

WEATHERBOND™

FULLY-ADHERED ROOFING SYSTEM INSTALLATION INSTRUCTIONS

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WEATHERBOND™

GENERAL INFORMATION

This Rooftop Guide has been designed to give the user a GENERAL overview of the application of a WeatherBond fully-adhered EPDM roof. This Rooftop Guide is intended as a broad reference aid and is not intended or meant to be all-inclusive. Please visit www.weatherbondroofing.com for additional information concerning applications not covered in this manual.

PRECAUTIONS

If the adhesive is not allowed to properly dry, gas bubbles or blisters may form under the membrane sheet. These bubbles or blisters may subside over time.

Due to solvent flash off, condensation may form on freshly applied adhesive when the ambient temperature is near the dew point. If condensation develops, possible surface contamination may occur and the application of adhesive must be discontinued. Allow the surface to dry and when conditions allow apply a thin fresher coat at a coverage rate that is approximately half of the normal coverage rate when readhering a previously coated surface.

Extreme care must be exercised when working on ladders, roofs, below grade or at elevations above ground. If used as an emergency repair to a roofing system, contact the roofing system manufacturer for compatibility and to ensure compliance with terms and limitations of the warranty.

Surface can be slippery when wet, damp, or frost covered. Do not stretch the product during installation. Do not expose product to temperatures in excess of 180 degrees. This product is not intended for use where roof top traffic or activity is anticipated.

THIS INFORMATION AS WELL AS INFORMATION CONTAINED IN THE MATERIAL SAFETY DATA SHEET AND ON PRODUCT PACKAGING MUST BE REVIEWED PRIOR TO STORAGE, HANDLING OR USE OF THESE PRODUCTS.

PRECAUTIONS

Liquid adhesives, primers, and sealants, as well as their fumes, contain petroleum distillates and are **EXTREMELY FLAMMABLE**. Do not breathe in vapors. Maintain proper ventilation. Store these products away from heat, flame, or sparks. Do not smoke near these materials. A fire extinguisher must be present when these products are used.

Keep containers closed when not in use. Care must be exercised to ensure that open containers are not placed near fresh air intake ventilators on the roof. Avoid contact with eyes. Glasses, goggles, or a face shield are recommended for eye protection. If contact is made with the eyes, immediately flush with plenty of water for at least 15 minutes and contact a physician. Avoid contact with the skin. Chemically resistant gloves are required for hand protection. In case of contact with skin, thoroughly wash the affected area with soap and water.

When loading materials onto the roof, exercise care to ensure that concentrated loads do not exceed the design load limitations of the existing roof structure. If stacking products, ensure sufficient stability of the materials.

To ensure proper adhesion Weathered Membrane Cleaner should be used on any membrane that gets dirty before installation.

TOOLS AND EQUIPMENT

Soft bristle push broom	Scissors	Chalk line	4" and 9" Medium nap paint roller and handle
Steel or silicone 2" hand roller	Utility knife	Coated or solvent resistant (Hycron™) gloves	Paper hole punch
Roofing nails	Caulk gun	Safety glasses	Scissors
Hammer	Cotton rags	Fire extinguisher	
	Duct tape		

ROOF SURFACE PREPARATION

The WeatherBond fully-adhered system will adhere to wood, metal, plastic, glass, fiberglass, rubber, masonry, brick, smooth surface built up roofs, non-granular roll roofing, non-granular "half lap" roofing, painted surfaces, wood fiberboard, lightweight concrete, and polyisocyanurate. This product may NOT be applied to polystyrene insulation. Priming of the roof deck is not required.

Be sure the roof surface is clean, free of dust, dirt, rust, oil, grease, and loose material. The roof surface must be dry. This product will not adhere to wet or damp surfaces. Trapped moisture may vaporize and negatively affect the performance of this product.

Good roofing practice dictates that ponding water be prevented. The roof surface should have a positive slope of at least 1/2": 12" to prevent ponding water conditions. Ponding water is defined as the presence of standing water within 24 hours of precipitation.

Before starting please consult the "Precautions" section at the beginning of this manual.

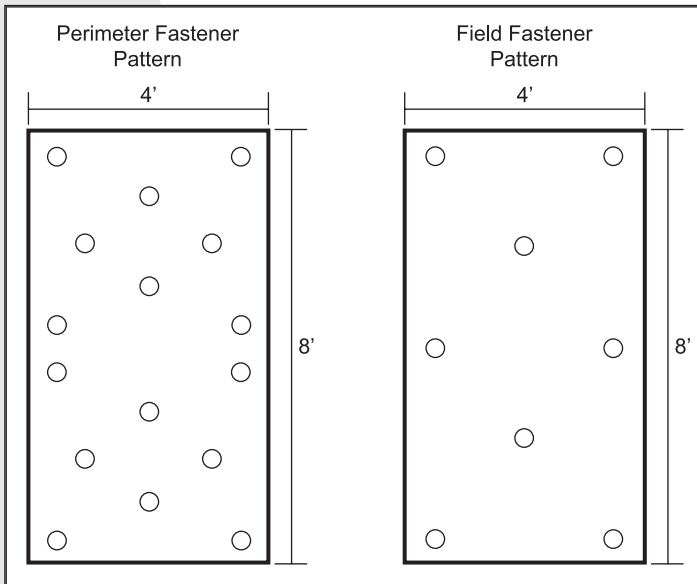
INSTALLATION OF INSULATION (OPTIONAL)

Butt all insulation boards together, staggering the joints. All spaces larger than one-quarter inch (1/4") must be filled to provide a uniform smooth surface.

Screws and deck plates shall be applied at the minimum rate of eight (8) per 4' x 8' sheet of insulation, and five (5) per 4' x 4' sheet, or as required by the insulation manufacturer. When installing insulation around the perimeter, the fastening pattern is one (1) deck plate and one (1) screw every two (2) square feet or sixteen (16) per 4' x 8' sheet in a diamond in the box pattern, and eight (8) per 4' x 4' sheet.

Extra fasteners should be installed around protrusions such as pipes, chimneys, skylights, and irregularities in the roof deck.

Do not lay more insulation than can be covered with the WeatherBond EPDM membrane by the end of the working day.



For buildings less than 60' in height, the width of the perimeter is defined as .4 x the building's height.

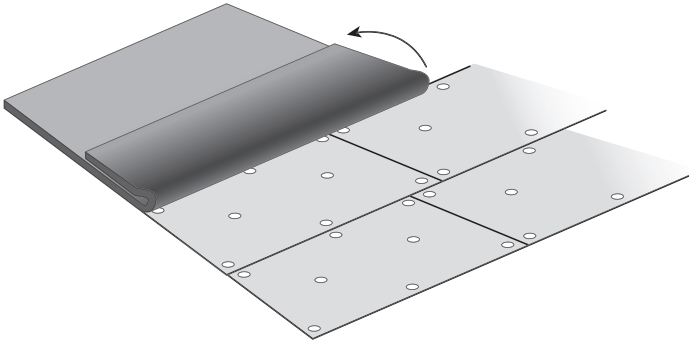
INSTALLATION OF ROOFING

Unroll the WeatherBond EPDM membrane over the substrate so that the sheet is in the desired position and is wrinkle free.

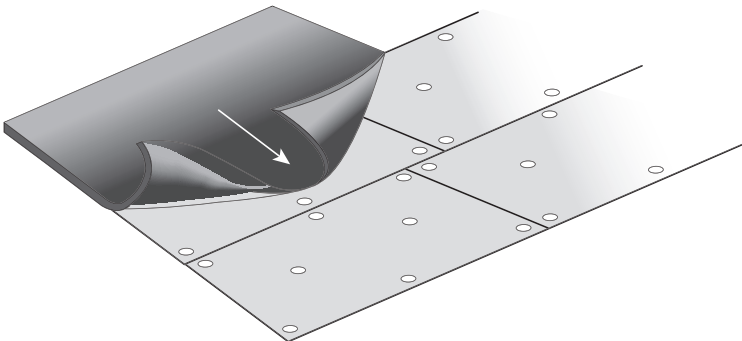
Allow the WeatherBond EPDM membrane to relax. Depending on weather conditions, this could take from fifteen (15) to thirty (30) minutes.

Begin at the low edge of the roof. Cut the membrane to length if required, and position the sheet to achieve an overhang off the roof of at least 3" for both the length and width. Use duct tape to secure width and half the length in place.

Fold the sheet onto itself so that one-half (1/2) of the sheet is exposed; take care to avoid wrinkles.



Open and thoroughly stir the WeatherBond LC-60 Bonding Adhesive. Using a medium nap, solvent accepting paint roller, apply the Bonding Adhesive to the substrate and the membrane at a rate of sixty (60) square feet per gallon (finished surface membrane and substrate). The adhesive must be applied to 100% of both surfaces in an even coat without globs or puddles. Allow the adhesive to dry to the finger touch (tacky not stringy).



INSTALLATION OF ROOFING

Roll the coated sheet onto the coated substrate avoiding wrinkles by rolling the middle of the sheet first. Immediately after rolling the sheet into the adhesive, broom the membrane sheet to achieve maximum contact. DO NOT apply excessive pressure to cause the membrane to wrinkle.

Repeat the application of WeatherBond LC-60 bonding adhesive for the other half of the WeatherBond EPDM membrane.

See the "Seams" section of this manual for seaming adjoining sections of the membrane together.

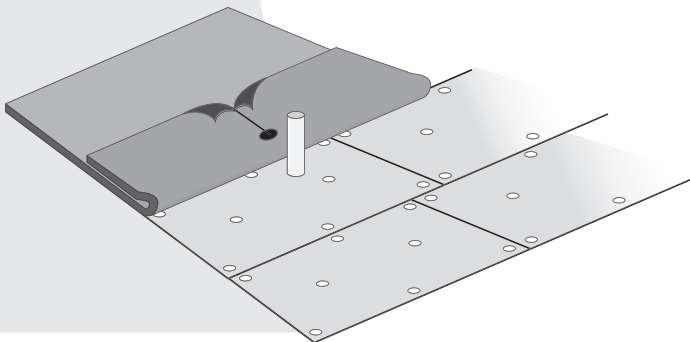
NOTE: POSITION ADJOINING SHEETS TO ACHIEVE AN OVERHANG OF AT LEAST 3" FOR BOTH THE LENGTH AND WIDTH.

NOTE: DO NOT APPLY BONDING ADHESIVE TO ANY SEAM AREAS.

PIPES/PENETRATIONS

When laying out the field sheets and a pipe or penetration is encountered, roll the folded membrane to the pipe. Be sure to maintain the proper alignment of the sheet with the roof edge, wall, and seams. Make a straight cut from the pipe to the nearest edge of the field sheet. Cut a hole to match the diameter of the pipe and roll the field sheet around the pipe. Check the final position of the sheet. Fold the membrane back and begin the bonding procedure

After the field sheet has been glued and broomed into place, apply a WeatherBond 6" wide Peel and Stick Cured Coverstrip over the entire cut in the field sheet from the pipe to the end of the sheet. Apply lap sealant around entire Coverstrip. See the "Prefabricated Pipe Boot" section of this manual for further information on finishing this detail.

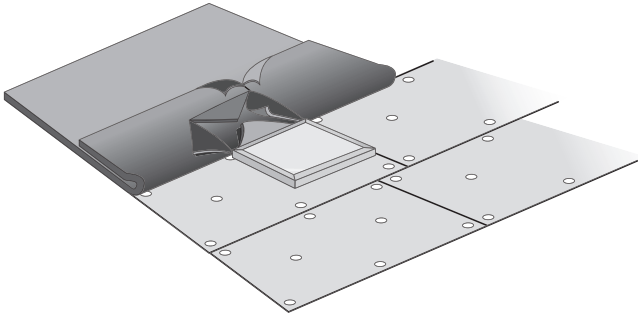


INSTALLATION OF ROOFING

CURBS (Skylights, Chimney)

When encountering an outside corner as part of a perimeter wall, refer to the Perimeter Wall details in this manual. When encountering outside corners as part of a rooftop penetration such as a skylight or chimney, follow the instructions below.

Prior to applying the adhesive, and while maintaining proper sheet alignment with walls, perimeter edges and other protrusions, unroll the membrane up to the base of the unit.



Measure the width and depth of the unit and transfer the corresponding dimensions onto the folded membrane. Draw an X inside the box. Cut the X mark and from one corner cut a straight line to the nearest edge of the membrane. Roll the membrane around the unit, leaving a triangle of membrane turning up each one of the four (4) sides. Using a standard paper punch or scissors, punch or cut a round hole at every angle change of the membrane at the outside corners. (This will prevent the cut in the membrane from continuing.)

After all cuts are made and the membrane has been correctly positioned, fold the membrane back and begin bonding procedures. After the field is complete, bond the triangles up the sides of the unit (chimney, skylight, etc.). Take care to bond the membrane into the angle change so that the membrane is completely adhered. After the field sheet has been glued and broomed into place, apply a WeatherBond 6" Peel and Stick Cured Coverstrip over the entire cut in the field sheet from the curb to the end of the sheet. Apply lap sealant around the entire Coverstrip. Refer to the "Outside Corners" section of this manual for further details on finishing the curb.

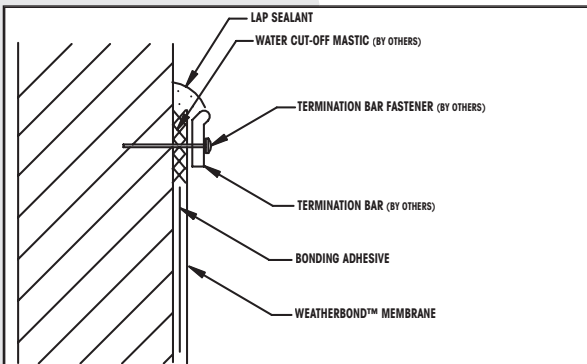
PERIMETER WALLS

The membrane on the wall should be a continuation of the deck membrane. The membrane should extend up the wall as far as possible to prevent the possibility of moisture infiltration behind the membrane. The membrane must extend on the roof deck a minimum of 6" and up the wall a minimum of 12"

Position the sheet in the desired location folding back the material that will be installed on the wall. Apply Bonding Adhesive to the wall, deck, and the membrane and allow to properly dry. Roll sheet to the base of the angle change. Firmly press or crease the sheet tightly into the angle change. Roll the sheet up the wall. Using a bristle broom to firmly adhere the membrane sheet to the wall and roof deck. Refer to the Outside Corner or Roof Edge Details for instructions on terminating the edge of the membrane.

Vertical Termination

After the desired flashing height is attained and the membrane has been adhered, determine the placement of the Termination Bar (by others), peel the top edge of the membrane back and apply a bead of Water Cut-Off Mastic (by others) between the membrane and the wall or curb. Install the Termination Bar directly over the membrane and Water Cut-Off Mastic. Clean any Water Cut-Off Mastic from the Termination Bar and apply a bead of Lap Sealant over the top of the bar.



NOTES:

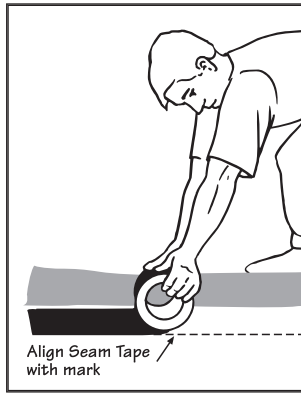
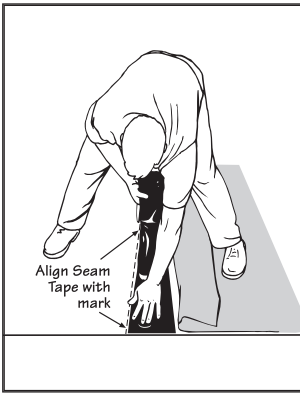
1. Apply on hard smooth surface only, not for use on wood.
2. Water cut-off mastic must be held under constant compression.
3. Do not wrap compression termination around corners.
4. Allow 1/4" (6 mm) min. to 1/2" (13 mm) max. spacing between consecutive lengths of termination bar.

SEAMING USING SEAM TAPE

The membrane should be positioned so that the width of the seam is 3". Remove excess chalk from a chalk line by snapping the line into the air and then chalk a line one-quarter (1/4") to one half inch (1/2") from the leading seam edge.

Fold the top sheet back to expose the seam area. Using the medium nap paint roller apply the WeatherBond Multipurpose Primer to the seam area using back and forth strokes with moderate pressure until the seam surface attains a smooth black appearance. Apply the WeatherBond Multipurpose Primer past the seam edge to the chalk line. Allow the Primer to flash off.

NOTE: If the EPDM membrane is contaminated with dirt, dust, or debris, clean the seam area with WeatherBond Membrane Cleaner before applying WeatherBond Multipurpose Primer.

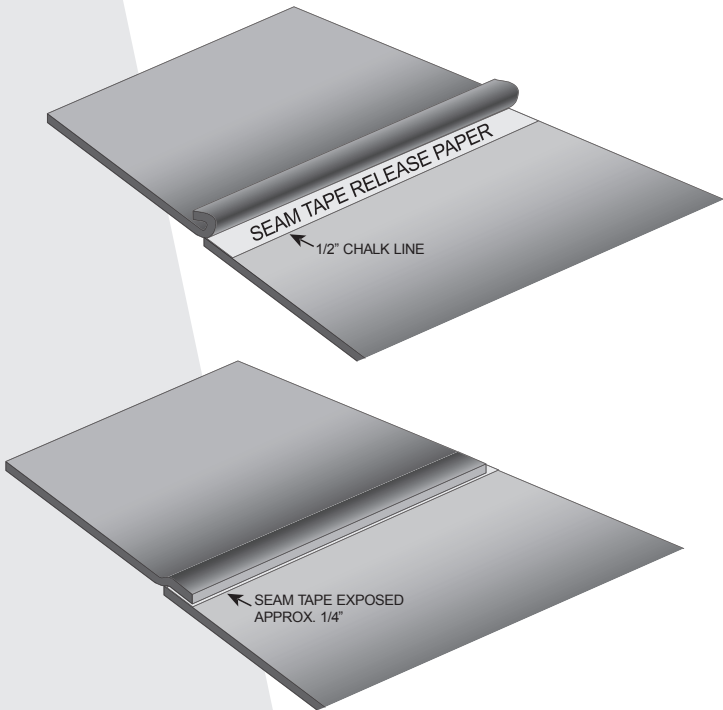


Unroll the 3" wide Seam Tape along the length of the seam, tape side down, aligning the Seam Tape (not the clear backing) along the chalk line. Using moderate pressure set the Seam Tape into place to keep air from being trapped under the tape. Fold the top membrane onto the Seam Tape release paper. (If the Seam Tape does not visibly extend beyond the leading seam edge, the membrane edge should be cut back to expose one-quarter inch (1/4") of Seam Tape.)

SEAMS

Reaching under the top ply of membrane, pull the release paper away from the Seam Tape at a 45-degree angle to the seam. While removing the paper, draw your hand across the seam, from the back to the leading edge. This will prevent wrinkles and fish mouths from forming in the seam. After the paper is removed, roll the entire length of the seam with a steel or silicone hand roller, first, across the seam, and then the length of the seam.

NOTE: When splicing Seam Tape, overlap each piece a minimum of one inch (1") and firmly roll with a steel or silicone hand roller. Apply lap sealant along the seam's leading edge 3" in each direction from where the seam tape is spliced together.

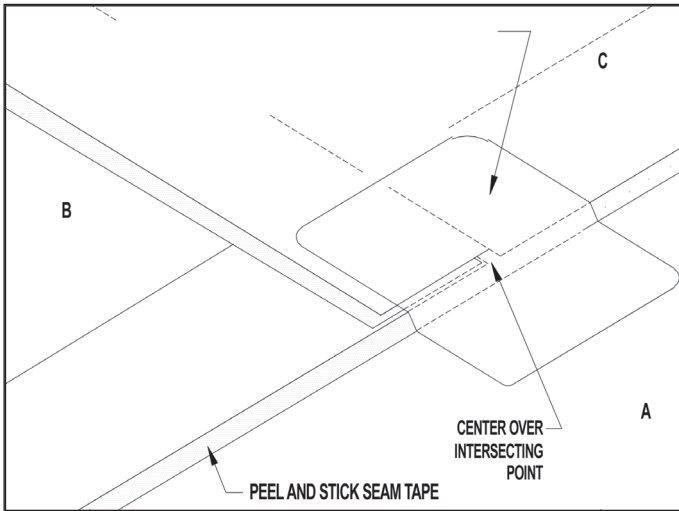


A T-Joint is formed when two sheets of membrane form a seam that travels under, or over, a third ply. The center of the "T" is where the middle sheet ends and the top sheet bridges over the middle sheet.

Use WeatherBond 6" Peel and Stick Cured T-Joint patches or WeatherBond 6" Peel and Stick Uncured Flashing to form T-Joint patches. T-Joint patches should be at least 6" X 6". Apply primer to membrane surface before applying T-Joint patches.

NOTE: All T-Joint Patches should be thoroughly rolled with a steel or silicone hand roller.

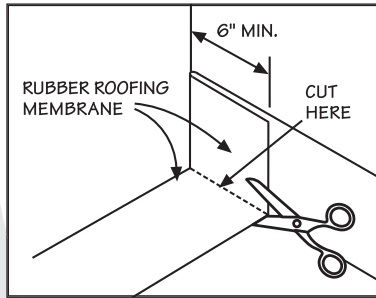
NOTE: When applying T-Joint patches over 60-mil WeatherBond EPDM membrane, Lap Sealant is required around all edges of the patch.



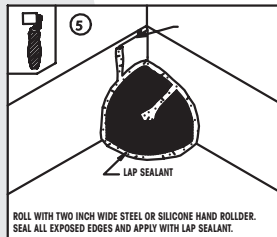
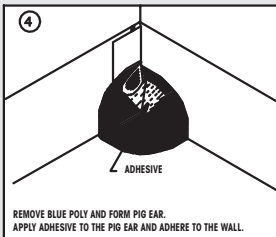
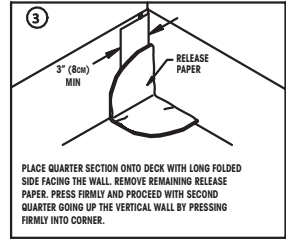
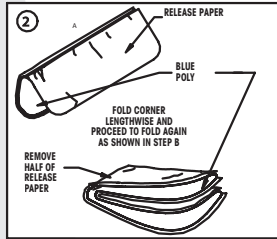
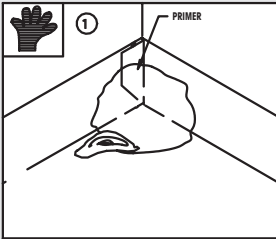
CORNERS

INSIDE CORNERS

The membrane should extend up the wall as far as possible (6" min.). Cut the membrane as shown. Apply Bonding Adhesive to the wall, roof deck, and membrane. Roll sheet to the base of the angle change. Firmly press or crease the sheet tightly into the angle change. Roll the sheet up the wall. Using a bristle broom to firmly adhere the membrane sheet to the wall and roof deck. Apply Bonding Adhesive to the back of the flap and the membrane and secure the flap to the wall. Refer to the Vertical Termination Section at Perimeter Walls for instructions on terminating the edge of the vertical membrane.



Use WeatherBond Peel and Stick Inside/Outside Corners to finish the inside corner.



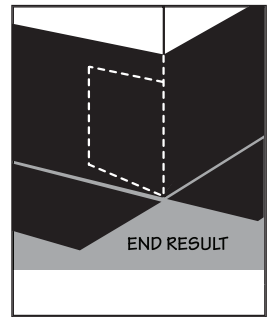
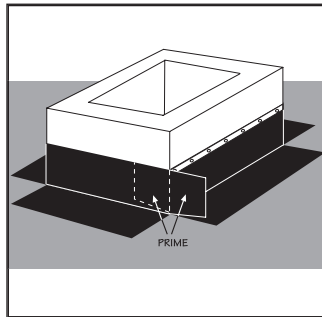
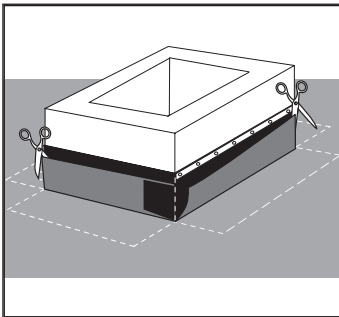
NOTE:

Wall Flashings should extend a minimum of twelve inches (12") above the roof deck.

OUTSIDE CORNERS

Measure and cut a piece of membrane to wrap the penetration and overlap itself by a minimum of 3". Allow at least 3" of material to extend onto the deck and at least 3" of membrane to extend past the triangle of membrane already adhered to the curb. Mark the desired height of the membrane on the penetration. This mark will serve as the starting point of the installation of the membrane piece. Apply WeatherBond LC-60 Bonding Adhesive to the penetration, roof deck, and membrane. Allow the adhesive to properly flash off.

Starting at the mark, press the material into place working from the top of the membrane down to the bottom while working around the penetration. This step will be easier if a second person holds the membrane away from the penetration. The material that will splice onto the deck should fold back against the penetration. At the final corner use scissors to cut out the 3" excess that will fold down on to the roof deck. **DO NOT** cut the 3" excess that will be adhered to the penetration.

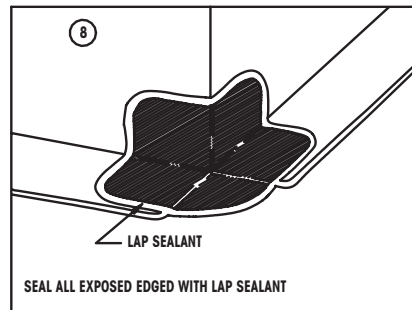
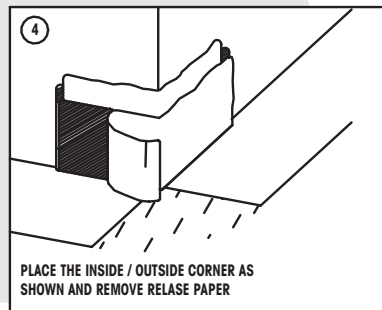
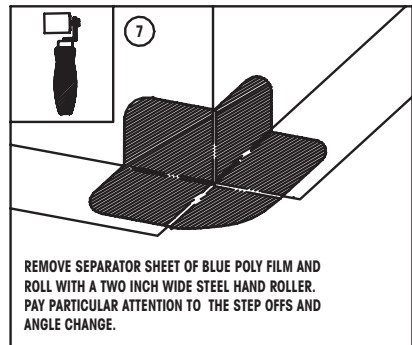
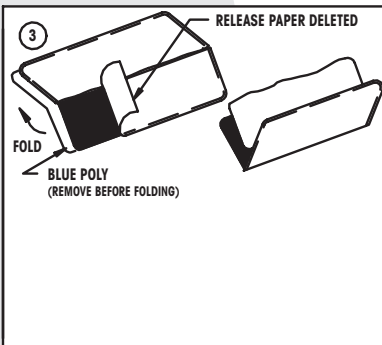
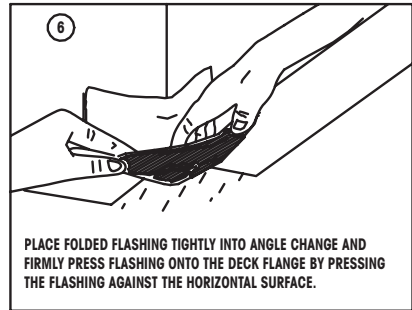
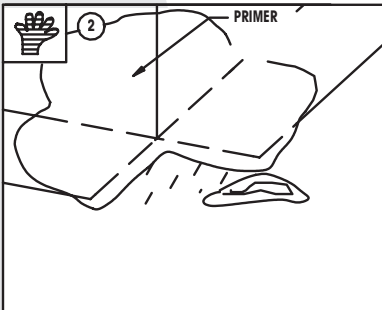
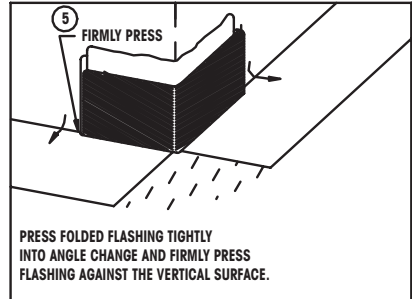
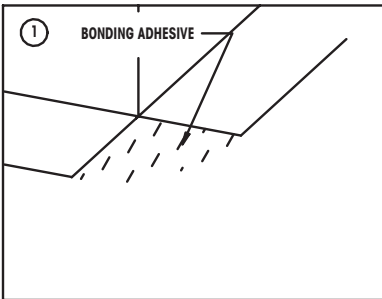


Starting with one side, cut down to the angle change at the corner. Roll the membrane tightly into the angle change and onto the roof deck. Repeat on each side of the penetration. Apply adhesive to the membrane on the penetration where the excess membrane flap will attach to the penetration.

Refer to the Vertical Termination Section at Perimeter Walls for instructions on terminatinog the edge of the vertical membrane.

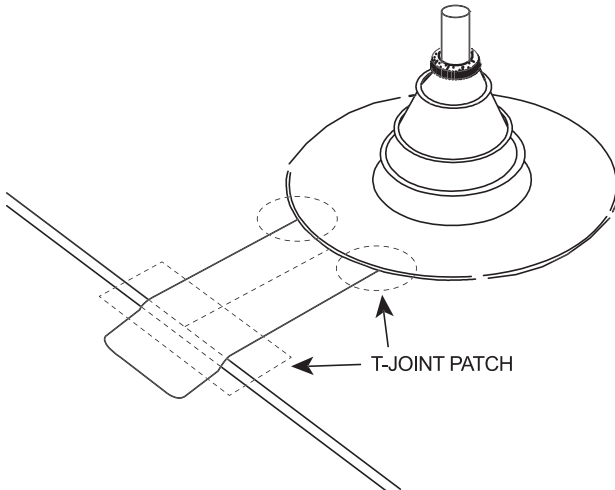
CORNERS

Finish the outside corner with WeatherBond Peel and Stick Inside / Outside Corners.



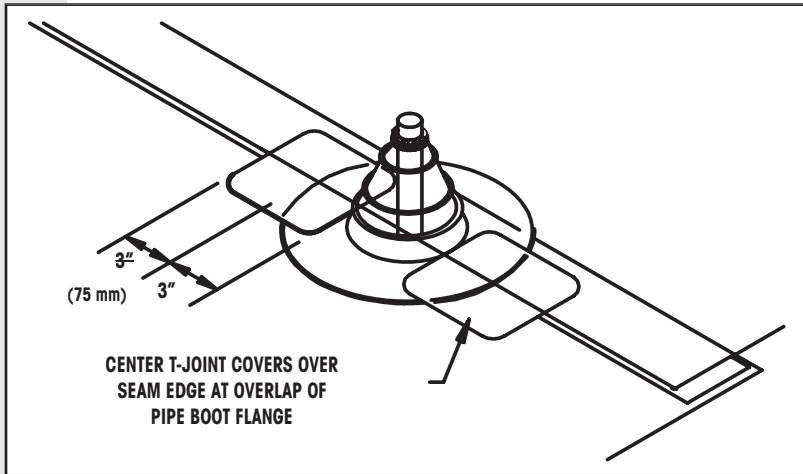
PREFABRICATED PIPE BOOT

1. Cut the pipe seal adjacent to the raised "ring" one size smaller than the pipe diameter. DO NOT CUT DIAGONALLY THRU THE INDEX RING.
2. Pull pipe seal over pipe until base flange is in contact with the membrane.
3. Mark pipe around the top of the pipe seal.
4. Pull pipe seal upwards on pipe until mark on the pipe is visible.
5. Install Water Cut-Off Mastic (by others) below the mark, which indicates the top of the installed pipe seal.
6. Apply WeatherBond Multipurpose primer to the EPDM deck membrane in the area where the base flange will be bonded. Allow to dry.
7. Pull pipe seal back down over pipe and into position.
8. Remove release paper from the tape and with hand pressure press tape to primed area. Roll splice area with a hand roller.
9. Install a stainless steel universal clamping ring to the top of the pipe seal to provide constant compression of the Water Cut-Off Mastic.
10. Apply WeatherBond 6" peel and stick cured T-Joint Patches (or WeatherBond 6" peel and stick uncured flashing) where pipe seal intersects a field splice.
11. Apply Lap Sealant around T-Joint Patches.



NOTE: Temperature of the pipe must not exceed 180° F.

PREFABRICATED PIPE BOOT

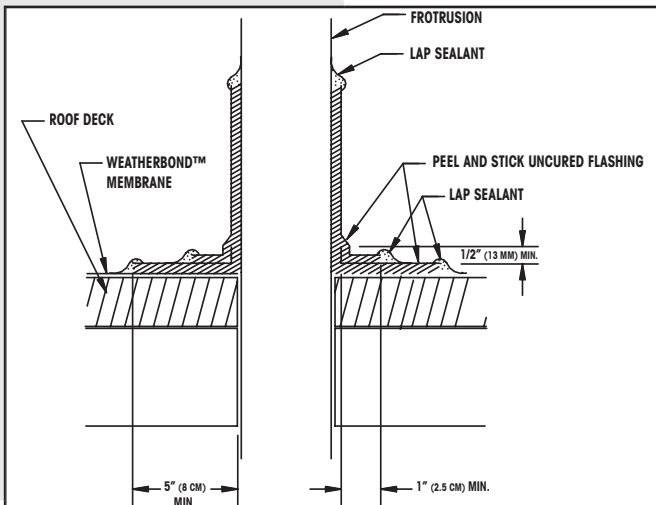


NOTES:

1. Remove all lead and other flashing.
2. Pipe seal must have intact rib at top edge, regardless of pipe diameter.
3. Deck flanges of the pre-molded pipe seal shall not be overlapped, cut or applied on any angle change.

PIPE AND PENETRATION FLASHINGS

To fabricate a pipe boot or flashing for other penetrations follow the procedures below using two layers of WeatherBond Peel and Stick Uncured Flashing.



NOTES:

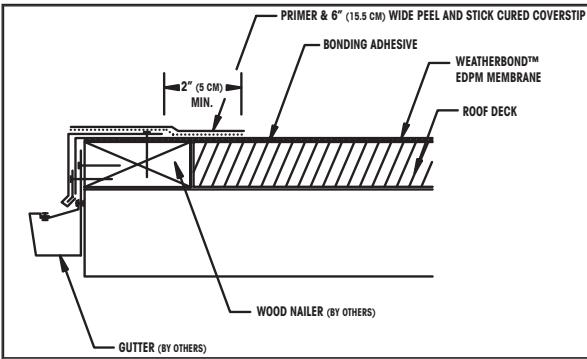
1. Remove all lead and other flashing before installing field-fabricated pipe flashing.
2. Nailers required around all pipes greater than 18" (46 cm) in diameter.
3. Peel and stick uncured flashing wrapped around pipe shall have 3" (8 cm) min. membrane seam.

ROOF EDGE DETAILS

Metal Drip Edge and Drip Edge to Gutter Using 6" Peel and Stick Cured Coverstrip

Install metal drip edge (by others) per manufacturer's instructions. Apply primer to the metal drip edge and the membrane the entire length of the drip edge. To ensure proper adhesion apply primer to an area that is wider than the Coverstrip. The Coverstrip should be applied $\frac{1}{2}$ " from the outside edge of the metal drip edge while extending onto the deck membrane by at least 2".

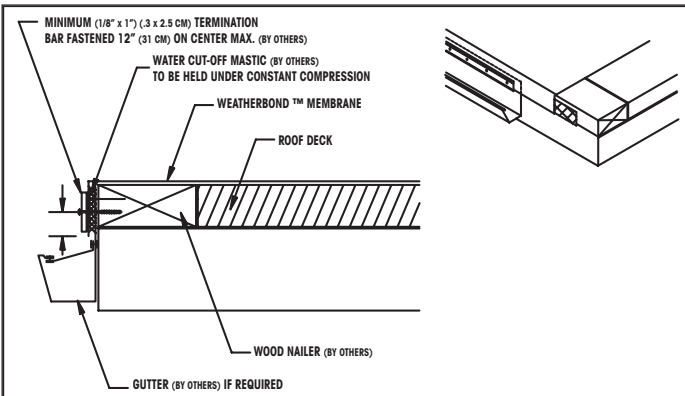
When splicing two pieces of Peel and Stick Cured Coverstrip, allow for a minimum lap of 1". Apply T-Joint patches and Lap Sealant where needed.



NOTES:

1. Min. 2" (5 cm) seam from nail head.
2. Peel and stick coverstrip must overlap deck membrane min. 2" (5 cm).
3. Fasteners and fastener pattern as recommended by metal edge manufacturer.
4. Wood nailer must extend past total width of metal edge deck flange.
5. Underside of metal flange must be sealed at all joints. Consult respective manufacturer for appropriate sealant.

Termination Bar to Gutter



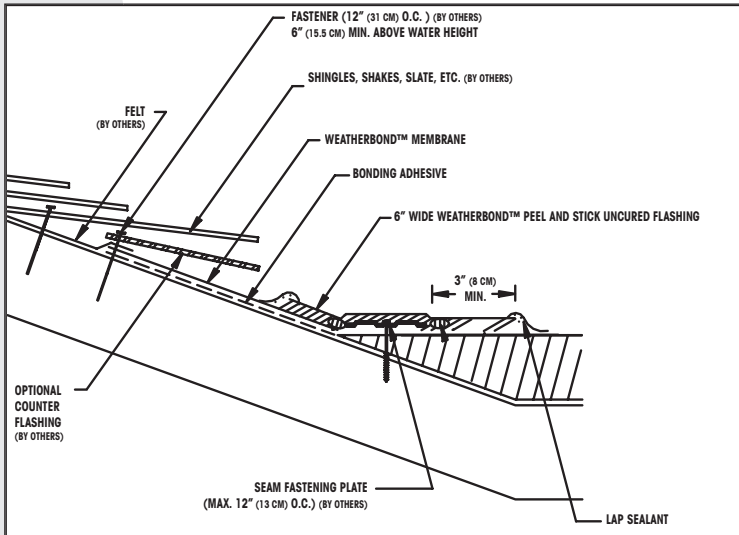
NOTES:

1. Fastener pattern of termination bar must provide constant compression on Water Cut-Off Mastic.

MEMBRANE TO SHINGLE TRANSITION

When installing a WeatherBond EPDM membrane system with a tie-in to an existing shingle roof, remove a minimum of 3 courses of shingles. Adhere the membrane onto the sloped roof deck. Nail the top of the membrane every six inches (6") and install the shingles over the EPDM membrane as shown.

Keep the bottom course of shingles a minimum of four inches (4") above the roof angle change. To adhere the bottom course of loose shingle tabs to the membrane, lift each tab and apply a one-inch (1") long bead of Lap Sealant.



TERMS

- BONDING ADHESIVE:** Adhesive used to adhere the field sheet to substrate, walls, and curbs. It should be thoroughly stirred before using and is yellow in color.
- CURED COVERSTRIP:** Six inch (6") wide cured EPDM membrane with Butyl Tape laminated to one side. Used when stripping in metal drip edge, repairing cuts in the field membrane, or flashings, which require cured membrane.
- DECK PLATES AND SCREWS:** Used to mechanically attach the insulation board to the roof deck.
- EPDM MEMBRANE:** Cured field sheet membrane applied to roof decks, walls, and flashings. Available in a variety of widths and lengths.
- FISH MOUTH:** A wrinkle is formed when an increasing amount of membrane is forced onto an area too small to accommodate the material. When the wrinkle ends at the edge of the material, a conical opening is formed called a Fish Mouth. Wrinkles and Fish Mouths in seams are not acceptable. They must be removed and covered with a T-Joint patch.
- FLASH OFF:** Allowing the solvents in the adhesives or primer to evaporate, leaving the material in a tacky, not wet or stringy condition, before mating the two surfaces together. If the proper Flash Off time is not allowed, blisters will form in the membrane. Blisters will not harm the membrane and over time, will usually disappear.
- LAP SEALANT:** Applied to exposed edges of field seams and uncured flashings. Also applied at the top of all Termination Bar applications and at the top of Pipe Boots after the Pipe Boot Clamp has been installed.
- MEMBRANE CLEANER:** Whenever mating two surfaces of membrane, both surfaces should be cleaned with Hexaprene. Used for cleaning metal drip edge after it has been sanded, prior to applying Cover Strip. Also used to clean seam edges prior to applying Lap Sealant.
- METAL DRIP EDGE:** Used to create a finished appearance and prevent water from running down the surface of fascias and walls. Metal Drip Edge is made from painted aluminum and galvanized or painted steel.
- PIPE BOOT:** Premolded EPDM boot. The best and most cost effective way to flash pipes.
- PIPE BOOT CLAMP:** Stainless steel clamp used to secure the top of the Pipe Boot to the Pipe.
- SEAM TAPE:** Butyl Tape used to splice two layers of membrane into a watertight seam.

TERMS

SEAM TAPE PRIMER: Solvent based primer used to clean and prime EPDM membrane before applying Seam Tape or any Cured or Uncured Tape Backed membrane.

Applied using a scratch pad. **DO NOT APPLY PRIMER DIRECTLY TO TAPE.**

Primer is only applied to surface being prepared to accept Tape products.

SPLICE ADHESIVE: Used whenever adhering two pieces of membrane together. This is a more time consuming substitute for Seam Tape. Adhesive is black in color and should be thoroughly stirred before using.

SUBSTRATE: The surface on which the membrane is applied (insulation, walls, etc.).

TERMINATION BAR: Extruded aluminum bar used to terminate the membrane at parapet walls, chimneys, skylights, and AC curbs. Also used to terminate membrane fascia when no metal drip edge is used. The proper fastener should be installed per the manufacturers recommendation and a 1/4 inch space maintained between bars.

PEEL AND STICK UNCURED FLASHING: Uncured EPDM membrane with Butyl Tape laminated to one side. Used whenever regular and field seams make angle changes. After Uncured Flashing is applied, it will cure in the position in which it was applied.

WATER CUT-OFF MASTIC: Used to create a waterproof compression gasket whenever the membrane is mechanically fastened using a Termination Bar, or Pipe Boot Clamp, Water Cut-Off Mastic is applied between the membrane and the pipe, or wall. The mechanical termination is installed over the membrane, compressing the mastic and creating the gasket.