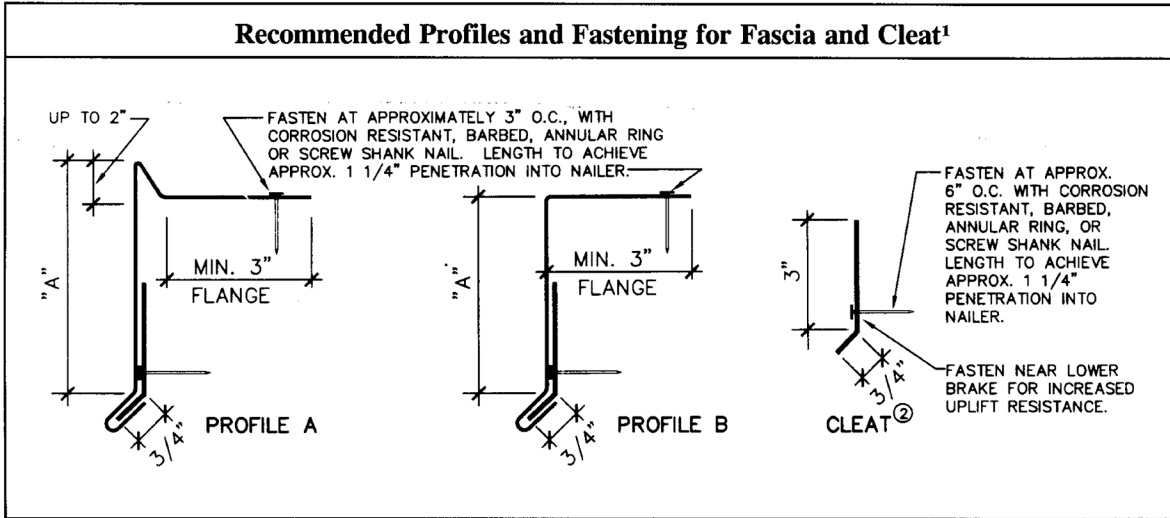
1. Shop Fabricated Metal Edging and Coatings must comply with SMACNA standards and design parameters outlined in the NRCA Waterproofing Manual. For ES-1 compliance, NRCA website should be accessed to determine required ES-1 certification.

## Guide for Sheet Metal Fascia Edges

(Reprinted from the NRCA Roofing and Waterproofing Manual - Fourth Edition)

Recommended Minimum Gauges for Fascia and Cleat <sup>1</sup>				
Exposed Face Without Brakes "A" Dimension	Aluminum Alloy (3003-H14)	Galvanized or Coated (G60 & G90) Steel	Stainless Steel (302 & 304)	Cleat <sup>2</sup>
Up to 3" Face	.032"	24 ga.	24 ga.	Same gauge as fascia metal
3" to 6" Face	.040"	24 ga.	24 ga.	One gauge heavier than fascia metal
6" to 8" Face	.050"	24 ga.	24 ga.	One gauge heavier than fascia metal
8" to 15" Face	Add brakes to stiffen or use two-piece face	Add brakes to stiffen or use two-piece face	Add bakes to stiffen or use two-piece face	One gauge heavier than fascia metal

## Recommended Profiles and Fastening for Fascia and Cleat<sup>1</sup>



### Notes:

1. Consideration must be given to wind zone and local conditions in regard to the selection of metal gauge, profile, and fastening schedule. Severe conditions or code and regulatory bodies may require more conservative designs. When using the above table, additional items should be considered, such as fastening pattern.
2. All cleats shall be continuous with lengths not to exceed 12 feet. Allow a 1/4" gap between pieces. Joints in cleat should not coincide with joints in fascia metal.

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**P-01-23**

**Related WeatherBond Products**

**January 2024**

*In addition to products included in the various roofing specification sections, Products listed herein are available from WeatherBond. Additional information concerning these products can also be found on individual Technical Data Bulletins or the WeatherBond website.*

**A. Edgings**

**Refer to Spec Supplement G-10-22 “Metal Edging and Details” for various product listings.**

**B. Termination Bar:** A 1" wide and 98-mil thick extruded aluminum bar pre-punched 6" on center which incorporates a sealant ledge to support Lap Sealant and provide increased stability for membrane terminations.

**C. Vapor Retarder and accessories**

1. **VapAir Seal 725TR Air and Vapor Barrier** - A 40-mil thick composite consisting of 35-mil self-adhering rubberized asphalt membrane laminated to an 5-mil UV resistant poly film with an anti-skid surface which is fully compatible with Flexible DASH Adhesive. 725TR can also function as a temporary roof for up to 120 days. Available in rolls 39" wide by 75' long (244 square feet).

<b>Technical Data –725TR Air and Vapor Barrier</b>		
<b>Property</b>	<b>ASTM</b>	<b>Results</b>
Thickness		40 mils
Tensile Strength	D-412	200 psi min.
Elongation (1)	D-412	200% min.
Pliability	D-146	-15° C
Peel Adhesion	D-903	5 lbs./in. min.
Puncture Resistance	E-154	20 lbs. min.
Permeability	E-96	0.05 perms
Air Permeance	E-2178	0.000L/s*m2 @ 75 Pa
(1) Rubberized asphalt compound only.		

2. **CCW 702 Primer** - A single component, solvent based, high tack primer used to provide maximum adhesion between 725TR Air and Vapor Barrier and an approved substrate. Applied by spray or long nap roller with a coverage rating ranging from approximately 250 square feet per gallon on smooth finishes (i.e., concrete) to 75 square feet per gallon on porous surfaces (i.e., Dens-Deck Prime gypsum board). Available in 5-gallon containers.

Technical Data –702 Primer		702 LV Primer
Property	Results	Results
Weight Per Gallon (lbs)	7.7	7.5
Solids Content (% by weight)	38%	46%
VOC Content	540 g/l	Less than 250 g/l
Color	Blue	Plumb Red
Flash Point	44° F	-4° F
Adhesion to Concrete (1b/lin. In.	7	11

3. **CAV-GRIP III** - is a low VOC contact adhesive used to prime surfaces for the application of 725TR. It features a quick dry time and ease of application from the self-contained pressurized cylinder. CAV-GRIP III is an alternate, high-strength, adhesive using a blend of VOC exempt and non-exempt solvents which complies with the State of California Clean Air Act of 1988 (updated in 1997). Coverage rate is 2,500-3,000 sq ft per cylinder.

#### D. Other Products

1. **GreenGuard PB6 Fanfold Roof Recover Board:** A high-density 3-lb density extruded polystyrene (XPS) foam core with 3-ply film facers on both sides for use as a recover board. Available 3/8" thick and 4' x 50' (2 squares) and weights 20 lbs per unit.
2. **SecurePly:** A membrane underlayment that is a coated glass-fiber mat used in conjunction with standard InsulFoam roof insulation to enhance fire rating. Available 4' x 250' roll (1000 square foot) weighing 0.09 lbs per square foot.
3. **G2 Base Sheet:** A non-porous 28 pound base sheet uniquely designed and constructed to be strong while remaining wrinkle resistant. G2 Base Sheet is typically mechanically attached (using WeatherBond approved fasteners) to the light concrete, gypsum or tectum substrate as the first ply and subsequent layers of G2 base sheet, Type IV or Type VI Glass felt is mopped or cold applied to the base-ply to achieve a vapor/air barrier. Available in rolls 36" wide and 108' long (324 square feet). Meets ASTM D4601.
4. **Type IV Felt:** A heavyweight fiberglass mat containing heat-cured resinous binders saturated with Type IV asphalt, giving the felt excellent breaking strength as well as dimensional stability. The Type IV felt can be mopped or cold applied over a nailed base sheet or two plies mopped over a concrete or approved surface achieving a vapor/air retarder. Available in rolls 36" wide and 180' long (540 square feet). Meets ASTM D2178 and UL-G2.
5. **Type VI Felt:** A heavyweight fiberglass mat containing heat-cured resinous binders saturated with Type IV asphalt. The Type VI felt is heavier weight than a Type IV giving the felt additional breaking strength and dimensional stability. The Type IV felt can be mopped or cold applied over a nailed base sheet or two plies mopped over a concrete or approved surface achieving a vapor/air retarder. Available in rolls 36" wide and 180' long (540 square feet). Meets ASTM D2178 and UL-G1.
6. **Dual-Prong Fastener:** A factory pre-assembled, 1.8" long fastener consisting of a precision tube formed from galvanized (G-90) coated steel, a 2.7" diameter disk formed from Galvalume (AX-55) coated steel, and a locking staple of high tensile steel wire. Use of this fastener is to secure base sheets to fibrous cement providing 70 pounds of pullout resistance.
7. **Lite Deck Fastener:** An oversized diameter fastener and associated 3" Lite-Deck Metal Plate for use on Fully Adhered Roofing Systems to attach insulation to gypsum decks.
8. **Expansion Joint Supports:** A high quality formed EPDM expansion joint support for use with all EPDM roofing systems; available in two profiles for use at expansion joints within the field of the roof and along parapet walls.

9. **Splice Wipes:** Used in conjunction with Splice Cleaners or EPDM Primer to clean membrane prior to splicing or applying Lap Sealant.
10. **Interlocking Rubber Pavers:** A 2' by 2' by 2" thick rubber paver weighing approximately 24 pounds per unit, 6 pounds per square foot manufactured from recycled rubber, which provides a resilient, shock absorbing, weather resistant surface. Designed primarily for use as a walkway or on terrace areas offering a unique, environmentally sound advantage over concrete pavers. Features include freeze/thaw stability, bi-directional drainage and no breakage concerns. Available in black and terra cotta.
11. **Insert Drains:** Vandal Resistant and Add-On Drain models; ideally suited for the reroofing market and are extremely cost effective when compared to removing and replacing existing drain bowls and associated plumbing costs. Insert Drains are designed to retrofit 3", 4", 5" or 6" drain assemblies. The Add-On model is available to connect with 4" outside diameter cast iron or PVC pipe.
12. **Olympic Pipe Support System:** A non-penetrating support system designed to carry piping, conduit, ductwork and elevated walkways across the roof or to support equipment such as air conditioners on the roof.
13. **SecurTaper:** An ergonomic equipment innovation designed to provide a means for tape seam application that is efficiently driven, user friendly and quality enhancing.
14. **6" Flashing Applicator:** Similar in concept to the SecurTaper only used to apply Peel & Stick Flashing.
15. **Stand Up Seam Roller:** A 6" wide by 2" diameter roller and 62" long handle with a 45° bend. Allows splices to be rolled in an ergonomic stand-up position.
16. **Other Accessories Available:**
  - a. **Lay Flat Tubing:** 2-1/2" diameter, 15' long tubing filled with dry sand, used in conjunction with Pourable Sealer to temporarily seal the edge of the membrane and to protect completed sections of the roof when nightfall or inclement weather interrupts installation.
  - b. **Expansion Joint Supports:** A high quality formed EPDM expansion joint support for use with EPDM Roofing Systems; available in two profiles for use at expansion joints within the field of the roof and along parapet walls.

#### E. Insulation Adhesive

1. **Flexible DASH Dual Cartridge Adhesive:** A two component (Part A and B), extrusion applied, low rise adhesive for attaching approved insulation to compatible roof decks.
2. **OlyBond 500 BA and Spot Shot:** A two-component, polyurethane construction grade, low-rising expanding adhesive designed for bonding insulation to various substrates. Applied in 1/2" to 3/4" beads or ribbons using a portable 1:1 applicator (oversized, dual-cartridge caulking gun). **Refer to the Technical Data Bulletin for bead spacing with reference to building height.**

#### F. Miscellaneous

1. **Seam Probe:** A hand tool used to check the integrity of heat welded seams on heat welded roofing systems. The probe has a heat-treated tip and the handle is tapped to fit standard threaded extension handles allowing the tool to be used from a standing position.

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**T-01-23**

## **Heat Welding Equipment Use & Procedures Thermoplastic Membranes**

**January 2024**

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### **A. Automatic Heat Welder**

An electrically powered, self-propelled device that utilizes an electrical resistance heating element or heater and fan-forced super heated air to weld membrane seams.

#### **1. Temperature Settings**

- a. When making a WeatherBond TPO/WeatherBond PVC splice, no one temperature setting or speed can be used to describe the temperature setting or speed to set the robot. The splice must be tested to determine the quality of the splice.
- b. Consult the respective heat welding machine manufacturer for recommendations concerning proper temperature setting and speed control of their equipment.
- c. Typically, the colder the ambient temperature (and likewise the membrane temperature) the slower the Automatic Heat Welder speed control must be adjusted to produce proper seams.
- d. As a general guide, **WeatherBond TPO** membranes will weld at a lower temperature (1000° F) and faster speed (10 feet to 15 feet per minute) than most other heat welded membrane materials. **WeatherBond PVC** membrane will weld at a temperature of 1150° F and a speed of 8 feet to 12 feet per minute.
- e. With the **Leister Varimat Automatic Heat Welder**, the suggested heat setting is 1004° F at 10 to 12.5 feet per minute for **WeatherBond TPO OR** 1148° F at 10.2' per minute for **WeatherBond PVC**. With any other brand of robot welder, the temperature should be set at the manufacturer's recommended temperature to obtain the correct splice results.
- f. The following is a list of items to be checked to determine the temperature setting and the speed at which a splice should be completed:
  - 1) When the membrane is in direct sunlight, the temperature or robot speed may have to be adjusted when moving into a shaded area, check the splice results. Remember the membrane surface in a shaded area will be cooler than a membrane surface that is in sunlight. Darker colored membrane (such as gray) will be warmer than white and may affect the welder speed.
  - 2) Dampness on the membrane from dew, a passing rain shower or misting condition will reduce heat from the splice due to evaporating moisture from the membrane surface. The heat welding temperature (increased) or the robot speed (slower) will have to be adjusted to produce a good splice. Water must be wiped from the welding surface prior to welding the splice.
  - 3) Wind has a cooling affect as it blows over the surface. It will also affect the airflow in the splice

reducing the effectiveness of the hot air gun. This will require the operator to increase heat from the hot air gun or reduce the welder speed.

- 4) Substrates make a substantial difference in the amount of heat required to produce a proper heat welded splice. The robot will have to be adjusted accordingly:
  - a) Plywood and Concrete act as heat sinks and will take a higher temperature or slower speed setting than insulation.
  - b) Cool damp substrates will take a higher temperature or slower speed setting than dry substrates.
- 5) Membrane "bleed-out" from sheets should occur with WeatherBond PVC membrane if properly welded. If bleed-out is not occurring (the underside of the membrane begins to melt and flow), the welder speed should be decreased to increase welding temperature.

## 2. Equipment Set-up

- a. Equipment set up is the responsibility of the Contractor. When poor welding is occurring check the following:
  - 1) If the membrane is overheated on one side or the other, check the nozzle to be sure it is distributing the heat evenly between the two sheets.
  - 2) If the heat is bypassing the edge of the sheet producing a cold weld along the edge of the splice, be sure the nozzle is completely under the sheet and the air dam is in place and functional.
  - 3) If the probed splice is tight at the edge but a cold weld is present in center of the splice (the heat is melting the edges but does not melt the center of the splice), check to be sure the robot is not running too fast.
  - 4) Ensure the silicone pressure wheel is intact with no voids in the silicone. If voids are present, incomplete welding will result.
  - 5) Be sure all wheels on the air dam are not binding. Binding wheels will cause sheet movement and distortion during the welding process.
  - 6) The automatic heat welder nozzle should be adjusted as close to the pressure wheel as possible. If the nozzle is too far away from the pressure wheel, distortion of the membrane may occur due to heat expansion.

**NOTE:** Adjust welder nozzle so the curved portion (heel) extending outside the seam area does not contact or drag on the exposed surface of the membrane. This portion of the nozzle should be 1/16" to 1/8" above membrane surface.

- 7) Overheating the membrane will cause poor welds. It is recommended the automatic welder be run not less than 8' a minute on average temperature days.
- 8) Only on very cold days the welder should be run below this speed. The temperature and welder speeds must be determined based on test welds prior to actual sheet welding.
- 9) Clean screen of dirt and debris on air inlet of heat gun every day. Accumulation of contaminants on screen will reduce air flow and heat output of welder.

## 3. Membrane Welding

- a. Prepare the Automatic Heat Welder and allow it to warm for approximately 5 to 10 minutes to reach operating temperature.
- b. Position the Automatic Heat Welder properly prior to seaming with the guide handle pointing in the same direction the machine will move along the seam.
- c. Lift the overlapping membrane sheet and insert the blower nozzle of the Automatic Heat Welder between the overlap. Immediately begin moving the machine along the seam to prevent burning the membrane.

- d. Weight plates provided on Automatic Welders must be utilized.
- e. Proceed along the seam ensuring that the small guide wheel in front of the machine aligns with the edge of the top membrane sheet. Guide the machine from the front only.

**CAUTION:** Ensure the power cord has plenty of slack to prevent dragging the machine off course (which could result from a tightly stretched cord).

- f. At all splice intersections, roll the seam with a silicone roller to ensure a continuous heat welded seam (the membrane should be creased into any membrane step-off with the edge of the silicone roller). A false weld may result due to surface irregularities created by multiple thicknesses of WeatherBond TPO/WeatherBond PVC membrane sheets.

When using **80-mil** WeatherBond PRO TPO/WeatherBond PVC Membrane, a **TPO/PVC "T" Joint Cover** must be applied over all "T" joint splice intersections.

- g. To remove the Automatic Heat Welder from the finished splice, stop the movement of the machine and immediately remove the nozzle from the seam area.
- h. Mark the end of the heat welded seam with a water-soluble marker for easy identification. A Hand Held Welder will be necessary to complete the weld in the area between where the Automatic Heat Welder is stopped and restarted.
- i. Perform a test weld, at least, at the start of work each morning and afternoon. Test welds should be made if any changes in substrate or weather conditions occur.

#### 4. Preventing Membrane Creeping During Welding

- a. The operator of the robot must apply foot pressure to the membrane, kicking and sliding the membrane under the robot to keep the membrane tight. Always have the operator stand on the unfastened sheet of membrane to prevent sheet movement.
- b. Do not release foot pressure from the membrane until the pressure wheel rolls over the membrane in front of the foot that is holding the membrane in place.

#### 5. Use of Welding Tracks

- a. Set welding tracks lengthwise along the splice, close to the Automatic Heat Welder air dam to reduce membrane movement caused by the welding process. The operator must continue to apply foot pressure to the welding tracks to help hold the membrane splice in place. Welding tracks are moved as welder progresses along seam.
- b. Welding tracks can be:
  - 1) Sheet metal, 22 gauge – 12" wide by 10' long (with rounded corners).
  - 2) Aluminum or steel plates – 1/4" x 3", 4' to 6' long (with rounded corners).
  - 3) Wood planks – 2" x 12" X 4' to 6' long.
  - 4) Heavy plywood – 3/4" x 24" x 8' long.

#### 6. Test Cuts

- a. Perform a test weld at least at the start of work each morning and afternoon.
- b. The test sample should be approximately 1 inch wide and longer than the width of the seam (cut across the heat welded seam).
- c. Peel the test sample apart after it has thoroughly cooled (approximately 10 minutes) and examine for a consistent 1-1/2 inch wide minimum weld. De-lamination of the membrane from the scrim-reinforcement is an indication of a properly welded seam.
- d. Identify the following seam problems to assure seam quality:

- 1) Discolored or scorched membrane – Increase speed or decrease temperature setting if membrane discolors
- 2) Voids and wrinkles - A proper heat welded seam has no voids or wrinkles and must be at least 1-1/2 inches wide. Refer to Seam Probing procedures outlined below for proper inspection of seam deficiencies.

## 7. Seam Probing

A blunt or dull cotter pin puller is recommended to probe all heat-welded seams. Probing seams must be done once heat welds have thoroughly cooled. Heat welded seams must be probed throughout the day to check seam quality and to make proper adjustments to heat welding equipment. **The repair of deficiencies must be done routinely throughout the day but no later than the end of each workday.**

- a. Allow heat-welded seams to cool thoroughly for approximately 30 minutes. Premature probing can damage warm seams.
- b. Draw probing tool tip along the edge of the heat welded seam. Apply firm pressure to probe the seam junction, but not into the bottom membrane sheet. The tool will not penetrate into the lap area of a properly welded seam.
- c. If the seam-probing tool penetrates into the lap area, mark the seam using a water-soluble marker at the beginning and the end of voids or wrinkles in the seam edge.
- d. Repair seam deficiencies as soon as possible using the hand held welder. WeatherBond recommends that repairs be made the same day they are discovered.
- e. Probe **repaired seams** after they have cooled completely. If the repair is acceptable, wipe off the water soluble marker lines; if not acceptable, repair the seam using standard heat welded overlay procedures.

**Note:** All laps must be probed each day soon after it has cooled to verify the welder set-up is effective. Particular attention must be given to all membrane intersections and heat-welded seams at insulation joints. In addition, there should be periodic checks (including at the start of each day) to verify good peel strength.

- f. **Apply Cut-Edge Sealant** on all cut edges of the reinforced WeatherBond TPO membrane (where the scrim reinforcement is exposed) **after seam probing** is completed. When a 1/8" diameter bead of Cut-Edge Sealant is applied, approximately 225 – 275 linear feet of coverage per squeeze bottle can be achieved.
  - 1) Cut Edge Sealant not required on cut edges of WeatherBond PVC membrane (Horizontal or Vertical) however, it is recommended.
  - 2) Cut-Edge Sealant is not required on vertical WeatherBond TPO splices.

## B. Hot Air Hand Welder

### 1. General

- a. An electrically powered, hand-held device that utilizes an electrical resistance heating element or heater and fan-forced super heated air to heat weld WeatherBond TPO/WeatherBond PVC membrane and flashing. A hand-held **silicone** rubber roller is used in conjunction with the welder to apply the pressure that fuses the heated membrane surfaces to each other.
- b. The hand-held welder is typically used to repair seams, or when the use of the Automatic Heat Welder is inappropriate (such as flashing penetrations and on high sloped surfaces).

### 2. Hand Held Welder Settings

- a. Temperature setting for hand held welders when used for flashing should be approximately "6" (on a scale from 1 to 10).
- b. Temperature settings for hand held welders when used for membrane should be approximately "8 –10" (on a scale from 1 to 10).
- c. Exact settings will vary based on heat welding membrane type, ambient temperatures, substrate and

type of welder.

- d. Silicone roller should be used to apply pressure to the membrane to be welded.

C. **Electrical Cords:** For generator requirements and maximum length of electrical cords, refer to Generator/Electrical Requirements below.

D. **Seam Prober:** The probing of heat welded seams is an important step in the application of a WeatherBond TPO/WeatherBond PVC Roofing System. WeatherBond recommends the use of a Seam Probe to probe all heat welded seams. All seams must be probed (**after the seam has thoroughly cooled**) with the appropriate seam probing tool and all deficiencies must be repaired accordingly with a hand held hot air welder no later than the end of each work day.

E. **Silicone Rubber Roller:** A 2" wide rubber roller used for rolling heat welded splices.

F. **Generator/Electrical Requirements**

Building power supplies do not typically provide the proper amount of power necessary for consistent heat welding. The use of a portable generator conforming to the following guidelines is strongly advised.

- 1. A **minimum 6500 watt generator** with a minimum output of 210 volts is required **for one Automatic Heat Welder**. Reduced power availability will result if additional equipment is connected to the generator and may result in faulty heat welded seams. GFI (Ground Fault Interrupter) protection is recommended. Additional generators will be required for operating other power tools and hand held heat welders.

**Electrical cords** (3 conductors) of the maximum length indicated must be used with the corresponding wire as listed below:

Maximum Length	Wire Size
50 foot	#12
100 foot	#10
300 foot	#8

- 2. A **minimum 3,000 watt generator** may be used to power a maximum of **two hand held heat welders** as long as no other equipment is connected. This generator should service a minimum of 110 volts and be GFI (Ground Fault Interrupter) protected.

**Electrical cords** (3 conductors) of the maximum length indicated must be used with the corresponding wire as listed below:

Maximum Length	Wire Size
50 foot	#14
100 foot	#12

For extension cords longer than 100', consult an electrician or electrical contractor to ensure proper size of generator and wire.

G. **Heat Welding Precautions**

- 1. Check the welding machine set-up to ensure proper alignment of the heating nozzle, air dam, pressure wheels, or moving parts to see they move properly or are free-spinning. Test run the welding machine to ensure it moves forward following a straight line. If the alignment is off, make necessary adjustments.
- 2. Make sure the air intake is open. Clean out the air intake screen for the blower unit at each start up.
- 3. Check the machine for worn or broken parts which need to be replaced. Exercise care to protect the pressure wheel from notches or cuts to prevent incomplete sealing of the welded seam.
- 4. Before the machine is connected to the power source, make sure it is switched off to prevent a power surge that could damage the unit. Turn the unit on and allow the blower/heater unit to warm up for approximately 5 to 10 minutes to reach operating temperature.
- 5. Clean the heat nozzle with a wire brush to remove any build-up of membrane, as needed.

6. To extend the life of the heating element of the Heat Welding Equipment, always turn the temperature adjustment down so the welder can cool prior to switching the machine off.
7. Follow all care and maintenance instructions recommended by the respective manufacturer.
8. It is recommended that two Automatic Heat Welders and two generators be available at the project site in the event of mechanical failure.

#### H. Welding Problems/Repairs

1. A Hand Held Hot Air Welder and a 2" wide silicone roller must be used when repairing the membrane. When the entire heat welded seam is to be overlaid, an Automatic Heat Welder may be used.
2. Prior to proceeding with any repair procedure, the area to be repaired must be cleaned and any material which has been exposed approximately 7 days must be prepared with WeatherBond Weathered Membrane Cleaner (WeatherBond TPO) or PVC Membrane Cleaner (WeatherBond PVC). The membrane can typically be repaired up to 6 months to a year with a standard cleaning method. In cases where the standard cleaning method is not sufficient, the following procedures must be used:
  - a. Scrub the area to be welded with a "Scotch Brite" Pad and appropriate Membrane Cleaner.
  - b. Clean all residue from the area to be welded with a Splice Wipe or a clean natural fiber (cotton) rag.
  - c. Weld the new membrane to the cleaned area using standard welding procedures.
3. Voids in welded seams can be repaired using a Hand Held Hot Air Welder and a silicone roller. Depending on conditions, a splice overlay may be required.
4. Position the hand held welder facing into void so hot air is forced between overlapping membranes. Roll the top membrane surface using positive pressure toward the outer edge until the heated membrane surfaces are fused.
5. Exposed scrim-reinforcement (resulting from scorching surface of membrane) and test weld areas must be repaired by overlaying the damaged area with a separate piece of membrane with rounded corners. The overlay must extend a minimum of 2 inches past the area to be repaired.
6. Probe all edges of the overlay once cooled to ensure a proper weld has been achieved.
7. Seal all cut edges of WeatherBond TPO Membrane with Cut-Edge Sealant. Cut-Edge sealant not required on cut edges of WeatherBond PVC Membrane, however, it is recommended.

**Note:** The same overlay repair procedures may be used for punctures in the heat weldable membrane.

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# WEATHERBOND ROOFING SYSTEMS

**E-02-23**

## **EPDM Membrane Splicing and Splice Repairs**

**January 2024**

*The information contained represents guidelines to address possible requirements as part of the building specification as listed under the Quality Assurance or Performance Article. WeatherBond recommends that the building owner retain a design professional to verify that these guidelines are appropriate.*

### **A. General**

#### **1. Fully Adhered (EPDM) Roofing Systems**

##### **a. Projects with 45-mil, 60-mil or 75-mil Membrane**

**Side Laps / End Laps:** Tape splices must be a minimum of 2-1/2" wide using **3" wide field-applied Peel and Stick Seam Tape OR 3" Pre-Applied Seam Tape.**

**Splice Intersections:** 'T'-Joints are to be flashed with a bead of lap sealant and 6"x6" minimum Peel and Stick 'T'-Joint Cover, (for membranes of maximum thickness of 75 mil).

**Note:** A minimum 6"x6" section of Peel and Stick Uncured Flashing may be used as a 'T'-Joint cover. Peel and Stick Uncured Flashing is available in rolls of 6", 9" and 12".

##### **b. Projects with 90-mil Membrane**

###### **OPTION 1:**

**Side Laps / End Laps:** Tape splices may be a minimum **3" wide Pre-Applied Seam Tape.** In addition the entire field splice must be overlaid with a continuous 6" wide Peel and Stick Overlayment Strip.

**Splice Intersections:** Overlay the entire field splice with a continuous 6" wide Peel and Stick Overlayment Strip. Apply Lap Sealant at all Intersections between Peel and Stick Overlayment Strip.

###### **OPTION 2:**

**Side Laps / End Laps:** Tape splices may be a minimum of 5-1/2" wide using **6" wide Pre-Applied Seam Tape.**

**Splice Intersections:** 'T'-Joints are to be flashed with a bead of lap sealant and 6"x6" minimum Peel and Stick 'T'-Joint Cover. Apply a second layer of 12"x12" Peel and Stick 'T'-Joint Cover centered over 6" x 6" Peel and Stick 'T'-Joint Cover.

**Note:** A minimum 6"x6" section of Peel and Stick Uncured Flashing may be used as a 'T'-Joint cover. Peel and Stick Uncured Flashing is available in rolls of 6", 9" and 12".

#### **2. Mechanically Attached (Reinforced EPDM) Roofing Systems**

##### **a. Projects with 45-mil, 60-mil or 75-mil Membrane**

**Side Laps:** Where fastening plates are placed, shall be spliced using **6" wide Pre-Applied Seam Tape** or **6" wide Field-Applied Peel and Stick Seam Tape**. The splice tape shall be centered over the plates to extend approximately 2" on each side. Peel and Stick Seam Tape must extend approximately 1/8" beyond the edge of the overlapping membrane.

**End Laps:** Shall be spliced using a **3" wide Peel and Stick Seam Tape** resulting in a minimum splice width of 2-1/2".

**Splice Intersections:** 'T'-Joints are to be flashed with a bead of lap sealant and 6"x6" Peel and Stick 'T'-Joint Cover.

b. **Projects with 90-mil Membrane**

**Side Laps:** Where fastening plates are placed, shall be spliced using **6" wide Pre-Applied Seam Tape OR 6" wide Field-Applied Peel and Stick Seam Tape**. The splice tape shall be centered over the plates to extend approximately 2" on each side. Peel and Stick Seam Tape must extend approximately 1/8" beyond the edge of the overlapping membrane.

**End Laps:** Shall be spliced using **6" wide Pre-Applied Seam Tape OR 6" wide Field-Applied Peel and Stick Seam Tape** resulting in a minimum splice of 5-1/2" wide.

**Splice Intersections:** 'T'-Joints are to be flashed with a bead of lap sealant and 6"x6" Peel and Stick 'T'-Joint Cover. Apply a second layer of 12"x12" Peel and Stick 'T'-Joint Cover centered over 6"x6" Peel and Stick 'T'-Joint Cover.

B. **Splicing Procedures**

1. **Set the Membrane** – Overlap the EPDM membrane a minimum 2 1/2" or 5 1/2" (63 or 138 mm) to coincide with the Peel and Stick Seam Tape width. Stagger factory seams on dusted EPDM to avoid a double thickness of membrane. For sheets without a pre-printed set mark, place a set mark 1/8" to 1/2" (3-13 mm) beyond the leading edge of the top membrane when field applying Peel and Stick Seam Tape. Locate field splices outside of drain sumps. The pre-marked line on the membrane edge can also be used as a guide for positioning splice tape.

**Note:** Refer to Step 5 for position of membrane with Pre-Applied Tape.

2. **Clean the Splice Area** - The entire membrane surface where Peel and Stick Seam Tape will be applied must be clean and free of any residual mica dust or dirt. Peel and Stick Seam Tape will not adhere to dusted or dirty surfaces.
  - a. Remove loose mica dust on dusted EPDM by brooming or wiping with a clean, dry rag or Splice Wipe. Pay particular attention to removing mica dust at any factory seam step-offs.
  - b. Clean the splice areas with Weathered Membrane Cleaner. This allows for roller application of the primer which improves productivity and decreases potential over drying of the primer. This process is required on membrane that has been exposed for a number of weeks. Change Splice Wipes often to ensure mica dust is removed. Permeation-resistant gloves meeting ANSI/ISEA 105-2005 are required for hand protection when cleaners or primers are being used. Allow the Weathered Membrane Cleaner to flash-off before applying primer.

**CAUTION:** Using rags or Splice Wipes that are saturated with mica dust only serve to move the dust from one area to another.

3. **Apply Multi-Purpose or Low-VOC Primer**

- a. **Dusted Membrane** - After removing the loose mica as noted above, Roller-apply the primer to the membrane with a 3/8" (9mm) medium nap paint roller achieving a thin and even coat that is uniform in color and free of streaks or heavy spots. Confirm that primer is applied into any factory seam step-offs.



- b. **Pre-Kleened™ Membrane or membrane cleaned with Weathered Membrane Cleaner** - Roller-apply the primer to the membrane with a 3/8" (9mm) medium nap paint roller achieving a thin and even coat that is uniform in color and free of streaks or heavy spots. Confirm that primer is applied into any factory seam step-offs.
- c. Allow the primer to flash-off until it does not transfer to a dry finger touch. Do not allow the primer to over dry.
- d. Install Peel and Stick Seam Tape shortly after the primer flashes off to maximize bond strength and minimize potential dust contamination

**CAUTION:** Due to solvent flash-off, condensation may form on freshly applied primer when the ambient temperature is near the dew point. If condensation develops, the application of primer and Peel and Stick Seam Tape must be discontinued since proper adhesion will not be achieved. Allow the primer surface to dry and apply a thin freshener coat of primer to the previously coated surface and apply Peel and Stick Seam Tape when conditions allow. Do not stir LVOC Primer.

#### 4. Field Applied Peel and Stick Seam Tape

- a. **Unroll** approximately 3' (1m) of Peel and Stick Seam Tape aligning the tape with the set marks. Use firm and even hand pressure to press the tape down to the bottom sheet along the length of the splice. Overlap tape roll ends 1". A continuous piece of Peel and Stick Seam Tape must be used at all factory seams and field splice intersections. In warm, sunny weather, keep Peel and Stick Seam Tape rolls in their box in a shaded area until ready to use.
- b. Rolling the installed Peel and Stick Seam Tape with a 2"-wide hand roller will reduce the frequency of air blisters in the completed field seam. Crease the Peel and Stick Seam Tape into any factory seam step-off with the edge of the hand roller.
- c. Allow the top sheet to fall freely onto the poly backing. Ensure that a minimum of 1/8" to a maximum of 1/2" of tape extends beyond the top membrane edge. Trim membrane if necessary.
- d. Pull the poly backing off at a 45 degree angle and use firm hand pressure across the splice towards the outside splice edge mating the top sheet onto the Peel and Stick Seam Tape.
- e. Immediately roll across the splice with a 2" (50 mm) wide hand roller applying positive pressure. Use the edge of the hand roller to crease the top membrane into any factory seam step-off.

**Note:** At any Peel and Stick Seam Tape overlap, apply a 5/16" (8 mm) diameter bead of Lap Sealant 1/2" (12 mm) in all directions from the overlap.

#### 5. Pre Applied Peel and Stick Seam Tape

- a. Overlap the Pre Applied Tape membrane a minimum 3" or 6" (75 or 150 mm) to coincide with the Peel and Stick Seam Tape width. Stagger factory seams on dusted EPDM to avoid a double thickness of membrane.
- b. Pull the poly backing off at a 45 degree angle and use firm hand pressure across the splice towards the outside splice edge mating the top sheet onto the primed area of the bottom sheet.
- c. Immediately roll across the splice with a 2" (50 mm) wide hand roller applying positive pressure. Use the edge of the hand roller to crease the top membrane into any factory seam step-off.

6. **Install T-Joint Covers** - At all field splice intersections, follow the cleaning and priming steps listed above and then apply a 5/16" diameter (8 mm) bead of Lap Sealant 1/2" (12 mm) in each direction from the membrane intersection. Then install a 6" x 6" Peel and Stick T-Joint Cover. For projects with 90-mil

membranes apply a 12" x 12" Peel and Stick T-Joint Cover centered over the 6" x 6" Peel and Stick T-Joint Cover.

7. **Apply Lap Sealant** - Apply Lap Sealant at cut edges of reinforced membrane, splice tape overlaps and Peel and Stick T-Joint Covers. Lap Sealant may be applied immediately following the completion of a splice. Feather the Lap Sealant with the specially formed plastic Lap Sealant Tool so the high point or crown is centered over the splice edge. Plastic Lap Sealant Tools are provided in cartons of Peel and Stick Uncured EPDM Flashing and cardboard tools are on the top of the Lap Sealant cartons.
8. **Cold Weather Requirements** – installation when temperatures fall below 40°F (4°C)
  - a. Hot boxes for jobsite storage must be provided to maintain a minimum Peel and Stick Seam Tape temperature of 40°F (4°C).
  - b. Heat the primed area of the bottom membrane as the Peel and Stick Seam Tape or Pre Applied Peel and Stick Seam Tape is installed and pressed into place.
  - c. Field applied Peel and Stick Seam Tape must be rolled with a 2" (50 mm) wide hand roller prior to removal of the release liner when temperatures fall below 40°F (4°C).
  - d. Prior to rolling the splice area with a 2" (50 mm) wide hand roller, apply heat to the topside of the membrane with a hot-air gun. The heated surface should be warm to the touch.

### C. Lap Sealant Application

#### 1. Lap Sealant is required at the following locations:

- a. Splice tape overlaps.
- b. Beneath 6" x 6" T-Joint Covers and around the outer edge.
- c. Where joints in metal edgings intersect with Peel and Stick Cured Cover Strip.
- d. Around all edges of Peel and Stick Uncured Flashing, Corners, and Pockets.
- e. Cut edges of reinforced membrane.

#### 2. Procedures

- a. Dusted EPDM must be cleaned 1" (25 mm) on either side of the splice edge using Weathered Membrane Cleaner or EPDM Primer and Splice Wipes or a clean cloth.

**Note:** Weathered Membrane Cleaner is not required when using Kleen EPDM unless accumulated dirt is present.

- b. Apply a 5/16" bead of Lap Sealant centered over the splice edge. Coverage rate is 22 lineal feet per tube.
- c. Feather the Lap Sealant with the specially formed Lap Seal Tool so the high point or crown is centered over the splice edge. Clean the feathering tool occasionally for consistent crowning of Lap Sealant.
- d. Application of Lap Sealant **should be completed each day** to avoid extra cleaning of accumulated dirt.

### D. Splice Repairs

#### 1. General

- a. Prior to initiating repairs, the membrane must be cleaned to remove field dirt and other contaminants. Using a scrub brush, scrub the splice areas with warm water and a low-sudsing soap (Spic and Span,

Tide, Lestoil). Rinse with clean water and allow to dry prior to applying Weathered Membrane Cleaner or EPDM Primer as required.

- b. Weathered Membrane Cleaner can be used to prepare membrane exposed to the weather prior to applying EPDM Primer. Using a Splice Wipe or natural fiber rag (cotton) with Weathered Membrane Cleaner, scrub the area in a circular motion. Continue cleaning until the surface is a consistent matte black color without streaking.

## 2. Repairs of Cuts and Tears (Surface Splice)

Repairs to cuts and tears in the membrane must be accomplished by splicing a membrane section over the affected area.

- a. Select a repair membrane, which is the same material as that to be repaired.
- b. Extend the repair membrane section at least 3" in every direction from the cut or tear. Round the corners of the repair membrane prior to splicing. Clean the membrane to remove field dirt and other contaminants as outlined above.
- c. Apply EPDM Primer to the splice areas. Install Peel and Stick Cured Cover Strip or Cured Membrane and Peel and Stick Seam Tape and then hand roll the splice areas. Apply T-Joint Covers at splice intersections. Lap Sealant is applied at flashing and tape overlaps in accordance with standard procedures.

## 3. Repair of improperly installed Tape Splices

- a. Improperly installed tape splices include, but are not limited to, fishmouths at field splices, lack of or improper use of Primer, condensation formation on Primer or incorrect tape placement, etc.
- b. **If fishmouths are present in the field splice**, the fishmouth must be cut by removing the top layer of membrane prior to overlaying the splice. The flashing overlay **must** be supported by the bottom layer of cured membrane
- c. Clean the splice area with Weathered Membrane Cleaner. Apply EPDM Primer on both sides extending past the width of the new flashing overlay to be installed.
- d. Overlay the defective splice area with a bead of lap sealant overlaid with a minimum 6" wide Peel and Stick Uncured EPDM Flashing, Cover Strip or Overlayment Strip centered over the edge of the splice. If using Peel and Stick Uncured EPDM Flashing, apply Lap Sealant around the outer edge and feather accordingly.

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