FLEECEBACK FIELD GUIDE

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Approximate FAST & Flexible FAST Adhesive Coverage Rates (Sq. Ft.)

Type of Installation	Packaging	Spray	Extrusion 4" o.c.	Extrusion 6" o.c.	Extrusion 12" o.c.
FB to a Smooth Flat Surface	50 gal (Per Set)	10,000	9,000	12,500	17,500
	15 gal (Per Set)	3,000	2,700	3,750	5,250
	Box Set	225	210	280	390
	Bag in a Box (Per Set)	N/A	650	950	1,700
	Dual Cartridges/Ctn (1 Ctn = 4 Cartridges)	200	200	300	600
Insulation Attachment to a Smooth Flat Surface Smooth Gypsum LWC Concrete Concrete Steel Smooth BUR Mod-Bit Mineral Cap Multiple layers of insulation	50 gal (Per Set)	9,000	8,500	11,250	15,750
	15 gal (Per Set)	2,700	2,500	3,375	4,725
	Box Set	180	170	225	315
	Bag in a Box (Per Set)	N/A	650	950	1,700
	Dual Cartridges/Ctn (1 Ctn = 4 Cartridges)	N/A	200	300	600
FB to Wood Fiber Insulation Board/HP Recovery Board	50 gal	7,500	6,000	9,100	12,725
	15 gal	2,250	1,900	2,875	4,025
Insulation to Wood Fiber Decks	50 gal	6,500	5,500	8,125	11,375
	15 gal	2,000	1,650	2,500	3,500
Insulation to Gravel BUR	50 gal	5,000	4,500	7,500	N/A
	15 gal	1,800	1,500	2,250	N/A

FleeceBACK Field Guide

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Introduction

This manual has been developed to serve as a reference guide for Carlisle's approved applicators who are already familiar with our roofing systems and responsible for actual roof installation, primarily the roofing foreman or lead person.

The following pages contain routine pre-installation precautions, safety reminders, basic installation procedures, spray equipment information and the most frequently utilized details pertaining to Carlisle's FleeceBACK Roofing Systems.

This manual is offered as a supplement, not a substitute, to the Specification Manual, Material Safety Data Sheets, Product Data Sheets, and Technical Data Bulletins, and must always be considered as such.

When installing a Carlisle warranted system, refer to your roof drawing (stamped and approved by Carlisle's Project Review Department) for your project's exact requirements.

The 10 Most Common Installation Issues with Urethane Adhesives

1. **Gaps between the deck and wall/penetration that are not sealed:** Unsealed gaps allow humid air to enter the roofing assembly and condensate on the deck, weakening the insulation facer. A physical air block using foam or backer rod in addition to 725TR or PS Flashing is required.
2. **Loose material or moisture on the deck:** Dirt, dust, debris and loose felts will compromise the adhesive bond. After brooming, use a blower to remove any residual contamination. Deck must be dry.
3. **Unweathered asphalt wasn't primed:** Carlisle requires the use of CAV-GRIP or 702 Primer over unoxidized asphalt when beads are spaced at 6" or 12" o.c. Adhesion to unweathered asphalt is doubled with CAV-GRIP or 702 Primer. CAV-GRIP is preferred. Fastening the first layer of insulation is an option.
4. **Depressions in the deck not accounted for:** Hard insulation boards will bridge depressions or deflections in the deck. These areas should be marked ahead of time so that more/thicker adhesive can be applied to compensate.
5. **Pencil thin beads applied:** Proper application and performance requires a minimum ½"-wide wet bead of adhesive that will foam out to around 1".
6. **Bead spacing exceeds what was specified:** Bead spacing has a direct impact on the uplift performance of the assembly. If the spec calls for 6" o.c. and you apply it at 8" or 9" o.c., the ultimate uplift strength will be reduced.

   4" o.c. spacing requires 12 beads per 4' x 4' board.
   6" o.c. spacing requires 8 beads per 4' x 4' board.
   12" o.c. spacing requires 4 beads per 4' x 4' board.
7. **12" bead spacing used in corners and perimeters:** Corners and perimeters experience more wind uplift pressure, which is why Carlisle requires tighter bead spacing in these areas. 12" bead spacing is not acceptable in corners or perimeters. Know the spacing requirements prior to starting the job.
8. **Thin application over Gravel BUR:** A thicker application of adhesive is required over a properly-prepared gravel BUR. The foam must rise ⅜" above the remaining gravel, or it won't touch the board.
9. **Not waiting for "string/gel" time:** If insulation boards are set prior to the adhesive reaching string or gel-like consistency, the foam cells collapse back to a liquid and the adhesive loses a significant amount of its holding power. VERY IMPORTANT!
10. **No weighted roller used and no relief cuts or constant weight applied:** Rigid insulation boards must be forced into the adhesive with a weighted roller. Relief cuts and constant weight are sometimes required to promote a solid bond. Rolling the boards at the 5 minute mark allows adhesive to gain strength.

Installation Procedures

FAST Adhesive Substrate Compatibility:

Insulation/Underlayments	**Compatible**
Polyiso	Yes (Note 1)
HP Recovery Board (Wood Fiber)	Yes
Expanded Polystyrene (EPS)	Yes (Note 2)
Extruded Polystyrene	Yes (Note 3)
New Sprayed Foam Insulation	Yes
Scarfed Foam Insulation	Yes
DensDeck/DensDeck Prime	Yes
OSB	Yes
SECUROCK	Yes

Decks	**Compatible**
Concrete	Yes
Cellular Light Weight Concrete (Min. 200 psi compressive strength) Celcore Elastizell Zonocel	Yes
NVS Light Weight Concrete	Yes
Vermiculite Light Weight Concrete	Contact Carlisle
Gypsum	Yes
Tectum	Yes
Wood	Yes
Painted Steel Deck	Yes (Note 4)
Galvanized Steel Deck	Yes (Note 5)
Acoustical Steel Deck	Yes (Note 6)

Existing roofing materials must be dry and free of debris	**Compatible**
Smooth BUR	Yes (Note 7)
Gravel BUR	Yes (Note 8)
Mineral Surface Cap Street	Yes
Granulated Modified-Bitumen	Yes
Smooth Modified-Bitumen	Yes
Aged EPDM, Hypalon, TPO and PIB	Yes (Note 9)
Coal Tar Pitch	Yes (Note 10)
Aluminum Coated Smooth BUR	Yes (Note 11)
Acrylic Coated SPF	Yes
Silicone Coated SPF	No (Note 12)
Carlisle – 725TR Vapor Barrier	Yes
Unexposed Asphalt	Yes/No (Note 13)

Notes:

1. Paper and coated-glass fiber-mat facers.

2. EPS insulation cannot be used directly under Sure-Seal (black) FleeceBACK systems unless a light-colored coating is specified. White FleeceBACK membrane may be installed directly over minimum 1.5 pcf density EPS; however, no UL or FM Codes are available unless overlayment of HP Recovery, DensDeck, DensDeck Prime, Securock or HP Polyiso is used.

3. Extruded insulation must be overlaid with a cover board such as HP Recovery Board or DensDeck. No direct membrane attachment options are available.

4. Painted steel decks shall be power-washed to remove any loose paint if present.

5. For new galvanized steel decks, power washing is required to remove finishing oil residue if present.

6. Prior to spraying deck with FAST Adhesive, fill flutes with fiberglass or other suitable fill insulation and tack in place with strips of duct tape 3' on center, or other adhesive.

7. If the membrane is to be installed directly over existing BUR, the asphalt must be Type III or IV.

8. The membrane cannot be installed directly over gravel surface BUR.A minimum ½"-thick insulation is the required underlayment. Use Carlisle's SecurShield HD.

9. Power washing aged EPDM or Hypalon membrane is required prior to application of FAST Adhesives. For EPDM membrane areas with heavy dirt accumulation, use X-Tenda Coat EPDM Activator prior to power washing. Use X-Tenda Coat General Purpose Cleaner to clean heavy dirt accumulation on membranes other than EPDM. To ensure adequate adhesion to PIB (Polyisobutylene) or TPO membranes less than 5 years old, use a floor sander with 100 grit screens to sand the existing surface. For TPO membranes less than 2 years old, use X-Tenda Coat General Purpose Cleaner. Dilute the product per instruction label. Spray the surface and let stand for 15 minutes prior to power washing.

10. The membrane may not be installed directly over coal tar pitch due to softening. An insulation providing the necessary R-Value must be used beneath membrane to prevent coal tar softening.

11. A test installation over aluminum coated smooth BUR is recommended to ensure the coating is well-adhered to the BUR surface. Any loose coatings must be removed by power washing or by physical abrasion prior to application of FAST Adhesive.

12. Silicone coated SPF must be scarfed (coating removed) prior to adhering membrane directly to SPF.

13. Acceptable with full coverage. Requires CAV-GRIP or 702 Primer with bead applied.

Substrate Preparation:

Defects in the substrate surface must be reported and documented to the specifier, general contractor and the building owner for assessment. The Carlisle Authorized Roofing Applicator shall not proceed with the installation unless the defects are corrected.

On retrofit/recover projects: Cut and remove wet insulation as identified by the specifier. Fill all voids with new insulation so that it is relatively flush (+/- ¼") (+/- 6 mm) with the existing surface.

For existing PVC membranes: When the new underlayment is to be mechanically secured, the membrane must be cut into maximum 10' (3 m) by 10' sections. All PVC flashings at the perimeter, roof drains and roof penetrations must be removed.

Gravel surfaced built-up roof: When installing insulation over an existing gravel surfaced built-up roof, **loose gravel must be removed** prior to installing an acceptable insulation. Power brooming or hydro vacuuming is recommended by Carlisle to remove the loose gravel. Any uneven areas of the substrate must be leveled to prevent insulation from bridging. Make sure FAST Adhesive rises above the remaining gravel for proper insulation attachment.

Adhering insulation to roof deck on new construction and tear-offs: Gaps between the deck and wall/penetration must be sealed. A physical air block using foam or backer rod in addition to 725TR, VapAir Seal™ MD or PS flashing is required.

For all projects(new or retrofit): The substrate must be relatively even, without noticeable high spots or depressions. Accumulated water, ice or snow must be removed to prevent the absorption of moisture in the new roofing components and roofing system.

The surface to which the membrane will be adhered must be dry, free of debris, frost, fins, and loose and foreign material. Gaps greater than ¼" must be filled with FAST Adhesive or other appropriate material.

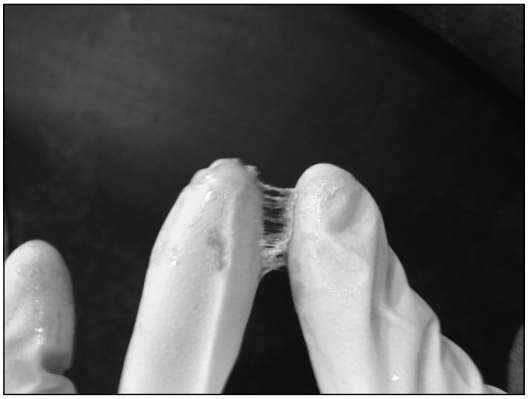
Insulation Attachment:

Extrude FAST Adhesive on the substrate at 4", 6" or 12" o.c.. Spray FAST Adhesive to obtain “full coverage.” Confirm the exact requirements for your project.

Place insulation boards into FAST Adhesive after allowing it to rise and develop string/body (approximately 1.5 to 2 minutes). Allowing more set-up time will help hold corners and boards in place.

Set the insulation boards in place. Do not slide the boards across the adhesive; instead walk the boards in. Wait an additional 3 to 5 minutes and roll in the insulation with a 150-lb steel segmented roller. Designate one person to walk and roll boards into place. Add constant weight or slit boards where necessary until adhesive takes hold.

In cold weather, adding FAST Catalyst to the B-side is recommended for insulation attachment to speed reaction time. Increasing the temperature settings will also speed up string time.



Proper string time shown here

Recommendations/Considerations:

Do not install more insulation/underlayment than can be covered by membrane in the same day.

All insulation boards must be butted together with no gaps greater than ¼" (6mm).

Gaps greater than a ¼" should be filled with FAST Adhesive and leveled out.

When multiple layers of insulation are specified, staggering joints between layers is recommended.

When FAST Adhesive is specified to secure insulation, refer to FleeceBACK Specification and Details or complete Spec Supplement.

Mechanical Insulation Attachment:

Carlisle Fasteners must be used for insulation attachment, in conjunction with Carlisle's 3" (7.5 cm) diameter Insulation Fastening Plates. For applicable Carlisle Fasteners and minimum deck penetration, refer to Spec Supplement G-09-11. Carlisle insulation must be mechanically fastened to the roof deck with 1 insulation fastener and plate per every 2 square feet (.18 m^2) as shown on Carlisle Detail A-27A. For exceptions, refer to Spec Supplement G-09-11.

A reduced fastening density can be used for structural concrete, minimum 22-gauge steel (.75 mm) or minimum 15/32" (12 mm)-thick plywood decks: When a single or top layer of minimum 1-½" (38 mm)-thick Carlisle Polyiso insulation is specified, the Carlisle insulation may be secured at the minimum rate of 1 fastener and plate per 4 square feet (8 fasteners per 4' x 8' board). Refer to Detail A-27C. On re-roof/no-tear-off projects with a maximum roof height of 40', any Sure-Seal insulation (i.e., HP Recovery Board, Polyisocyanurate less than 1-½" thick) may be secured at the minimum rate of 11 fasteners per 4' x 8' board (5 fasteners per 4' x 4' board). This option is not applicable for 15- or 20-year Golden Seal Warranty projects or for projects where extended wind speed coverage (greater than 72 mph) is desired. Refer to Carlisle Specifications.

Insulations by others must be secured to the roof deck in accordance with the insulation manufacturer's recommendations. If the fastening density is specified to be less than 1 fastener and plate every 2 square feet, the respective manufacturer must verify their requirements in writing concerning the fastening density and acceptable fastening pattern.

Oriented strand board (OSB), when specified to be mechanically fastened to the deck, is fastened in accordance with Carlisle Detail A-27A.

FleeceBACK Installation:

The following must be accomplished:

Ensure that water does not flow beneath any completed sections of the membrane system by completing all flashing, terminations and daily seals by the end of each workday. Sweep or blow all loose debris from the substrate with compressed air.

Verify all sections are completely dry prior to proceeding with the application of FAST Adhesive and FleeceBACK membrane.

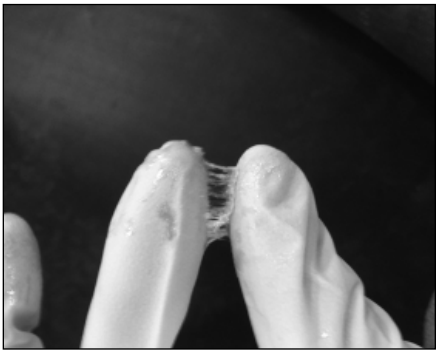
Traditional "Barn Door" Method:

1. Make a roof drawing to show how rolls will be laid out. Unroll FleeceBACK sheet, let it relax and position it accordingly. Fold sheets in half width-wise.

2. For TPO FleeceBACK, utilize a “header sheet”; position a roll 90° at the end of the roll lengths or overlay with 6"-wide reinforced membrane: see detail FB-2B. For EPDM, end laps must be butted together with a maximum of 1" gap. Overlay with 6"-wide PS Cured Cover Strip: see detail FB-2A/FB-2A-1.

3. Spray FAST Adhesive on the substrate to obtain full coverage, or, if specified, extrude FAST Adhesive at 4", 6" or 12" o.c. in the field. Spacing at perimeters and corners may never exceed 6" o.c. Warranties will vary based on bead spacing or achievement of full coverage.

4. **It is necessary for FAST Adhesive to rise and develop string/body prior to placing FleeceBACK membrane into the FAST Adhesive.** This will take approximately 1.5 to minutes depending on environmental conditions, temperature, humidity, and other factors.



5. Roll membrane with a 150-lb (68 kg) segmented steel roller to ensure fleece embedment. Start rolling at the same end that spraying is initiated. Roll the sheet width-wise to push out any air pockets and prevent fish mouths or mole runs. If adhesive contaminates the splice area, immediately remove with splice cleaner and a “Scotch Brite” pad. On Sure-Weld (TPO) and Sure-Flex (PVC/KEE HP), allow adhesive to dry and chip off.

Mod-Bit Method:

Instead of folding sheets width-wise, fold back length-wise or work directly off of the roll. Extrude or spray FAST Adhesive at specified coverage rate and roll membrane into adhesive as it comes to string time. Roll the membrane width-wise using a 150-lb segmented steel roller.

Wood Nailers:

1. Install wood nailers in those locations that have been designated by the specifier and as approved by Carlisle.

2. Wood nailers must be installed so that the top of the wood nailer is relatively flush (+/- ¼") with the top surface of the membrane underlayment and the width of the wood nailer exceeds the width of the metal flange (where applicable at edgings, scuppers, etc.) as shown on the appropriate Carlisle detail.

3. Follow the specifier's guidelines for the securement of the wood nailers or use FM 1-49 fastening at minimum. Use proper fasteners for treated wood, usually G90 Hot Dipped Galvanized or stainless steel anchors and screws. Exceed 1-49 if nailer extends over edge.

Daily Seal:

- On phased roofing, when the completion of flashings and terminations are not completed by the end of each day provisions must be provided to temporarily close the membrane to prevent water infiltration.

- Temporarily seal any loose membrane edge down slope using FAST Adhesive, urethane foam or other similar material so the membrane edge will not buck water. Caution must be exercised to ensure the membrane is not temporarily sealed near drains in such a way as to promote water migration below the membrane.

- On existing built-up roofs, remove the gravel. The surface must be clean and dry.
- After embedding the membrane in daily seal material, CHECK FOR CONTINUOUS CONTACT. Provide continuous pressure over the length of the temporary seal with 15' (4.57 m) lengths of 2-½" (6.5 cm)-diameter Sure-Seal Lay Flat Tubing filled with dry sand.

Note:

Wood nailers will not provide constant compression due to warping and an uneven substrate.

When work is resumed, pull the membrane free; trim and remove where the daily seal material was applied.

Overspray Protection and Windscreens:

- Make a plan before you begin to spray.
- Move cars or section off parking lots.
- Carry car covers if moving cars is not an option.
- Use windscreens with HP Mat.
- Use spray booths with HP Mat.
- Use the spatter spray tip and lower spray pressure.
- Keep the Spray Gun closer to the deck.
- Spray at a 90° angle to the deck.

Materials needed to build a windscreen:

- 2 – 10' X ½" metal electrical conduit lengths
- 4 – 5' X ½" metal electrical conduit lengths
- 4 - 90° ½" metal electrical conduit elbows
- Bag of zip ties (5" long is sufficient)
- 1 box of 5/32" self-tapping screws
- 1 – 11' X 5' piece of window screen or HP Mat
- Drill with a 5/32" nut driver

Note: Any window screening is sufficient, as long as it's 5' wide (60"). With time, the screening often becomes damaged or ripped. Purchase an 80' X 60" or 100' X 60" roll to replace the damaged or ripped windscreen. HP Mat also works well.

Procedures to build the windscreen:

1. Layout the 2 – 5' X 10' pieces of conduit parallel to each other and 5' apart. Next, take 2 of the 5' lengths of conduit and set them perpendicular to the 10' lengths at either end of the 10' conduit to create a 5' X 10' rectangular frame.

2. Attach the 90° elbows to each of the ends to finish the windscreen frame.

3. The other 2 – 5' lengths will be used as handles. For both of these 5' lengths, hammer the ends flat.

4. Use the 5/32" nut driver to attach the 2 – 5' hammered end lengths approximately 3.5' in from each end of the rectangle.

5. Roll out the screening or HP Mat and attach it to the frame using the zip ties or staples.

Recommended Procedures for Removing FAST Overspray:

FAST Adhesive is a polyurethane-based material that breaks down naturally with exposure to normal sunlight and U.V. rays. When vehicles are exposed to overspray, Carlisle recommends the following this procedure to completely remove the urethane particles:

1. After spraying with glass cleaner, remove overspray from windows and windshields using a razor blade-type scraper.

2. Wait 45 to 60 days, allowing the sunlight to naturally break down the urethane particles.

3. Thoroughly wash the vehicle after the aging period. Many times this alone is sufficient.

4. If washing alone was not totally effective, consider one of the options below:

    - Get a normal spring detail from an auto detail shop such as Detail Masters (1-800-634-9275) or Nationwide Overspray Network (1-800-345-1269).

    - Use a detailer's product like Clay Magic for painted surfaces. (1-800-826-0828) Request purple clay- blue works as well but it takes longer.

    - Urethane is a very inert material that will not harm or etch paint, chrome, aluminum or glass surfaces.

    - For finished brick or masonry, contact a contractor for dry ice blasting or sand blasting

Clean-Up:

If required by the specifier to ensure the aesthetics of the white surface of the Sure-White FleeceBACK membrane, the following procedures should be utilized:

Handprints, footprints, general traffic grime, industrial pollutants and dirt may be cleaned from the membrane surface by scrubbing lightly with warm water and a low-sudsing soap; rinse the area completely with clean water. High-pressure washing is NOT recommended.

Adhesive and splicing cement residue may be cleaned using the following procedures:

- Saturate a clean HP Splice Wipe with clean Weathered Membrane Cleaner.

- Scrub exposed adhesive or splicing cement with the saturated HP Splice Wipe until all residue is removed from the membrane. For easier removal, it may be necessary to change Splice Wipes frequently.

Cold Weather Application Tips:

Listed below are the commonly used practices to work with Flexible FAST or FAST 100-LV adhesive down to the published 25°F bottom-end temperature, using heated equipment.

1. **Keep your raw materials warm**

   Drums:
   Adhesive temperatures must be a minimum of 70°F for the material to flow and mix properly. A common mistake is storing FAST drums outside overnight. Remember that FAST Adhesive will freeze, causing seeds to form on the A-side. Band heaters, drum blankets and re-circulation blocks are recommended tools to raise the temperature of the material in the drums. When using band heaters or drum blankets, it is more effective to turn the heat to medium-low rather than high. This will create a convection cycle inside the drum, heating the material evenly rather than over-heating or "cooking" it. It is highly recommended to purchase drum blankets with thermostats in order to maintain a constant temperature of 70°F (21°C).

   Bag-in-a-Box and Dual Cartridges:
   Store FAST Bag-in-a-Box and Dual Cartridges in a heated penthouse or hotbox on the roof. In temperatures below 50°F (10°C), it is recommended to use **FAST Bag-in-a-Box IC or FAST Dual Cartridge IC.**

   FAST Catalyst:
   To speed set-up time, use the appropriate amount of FAST Catalyst, especially for insulation attachment **(see mixing chart on can for Catalyst amounts).** Remember that you need to mix FAST Catalyst into a warm FAST Part "B" drum for 10 minutes with an automated paddle drum mixer. Do not use a stick or roll the drum to mix. Only add catalyst to the B-side. Never add anything to the A-side.

2. **Keep trailer heated or warm overnight**

   Store your hose/materials inside the trailer to keep them warm overnight. Hose heat is designed to maintain pre-heat temperature so it's important to "crank" your hose heat and allow time for it to reach 120°F prior to spraying.

3. **Raise pre-heat temperature**

   Normal pre-heat temperature is 120°F; however, you may need to increase to 135°F in cold weather.

4. **Watch for heat sinks**

   Concrete and metal decks and masonry walls will pull heat away from the adhesive reaction. Often, these are good situations for adding more catalyst. Another technique is to prime the decks with a dark-colored primer to help draw heat from the sun.

5. **Reschedule workday**

   Many people will do detail work in the morning, waiting until the temperature rises above 25°F later in the day to apply FAST. Flexibility is a key to success.

   If the adhesive fails to foam, it is either too cold for the adhesive to properly react or you may be off-ratio. Stop spraying if this occurs and diagnose the problem to take corrective action.

Warm Weather Application Tips:

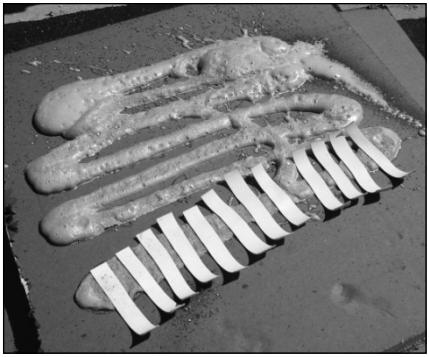
1. Warm temperatures will speed up string time. If the adhesive is coming to string before you have a chance to spray the entire run, you will have to use the Mod-Bit installation method. Fold the sheet in half length-wise, spray the adhesive to the substrate and install the membrane as the adhesive comes to string. Roll the membrane width-wise immediately.

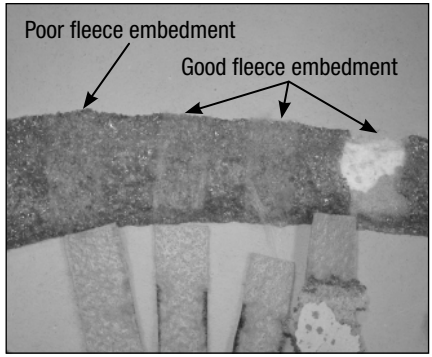
2. In some instances, it may be easier to work off the roll. Be sure that the membrane is aligned properly.

3. Keep the FAST material out of direct sunlight, if possible.

Reactivity Profile Test:

Carlisle recommends performing a reactivity test of the adhesive both at the start of the project and any time there is a major temperature change. This will help the applicators determine the amount of working time allowed with the adhesives. To perform this test, the following items are needed: a scrap piece of insulation, membrane or other material, 15- 1" x 6-8" strips of FleeceBACK membrane and a stop watch or wrist watch. Spray or extrude FAST Adhesive onto scrap substrate and begin timing. Determine how long it takes to come to string time. Once string time occurs, place a strip of FleeceBACK in to the adhesive at one minute intervals until the adhesive is tack-free. Allow the adhesive to cure for 30 minutes. Pull each of the strips from the adhesive and note the time at which you lose fleece embedment. In general, you will have a shorter working window in hot weather (1.5 – 12 minutes) and longer working window in cold weather (2 – 20 minutes). Your working window is between the string time and the time you lose fleece embedment. This simple test will help you determine your installation methods and timing.





Extrusion Hints:

When extruding FAST Adhesive from a high-pressure machine, it is helpful to reduce the angle of the wand to the deck. This forces the adhesive to spread out, resulting in wider, flatter ribbons.

After the three-second test spray, but before you attach the hose to the air cap, inject a few shots of lithium grease into the tubing. The purge air will force the grease through the tube, reducing the amount of adhesive clogging the tube.

On hot days, if the adhesive is coming to string too quickly, reduce or eliminate the hose heat. This will result in a longer working time with the adhesive.

If purge air is reduced, trim the end of the tubing and remove any clogged material. If the problem persists, replace the tubing.

Perimeters for 5-, 10-, and 15-year 55 mph warranties:

(Bead Spacing is 6” O.C.)	
Building Height	Perimeter
0-25'	4'
25-50'	8'
50-75'	12'
75-100'	16'

Contact Carlisle Project Review for bead spacing on buildings greater than 100', for higher wind speed warranties or for 20- to 30-year warranty projects.

Bead Spacing

1. Refer to Carlisle specifications or product data sheets for appropriate bead spacing basedon building height, warranty term and acceptable substrate.

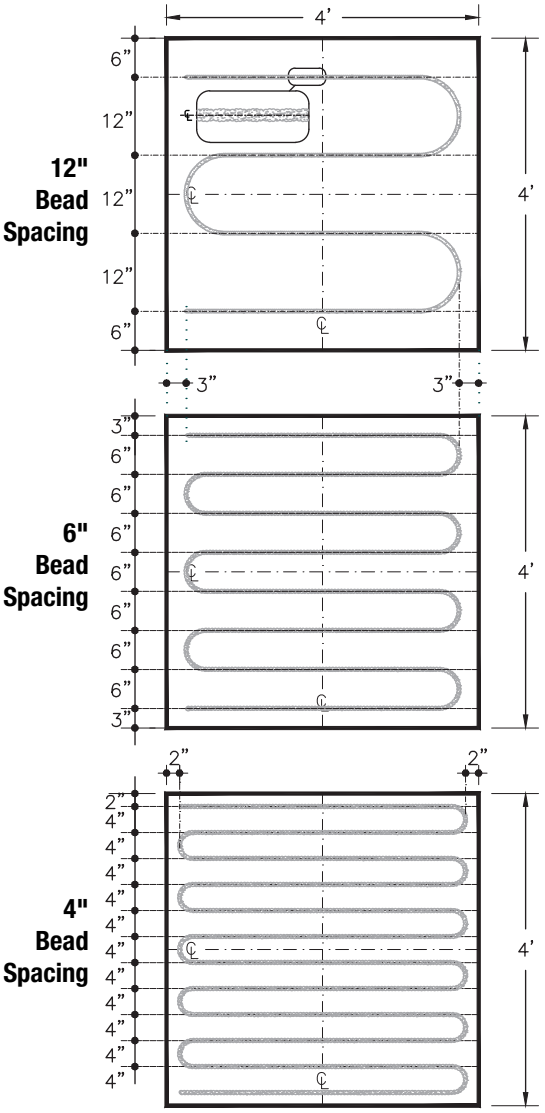
2. The surface to which adhesive is to be applied shall be dry, free of fins, protrusions, sharp edges, loose and foreign materials, oil and grease. Area should be cleaned with an air blower.

3. Previously unexposed asphalt or residue must be primed with Carlisle CAV-GRIP, CCW-702 or 702LV Primer.

4. Seal all gaps in the concrete deck with Carlisle 725TR or other suitable material to avoid condensation issues, or fill with Carlisle 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 weighed down and slit to conform to the contours of the substrate.



Equipment and Tools Unique to the FAST Adhesive System:

- Drum mixer
- Drum band heaters
- Bung wrench
- Extrusion kit (available through Foampak)
- Desiccant air dryer adapter
- Desiccant air dryer cartridges
- Respirator (half mask is sufficient)
- OSHA-approved solvent-resistant N95 pre-filter and P-100 organic vapor respirator cartridges
- Cotton gloves
- Latex gloves
- Safety glasses
- FleeceBACK Roller (100-150 lbs. max. segmented roller)
- FAST Adhesive Gun Cleaner
- 15- or 55-gallon drum heaters
- Re-circulation block
- 1 gallon pump lube
- Fusion Gun grease
- Cotton rags
- Paper towels
- Trash bags
- Empty buckets

PaceCart Operating Procedure:

Start-Up:

1. Install FAST Bag-in-a-Box on the proper sides of the PaceCart. Part A goes on the side marked “1”, Part B on the “2” side. Extend the spouts, grease the connectors, and connect the spouts to gravity hoses. **Warning! Connector colors must match! Part A black to black, part B gray to gray.**
2. Plug power into cart using a minimum 12-gauge extension cord, no longer than 100'.
3. Turn on the PaceCart.
4. Open both valves and purge the gun over a waste container. There should be equal amounts of A and B.
5. Thoroughly grease the threads on the static mixing nozzle and attach to the gun.
6. Open both valves and immediately begin applying FAST to the substrate.
7. **If you must stop, replace the mixing nozzle with a clean, greased nozzle.** Note: Nozzles are sold separately.

Shut-Down:

1. Close valves and remove mixing nozzle.
2. Turn off power and unplug PaceCart.
3. Open valves briefly to relieve pressure in hoses.
4. Inject grease into both fittings on the gun until it comes out the end of the gun.
5. Store gun facing downward.
6. Store with boxes attached.

PaceCart Tips:

1. To save time when changing nozzles, grease several mixing nozzles before you start spraying.

2. A five-gallon bucket hung from the gun support and lined with a trash bag is a convenient place to purge the gun or to place spent tips.

3. If the machine has been stored for a period of time and makes a clicking noise when turned on, the shaft is probably frozen. Remove the right wheel from the cart. There is a slotted end on the pump shaft. Insert a large slotted screwdriver and turn the shaft clockwise.

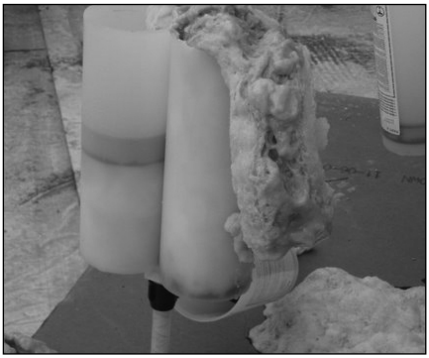
4. If the machine will still not turn, you can carefully apply heat to the pump cylinder to soften the material and retry manually turning the pump shaft.

5. Be sure the PaceCart is on a dedicated circuit. If using ground power, do not use extension cords longer than 75 feet, as this will damage the motor.

FAST Dual Cartridge Safe Handling:

When stopping or pausing for more than 30–60 seconds, IMMEDIATELY REMOVE THE NOZZLE from a partially-used cartridge. Wipe the opening with a clean rag and reinstall the plastic stopper. When ready to restart adhesive application, ensure that the opening in each side is clear and install new nozzle.

Failure to remove the nozzle from a partially-used cartridge will cause increased internal pressure upon reuse, with possible rupturing of the cartridge and could result in personal injury.

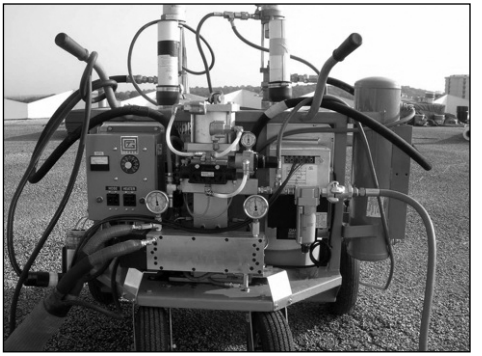


Heated Predator/Spray Guns:

Heated Predator & Fusion Gun Operating Procedures:

Safety first - use proper personal protective equipment before continuing.

Ensure the material in the A & B drums is 70 degrees or higher.
Use drum band heaters if necessary.



Daily Start-Up:

1. Check generator oil and fuel.
2. Check compressor oil and air filter. Bleed off moisture in the tank through the valve on the side of the tank. Drain the water separator on the air-inlet side of the machine. Leave the valve on the separator slightly open to allow accumulated water to bleed off.
3. Put on safety glasses.
4. Start generator and compressor.
5. Turn on main breakers (red & yellow rotary switch on left side of power box). Turn on “Heat” & “Hose Breaker.” During preheat, adjust dial to max amperage (three amps for 50', seven amps for longer lengths) prescribed for the hose length being used. Also, check the pump lube container or cup for contamination and replace if necessary.

   Insert thermometer on hose. Once the hose heater has reached the desired operating temperature, adjust dial to maintain proper hose heat. Remember, a hose thermometer reads 20 degrees low. Now you can proceed with the pumping operation procedure.

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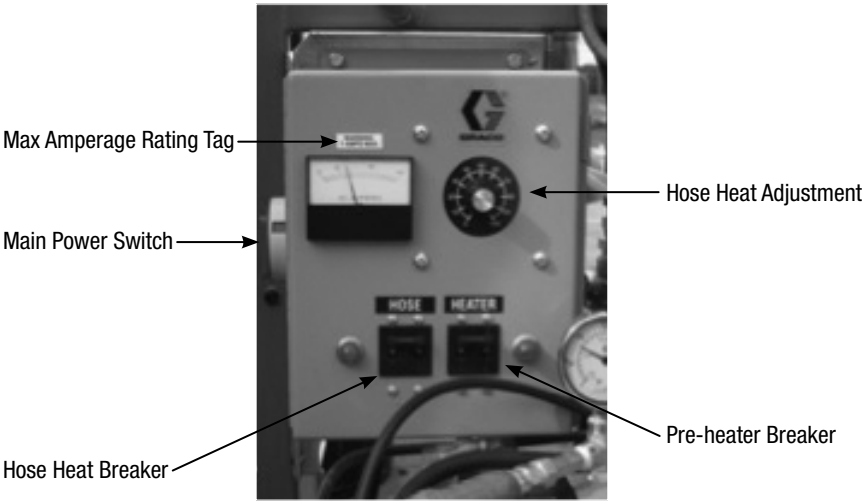
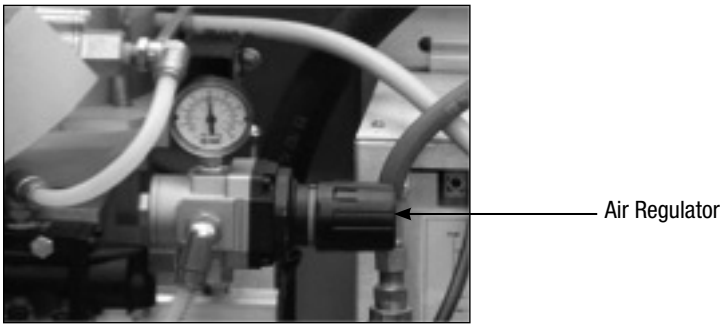


6. Turn on air-transfer pumps located in drums.

7. Adjust “Air Regulator” to proper pressure (80 psi full spray - 60 psi beads) to start machine. Note: The temperatures and pressures are “starting points”.

8. Line pressure should not vary by more than 500 psi between Parts A and B. The gauges to check this are on the front of the machine at the heated-spray hose outlets.



9. Attach air to gun and check for consistent and sufficient purge air. If air leaks, correct the problem before proceeding.

10. Turn off safety and check to make sure the gun is operating properly. Re-set safety.

11. Open one material supply valve while watching the purge air steam for a mist. Close valve. Repeat with the other side. If mist is present, stop immediately and repair internal leak. If no mist is present, do a three-second test-spray off target. Note the color of the material and the gauge readings. Color should be slightly off-white and gauges should be within 500 psi of each other.

12. When the technician stops spraying, Part A will rise on psi. This is OK. If spray is stopped momentarily, set safety, close material valves and hang gun so spray tip is pointing down.

13. If line pressures are more than 500 psi apart, stop spraying immediately and fix the problem. Check for symptoms and proper procedures at the end of this manual. If the problem continues, it could be because the material is too cold (barrels should be approximately 70 degrees for proper application). Note: When the technician stops spraying, Part A psi will rise. This is normal. If spraying is stopped momentarily, set safety, close material valves and hang gun so spray tip is pointing down.

    Check air cap tightness throughout the day.

    If extruding: attach greased hose to gun. During the extrusion operation, keep the hose clear of material blockage and skinning. Ensure that FAST Adhesive does not build up inside the hose, as this will decrease the inside diameter of the hose. When possible, remove the “skin” created by the adhesive on the inside of the hose by setting the gun safety, closing the spray gun manifold valves, and pulling the skin from the spray end of the hose with your gloved fingers or pliers. If hose tip is coated with adhesive, cut 1" off the end of the hose.

Detecting Off-ratio Material:

A-SIDE RICH – FAST 100-LV will have little rise and be dark in color. Flexible FAST will be light blue in color. Both may be brittle, crunchy or friable.

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The problem will be on the B-side of the machine.

POSSIBLE CAUSES:

- If the B gauge reads high, the problem is most likely in the spray gun on the B side. Check for a plugged screen; check valve, mixing chamber and/or passage. It is also possible that the B material is cold.

- If the B gauge reads low, the pump is starving on the B side. Check the transfer pump, the supply valve and the supply screen. It is also possible that the pump is starving because of extremely cold material.

B-SIDE RICH – FAST 100-LV will be light in color. Flexible FAST will be dark blue in color. Both will be soft and spongy.

The problem will be on the A side of the machine.

POSSIBLE CAUSES:

- If the A gauge reads high, the problem is most likely in the spray gun on the A side. Check for a plugged screen, check valve, mixing chamber and/or passage.
- If the A gauge reads low, the pump is starving on the A side. Check the transfer pump, the supply valve or the supply screen.

Shut-Down:

1. Turn off both heater breakers, turn hose heat regulator to 0 and turn off the main power switch.
2. Turn air regulator down to 0 psi.
3. Open the valves at the gun, release safety and pull trigger to lower pressure on machine to between 300 and 400 psi. Close the gun valves. Do not over-tighten. Engage safety and grease the Fusion Gun according to the following instructions:

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   A. Leave air on and gun de-triggered.

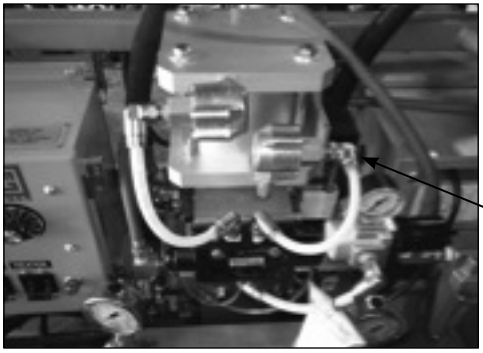
   B. Remove grease-fitting cap. Using grease gun, dispense grease into fitting until grease-mist sprays from mixing chamber nozzle (no more than three pumps). Do not over-grease. Unplug air at the gun.

   C. Do not spray grease-mist on sprayed, completed roofing system.

   D. Replace grease cap.

   E. Hang gun facing downward.

4. To retract the machine, disconnect the lower cylinder hose and turn up the air regulator slowly to cause the piston to go all the way down. You will hear a large release of air when the piston has reached the bottom of its stroke. Once the piston is down, turn air regulator back to 0.



5. Turn off compressor.

6. Remove the Spatter Tip assembly from the "Air Cap and clean thoroughly. Using a proper size drill bit, run through the holes in the nozzle and spray tip. Thoroughly grease all parts inside and out and reinstall on Air Cap.

7. Check the Air Cap to assure it is properly tightened. The procedure is to hand tighten and then ¼ turn with a wrench.

Changing Material Drums:

DO NOT MIX PUMPS! A goes to A and B goes to B ALWAYS!

1. Before drums run out of material, notify the spray technician to stop spraying. Spray technician should not attempt to spray until the drums are completely changed. Disconnect the air hose from the transfer pumps; disconnect pumps from the bung coupler and un-screw the bung coupler. Remove transfer pump by pulling the pump straight up to avoid tipping the barrel and spilling remaining material.

2. All threaded areas should be wiped clean (using separate rags for each raw material) and all parts should be thoroughly greased prior to re-assembly. Insert pump and bung coupler into the new drum. Connect air supply to the transfer pumps. If machine has a stroke counter, reset it at this time.

3. Inform spray technician that he or she can resume test spray.

4. Check A/B gauges to assure proper operation. Readings should be within 500 psi of each other. If not, stop spray procedure immediately and correct the problem.

NOTE: Always keep track of how full the drums are; if the drum empties, the plunger on the transfer pump will start to pump in an exaggerated manner. If this occurs, remove the air supply hose from the pump immediately or you may damage the drum pump. **IT'S BETTER TO STOP THE PUMPS AND CHANGE BARRELS WITH A COUPLE OF GALLONS LEFT.**

If drums run dry, set a bucket under machine and remove the screen filter. Open valve SLOWLY and drain approximately one quart of material, close valve and reinstall filter screen. Open valve and perform a 3-second test spray to ensure material pressures are balanced.

Weekly Maintenance:

ALL MAINTENANCE SHOULD BE PERFORMED PRIOR TO THE START OF THE FIRST DAY OF THE WORK WEEK

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1. **Clean and lubricate transfer pumps in the following manner:**

   A. Remove the air cylinder from the pump by grabbing the center of the cylinder and turning counter clockwise.

   B. Wipe all parts and the inside of the cylinder with a clean rag.

   C. Use white lithium grease to lubricate the inside of the cylinder.

   D. Re-install cylinder, taking care to not "cross thread." It should turn easily. If there is any resistance, it is probably not aligned.

2. **Clean both the A and B filters on the machine in the following manner:**

   A. Close the material supply valves.

   B. Remove the filters, clean with gun cleaner and blow clean with air.

   C. Hold the screen up to the light to see if it is clean; if not, repeat the above procedure.

   D. When you are sure the filters are clean, re-install and OPEN the supply valves.

3. Clean the filters on the gun in the following manner:

A. Remove the gun from the block.

B. Remove the check valve and remove the screens from the check valve. Be sure to keep A and B parts separate.

C. Clean the filters with gun cleaner and blow clean with air.

D. Hold up to the light and see if the screen is clean; if not, repeat the above procedure.

E. Blow out check valve with air.

F. Wipe everything clean with a clean rag.

G. Re-install screen on the check valve.

H. Lubricate O-Ring with white lithium grease and re-install in gun.

I. Wipe off valve block with clean rag and coat with lithium grease.

J. Re-install gun.

4. Check the packing nut on pump cylinders A and B and tighten as needed.

NOTE: On new or re-built machines, this packing should be checked and tightened the first three days of operation, then during weekly maintenance.

5. Check pump lube. If lube is milky in color, or not clear, dispose and refill lube jar ¾ full.

Extended Storage/Winterizing Machines:

If rigs can be used every 30 days or so, it is only necessary to purge the line material prior to job start. If the rig is to be stored for over 30 days, one of the following procedures is recommended:

Recommended Monthly Maintenance Procedures for Storage:

Use all PPE (personal protection equipment) recommended for use with FAST Adhesives and all other chemicals used in the following procedures. Refer to the appropriate MSDS sheets for complete details.

Option 1:

For long-term storage, the gun should be removed from the block, cleaned and stored properly. The transfer pumps should be in full drums of FAST (2/3 minimum) to prevent the formation of crystals on the transfer pump shafts. The following maintenance procedures should be performed **MONTHLY:**

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1. Connect air hoses to the transfer pumps and air-inlet.
2. Start compressor. There is no need to start the generator and turn on heaters if maintenance is performed as scheduled.
3. Over a waste container, open the A-side valve on the gun block. For 50'-100' hoses, allow approximately ¾ gallon of material to run into the waste container. For longer hoses, allow about ¼ gallon per 100' of additional hose. If the material is cloudy or has crystals, continue purging until fresh clear material appears.
4. Use a clean rag to wipe down the gun block.
5. Repeat the above process for the B-side.
6. This process will produce foam in the waste container. Once the foam has cured, it is an inert organic material and can be thrown out.
7. Clean and grease the gun block (white lithium grease only).
8. Retract the proportioning pumps by removing the opaque hose leading to the BOTTOM of the air motor and turning up the regulator on the Predator until the pumps have retracted.
9. When the pumps have fully retracted, turn the regulator to 0, reconnect the air hose to the air motor, shut down the compressor and disconnect the air supply.
10. Check the pump lube. Change if discolored or milky.
11. On the machine, close the material supply valves and clean the supply filters.
12. Replace filters keeping the A and B on the correct sides.
13. Reopen the material supply valves.

14. Store machine indoors in warm, dry conditions.

15. Repeat all steps every 4 weeks if the machine is not used.

Option 2: Completely flush machine

Call Foampak @ (888) 458-2928 before attempting this option.

Winterizing Supplies Needed:

- FAST Adhesive Gun Cleaner
- The lubricant recommended by the manufacturer of your machine. If nothing is recommended then we suggest you use a product called Dioctyl Phthamathe (D.O.P)
- Two clean 5-gallon buckets
- Two waste containers of appropriate size
- Lithium grease
- Clean rags
- 3" PVC pipe, end cap and 2" to 3" no-hub adapter

1. If you have an air-driven pump, clean out your wet cups and put in new lubrication. If you have a hydraulic-driven pump or a newer air-driven pump with an auto lube system, then you should have a lubrication bottle on the machine. Dump out the old lubricant and replace with new lubricant.

   You should use the lubrication recommended by the manufacturer of your equipment.

2. Get a clean 5-gallon bucket and fill with 4 gallons (per 100' of hose) of the pump lube recommended by the manufacturer.

3. Shut off B-side material supply valve.

4. Pull out A-side proportioning unit screen located at base of pump, clean/grease threads and replace.

5. Get an empty “throwaway” container that is large enough to hold all expended material that will be pumped from the A hose.

6. Remove the A transfer pump from barrel and depress bottom ball valve to drain as much A material as possible. Wipe down the outside of pump with a clean rag.

7. Insert the cleaned transfer pump into the bucket of pump lube and secure it so it cannot fall over.

8. Shut off the air valve on the transfer pump and connect air. Once air is connected, slowly open valve and allow pump to prime.

9. Open the A valve on the end of the hose over the waste container.

10. Slowly raise the operation air regulator until the machine is cycling at a moderate rate.

11. Don't use the heating system

It may be necessary to slowly open the B valve on hose momentarily. This will help to relieve pressure and allow the machine to cycle.

12. Run the machine until the pump lube coming out of the A hose is clear. This will leave approximately 1 gallon of pump lube in the supply bucket.

13. Shut the A valve at hose.

14. At this point, add ½ gallon of gun cleaner to the supply bucket.

15. While the machine is pumping at a moderate rate (as described above), bring the hose end back to the supply bucket and open to re-circulate this mixture for minimum of 15 minutes.

16. When re-circulation is complete, turn air regulator back to 0.

17. Shut off the A valve at the end of the hose.

18. Remove air supply from the A transfer pump and remove the pump from the bucket. Using the method described above, drain as much material as possible from the pump. Wipe off the pump with a clean rag.

19. Dump remaining material from the supply bucket into the waste container and thoroughly clean the supply bucket.

20. Put 4 gallons (per 100' of hose) of pump lube into the bucket. Pump the A transfer pump back into the supply bucket.

21. Shut off the air valve of the transfer pump and re-connect air supply. Slowly open the valve to prime pump.

22. Take hose back to the waste container and slowly open the A valve.

23. Raise machine air pressure to cause the machine to cycle at a moderate rate.

24. Pump material until there is approximately 1" of material left in the supply bucket.

25. Turn machine air regulator to 0 and close A valve on the hose.

26. Retract the machine.

27. Cut a 3" diameter PVC pipe to the appropriate barrel height and glue on cap at one end.

28. Fill ¾" of the tube with new pump lube.

29. Get a 3" to 2" rubber no-hub adapter and install on the other end of the PVC tube. Install A transfer pump, tighten band and secure the tube in an upright position.

30. Store the machine in a temperature-controlled, dry area.

Procedure for Start-Up After Storage:

Call Foampak @ (888) 458-2928 before attempting this option

1. Remove the A pump from the storage tube and drain using the method described above. Wipe off the pump with a clean rag.

2. Place the A transfer pump into a fresh drum of FAST Adhesive Part A, and install the B transfer pump into a fresh drum of Fast Adhesive Part B.

3. Clean both A and B screens at this time.

4. Attach air to machine and slowly start the transfer pumps.

5. Open both supply valves (handles to be parallel to hose).

6. Take out hose to 2 waste containers. Open both A and B valve at the hose and slowly turn the machine air supply until the machine is running at a moderate rate.

7. Allow machine to run until you get clean A from the hose.

8. Turn machine air supply regulator to 0 and close valves on the end of the hose.

9. Install a clean gun on the hose.
10. Follow the machine's normal start-up procedure.
11. When the machine is ready to spray, spray off target for approximately 50 cycles to purge the machine of all contaminated material.
12. At this point, perform a "test spray". If foam looks ok and has proper color and rise, you can proceed with normal spray operations. If foam is not right, continue to spray machine off target for another 25 cycles.
13. Re-check foam for color and rise.

Gun Spare Parts:

Recommended Spare Parts for Graco Fusion Gun:

- Fusion Gun parts manual from Graco #309550K
- Spare parts kit
- One O-Ring kit # 246355 (rebuild kit)
- Extra mixing chamber and side seal cartridges
- Check Valve O-Rings and filters
- Mix Chamber Seals, round, 5 to a pack. #248019
- 15B817 Flush Manifold (not included with gun)

Fusion Gun Bead adaptor conversion kit #248414 consisting of:

- 1-AR5252 Mixing Chamber
- 1-248528 Air Cap Adapter
- 1-Air Cap Seal (order 248019 PKG/5)
- 1-Air Cap Cleanout (order 246623 PKG/3)
- 1 – custom wand
- 5 -10' special hose
- 1-GUS 5485-7-2 Hose Clamp

Supplied Tool Kit for Fusion Gun:

- Hex Nut Driver; 5/16 screwdriver; 1/8 blade
- Nozzle Drill Bit (various sizes, depending on nozzle size). See parts manual.Impingement Port Drill Bit (various sizes depending on port size). See parts manual.
- 117661 Pin Vise; dual reversible chucks
- 551189 Grease Gun with 3 oz. grease

***A spare gun is highly recommended. Keep gun clean with accessory gun cover. Applying a light coat of lubricant will make cleaning easier.**

Recommended Spare Parts for Gusmer GAP Spray Gun

Part #	Description	Qty.
4401-2-6	Socket Head Cap Screw	2
4406-16	Socket Head Cap Screw	2
5105	Manual Valve Assembly	2
35101	Gun Block	1
35104	Check Valve Assembly	4
35107	Coupling Block Seals	4
35106	Seal Assembly Insert	1
35108	Spring	2
35160-3-1-F	Air Cap Seal	4
35130-80	Screen – 80 Mesh	2
35131-2	Screen Screw Seal	1
4405-1-6	O-Ring	3
0204-14	Socket Head Cap Screw	1
1123B-4	O-Ring	5
1310	O-Ring	4
8120	O-Ring	1
32111-14	Spring	1
OP200-2-3	O-Ring	1
35160-1-F-04	Flat Mixing Chamber	1
35173-1	Adapter	1
35176-1	Seal	1
35171	Retaining Nut	1
35172-1	Fountain Tip	1

***A spare gun is highly recommended**

Recommended Spare Parts for Glas-Craft Probler Spray Gun

Part #	Description	Qty.
7730-08F	Machine Screw	2
7716-08C	Machine Screw	3
7754-09	O-Ring	3
7754-07	O-Ring	3
7754-12	O-Ring	4
16805-00	Gun Filter Screen	3
9944-48C	Side Block Screw	2
PG-12	Nipple Fitting	2
17275-00	Side Block Seal Ass.	2
T4-132	Side Block Seals	4
16823-00	Spring	2
16809-00	Spring	2
16808-00	Ball	2
7959-24C	Chamber Housing Screw	2
18377-00	Air Cap (Flat)	1
18380-00	Air Cap Seal (Flat)	3
9697-20C	All Thread	1
19881-00	Plug fitting	1
7554-03	O-Ring	3
7554-05	O-Ring	4
16828-01	Snap Ring	1
7554-29	O-Ring	2
16865-00	Spring	1
PG-19	Spring	2
7554-53	O-Ring	4
1388-02	Snap Ring	1
16800-00	Mixing Chamber Housing	1
18375-XX	Mixing Chamber	1

***A spare gun is highly recommended**

Recommended Spare Parts for Gusmer GX-7 Spray Gun

Part #	Description	Qty.
16114-SS-125	Valving Rod	1
16104	Check Valve Assembly	3
16130-80	Filter Screen (80 Mesh)	4
16140-2	Coupling Block Mtg. Screw	1
16155-1-125	Rear Packing Retainer	1
16155-2-125	Rear Seal Packing	3
16155-3-125	Rear Seal Retainer	1
16183-A	PCD Retainer	1
16184-300-A	PCD Air Cap	1
3101-1-PKG	Coupling Blk Gasket (2/Pkg)	3
3184A-2	O-Ring	2
HP3181-A	PCD Body	1
HP3185-A	HP Front Packing	1
5105	Manual Valve Ass. (2/Pkg)	2
2123-2-1	Needle Valve Packing	1
3160-X-125	Mixing Module (X = Sizes)	2
16282-XX-A	PCD (X=Diff. Sizes)	2

***A spare gun is highly recommended**

Procedures for Cleaning Crossed-Over Guns

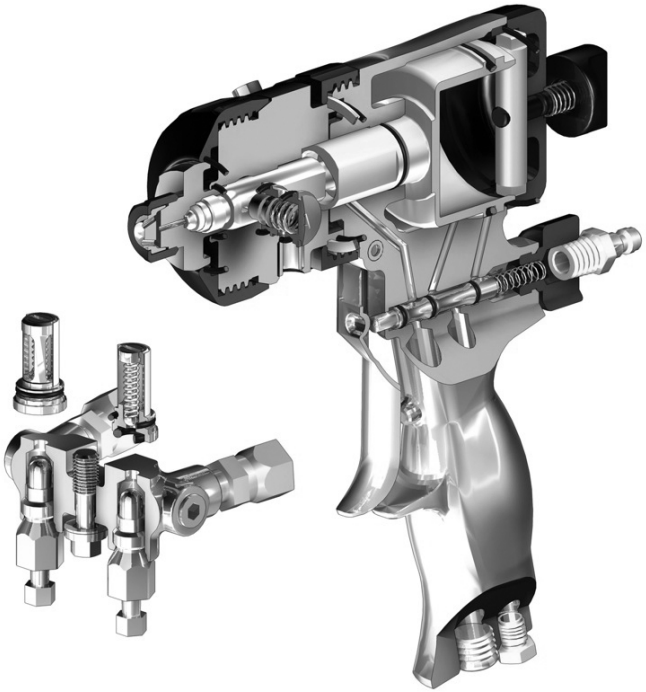
Fusion Gun:

Materials Needed:

- Personal protective equipment (see MSDS)
- Fusion Spray Gun operating manual
- Fusion Spray Gun parts identification manual
- Compressed air
- O-Ring kit # 246355 (rebuild kit)
- Nozzle Drill Bit
- Impingement Port Drill Bit
- Clean rags
- Soft-bristled brushes
- Fusion grease

- FAST Adhesive Gun Cleaner
- Three small containers
- Small metal picks

1. Disassemble the spray gun completely. Remove all O-Rings, disassemble the entire gun and spray tip assembly and completely submerge its parts in FAST Adhesive Gun Cleaner.
2. Clean out all ports with proper-sized drill bits and clear ports with compressed air.
3. Disassemble side seal cartridges; inspect condition of mixing chamber to be sure the surfaces are not scored. If damaged, replace. Clean and check valves and screens. Do not use metal to clean the mixing chamber of machined surfaces of side seals.
4. Assemble all cleaned parts with fusion grease, replacing O-Rings as needed.
5. Connect air to gun and verify purge air. Trigger gun and verify that there are no air leaks.



Gusmer GAP Gun:

Materials Needed:

- Personal protective equipment (see MSDS)
- GAP Spray Gun operating manual
- GAP Spray Gun parts identification manual
- Compressed air
- One 1/8" x 3" drill bit
- One 5/32" X 3" drill bit
- Needle-nose pliers
- Snap ring pliers
- Complete set of ball-point Allen wrenches
- Clean rags
- Soft-bristled brushes
- Lithium grease
- FAST Adhesive Gun Cleaner
- Three small containers

1. Verify that the A and B manual valves at the spray gun are closed. Next, remove the spray gun from the spray hose. Remove the filter screen and side block seal assembly from the A–side block. Disassemble all the working parts, clean with FAST Adhesive Gun Cleaner, grease, and reassemble. Next, remove the filter screen and side block seal assembly from the B-side block. Disassemble all the working parts, clean with FAST Adhesive Gun Cleaner, grease, and reassemble.

2. Begin to disassemble the spray gun. Remove and disassemble the entire spray tip assembly and completely submerge its parts in FAST Adhesive Gun Cleaner. Remove the air cap, mixing chamber housing, and mixing chamber, and completely submerge all of these parts in FAST Adhesive Gun Cleaner.

3. Take the small white air cap seal and the O-Ring that was behind the mixing chamber housing, wipe clean with a rag, and place them in a small container.

4. Use the “Handle Assembly, Exploded View” diagram (pg. 8 of the GAP Spray Gun Parts Identification Manuall) to complete the next four steps. Remove the small socket head cap screw from the back of the spray gun (the screw under the safety stop.) Next, remove the snap ring, end cap / safety stop, large spring, and the piston assembly. The piston rod may be foamed to the walls of the gun body. If necessary, use a block of wood to push against to break the piston rod free from the gun body.

5. Next, remove the incoming air hose and the 1/16" pipe plug and the 1/8" pipe plug from bottom of the gun handle. If your spray gun is set up with the air entering the gun through its bottom, the 1/8" pipe plug will have to be removed from the back of the spray gun. Inspect the air hose; if there is adhesive inside, then the air hose should be replaced. Then, remove the trigger lever and the valve retainer nut and set aside. Push against the spring seat at the back of the spray gun behind where the 1/16" or 1/8" pipe plug was located. Use a large Allen wrench or something comparable to push. The trigger assembly will push out the front of the spray gun. Be sure to pay careful attention to the order in which the trigger assembly comes out of the gun body. Once removed, inspect the O-Rings, spring, and trigger air manifold. Clean all of these parts, grease, reassemble, and set aside.

6. Remove the two socket head cap screws that connect the piston cylinder to the gun handle. Then, remove the three O-Rings, clean, grease, and set aside.

7. Reference the air passage diagrams (pg. 21 of the GAP Spray Gun Operating Manual) to complete the following steps. Remove all the set screws, including the three in the back of the gun handle. Begin to clean out the air passages throughout the gun body using the appropriate hand-held drill bits for each hole. Never clean out these air passages with an electric drill. Be sure to double and even triple check each air passage for adhesive remnants. It is a good idea to blow all the passages clean, run the drill bits through each air passage again, and blow clean one more time. Once complete, replace all set screws.

8. Once all of the air passages are clean, begin to reassemble the spray gun. Make sure that all the parts are thoroughly cleaned and greased.

9. Reassemble the GAP spray gun in the following order:

    A. Reconnect the piston cylinder to the gun handle using the two socket head cap screws. Be sure to replace the appropriate O-Rings.

    B. Reassemble the trigger assembly with air hose.

    C. Reassemble the piston rod assembly.

    D. Lastly, reassemble the mixing chamber assembly and housing.

    E. Once reassembled, reconnect the spray gun to the compressed air and test. If the gun is triggering properly and there is plenty of air exiting the mixing chamber housing, the spray gun should be fully operational again. If not, there is an air passage that is still not cleaned out. Disassemble the spray gun and repeat the procedure.

Glas-Craft Probler Gun:

Materials Needed:

- Personal protective equipment (see MSDS)
- Probler Spray Gun operating manual
- Compressed air
- One 1/8" x 5" min. drill bit
- One 3/32" x 2" drill bit
- Small pair of pliers
- Adjustable wrench
- Flat head screwdriver
- Complete set of Allen wrenches
- Clean rags
- Soft-bristled brushes
- Lithium grease
- Small plastic container
- FAST Adhesive Gun Cleaner and container

1. Verify that the A and B manual valves at the spray gun are closed. Next, remove the spray gun from the spray hose. Remove the filter screen and side block seal assembly from the A–side block. Disassemble all the working parts, clean with FAST Adhesive Gun Cleaner, grease, and reassemble. Next, remove the side block seal assembly from the B-side block. Disassemble all the working parts, clean with FAST Adhesive Gun Cleaner, grease, and reassemble.

2. Begin to disassemble the spray gun. Remove and disassemble the entire spray tip assembly and completely submerge its parts in FAST Adhesive Gun Cleaner.

3. Remove the air cap, mixing chamber housing and mixing chamber, and completely submerge all of these parts into FAST Adhesive Gun Cleaner.

4. Take the small white air cap seal and the O-Ring that was behind the mixing chamber housing, wipe clean with a rag, and place them in the small plastic container.

5. Next, remove the three set screws, the two flat head screws, and the gold hex nut from the gun body. Be careful not to drop any of these small parts. Place these in the small plastic container.

6. Remove the air valve stem that leads into the spray gun from the top of the gun body. Remove the aluminum valving sleeve and inspect. If there is any adhesive inside this part, it must be thoroughly cleaned. Inspect all the O-Rings on air valve stem, and the two inside the aluminum valving sleeve, and replace them if necessary. Apply lithium grease to all the working parts and O-Rings, reassemble, and set the assembly to the side.

7. Use an adjustable wrench to remove the piston rod retainer screw from the back of the gun body. Next, remove the large spring and piston rod from the gun body. The piston rod may be foamed to the walls of the gun body. If necessary, use a block of wood to push against in order to break the piston rod free from the gun body. Be very careful that you don't bend the piston rod when doing this. Once the piston rod is removed, inspect the inside of the gun body and clean if necessary. Inspect the O-Rings on the piston rod and clean or replace if necessary.

8. Next, remove the trigger ball at the end of the trigger rod. Then, remove the trigger piston retainer from the back of the spray gun using your adjustable wrench. Next, remove the spring and the trigger rod, inspect, and clean with FAST Adhesive Gun Cleaner and a soft-bristled brush if needed. Closely inspect the O-Rings on the trigger rod and replace if necessary. Apply lithium grease to all the O-Rings and set the assembly aside.

Reference the “Gun Handle Air Passage Locations and Thread Sizes” diagram on pg. 4 of the Glas-Craft Probler User Manual to complete the following steps. Next, begin to clean out all the air passages throughout the gun body using the appropriate hand-held drill bits for each hole. Never clean out these air passages with an electric drill. Be sure to double- and even triple-check each air passage for adhesive remnants. It is a good idea to blow all the passages clean with compressed air, run the drill bits through each air passage again, and blow clean one more time.

NOTE: Use the 1/8" drill bit to clean all of the air passages labeled #29 drill and 3/8" drill on the diagram.

9. Once all the air passages are clean, begin to reassemble the spray gun. Reassemble the Probler Spray Gun in the following order:

10. Trigger assembly

11. Piston rod assembly

12. Air valve stem – Make sure that everything is greased very well when putting the air valve stem back into the gun body. Also, don’t push the air valve stem in too far, or not far enough. Either way will cause the air entering the gun to be partially choked off.

13. Replace all of the setscrews, flat head screws, and the gold hex head screw.

14. Last, the mixing chamber assembly and housing.

15. Once reassembled, reconnect the spray gun to the compressed air and test. If the gun is triggering properly and there is plenty of air exiting the mixing chamber housing, the spray gun should be fully operational again. If not, there is an air passage that is still not cleaned out. Disassemble the spray gun and repeat the procedure.

Gusmer GX-7 Gun:

Materials Needed:

- Personnel protective equipment (see MSDS)
- GX-7 Spray Gun operating manual
- Compressed air
- Needle-nose pliers

- Snap ring pliers
- Complete set of ball-point Allen wrenches
- Complete set of standard box wrenches
- Clean rags
- Soft-bristled brushes
- Lithium grease
- FAST Adhesive Gun Cleaner

1. Remove the spray gun from the spray hose/coupling block. Then remove the valving rod. Let these parts soak in FAST Adhesive Gun Cleaner.
2. Remove the air cap, the pattern control disc retainer, the disc, the PCD body, the front packing and the mixing module. Completely submerge all of these parts into FAST Adhesive Gun Cleaner.
3. Remove both A- and B-side screens, separate the check valve assembly and soak in FAST Adhesive Gun Cleaner.
4. Remove gun block and submerge in FAST Adhesive Gun Cleaner.
5. Remove the rear-packing retainer and the rear seal retainer and allow to soak in FAST Adhesive Gun Cleaner.

   NOTE: Depending on the severity of the cross-over, parts such as the front packing, mixing module, A- and B-side screens, A- and B-side check valve assemblies, and the rear seal packing may not be salvageable. If they are not, discard and replace with new.
6. After parts have soaked long enough to loosen the adhesive, remove them from the cleaner one by one, brush off the material and blow clean with air and grease.
7. Be sure the air passage that goes through the snout on the top of the spray gun does not have adhesive in it. If so, a paper clip or something small and bendable must be used in conjunction with compressed air to clean out the adhesive from that air passage. Once completely cleaned, reassembly of the spray gun can commence.
8. Once reassembled, reconnect the spray gun to the compressed air and test. If the gun is triggering properly and there is plenty of air exiting the PCD retainer, the spray gun should be fully operational again.

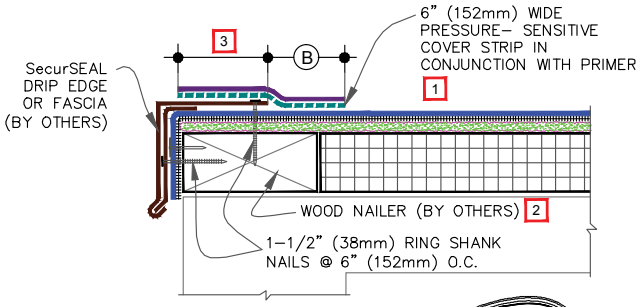
Garlock Pace Setter:

1. Store your equipment in an area that does not drop below 32°F.
2. Once every two weeks, re-circulate the material in the lines as follows;
   A. Set the machine's heating system to 120 degrees.
   B. Turn down the pressure on the machine.
   C. Begin re-circulating.

   NOTE: Remember to re-circulate the A-side into the A drum and the B-side into the B drum.
3. Shut down the machine as you normally would; come back in 2 weeks and repeat the process.

CAUTION

DETAIL NOT FOR USE ON 25 & 30-YEAR WARRANTY PROJECTS. ACCEPTABLE EDGING SHALL CONFORM WITH THERMOSET DETAIL U-1A.1 WHEN USING EPDM MEMBRANE OR FB-1B WITH TPO MEMBRANE.

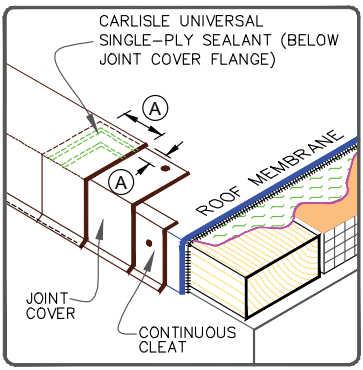


EPDM & TPO ONLY (NOT FOR PVC)

NOTES:

1. USE APPROPRIATE COVER STRIP & PRIMER BASED UPON MEMBRANE TYPE. FOR EPDM, REFER TO THERMOSET U-1A. FOR TPO, REFER TO THERMOPLASTIC U-1A.
2. WOOD NAILER MUST EXTEND PAST TOTAL WIDTH OF METAL FASCIA DECK FLANGE.
3. METAL FASCIA DECK FLANGE MUST BE TOTALLY COVERED BY PRESSURE-SENSITIVE COVER STRIP WITH MINIMUM 2" (51mm) COVERAGE PAST NAIL HEADS.
4. TO REMOVE FINISHING OILS, SCRUB METAL FLANGE WITH WEATHERED MEMBRANE CLEANER; ALLOW TO DRY PRIOR TO APPLYING PRIMER.
5. APPLY PRIMER TO METAL FLANGE AND MEMBRANE SURFACE PRIOR TO INSTALLING PRESSURE-SENSITIVE FLASHING.
6. WHEN METAL FASCIA BY OTHERS IS USED, FASTENER TYPE AND FASTENING FREQUENCY SHALL BE RECOMMENDED BY METAL EDGE MANUFACTURER.

DIMENSIONS		mm	
A	1/2"	13	TO
	1"	25	
B	2"	51	MIN.



FleeceBACK MEMBRANE
FAST ADHESIVE/AQUABASE
APPROVED SUBSTRATE
0 SEE NOTE(S)

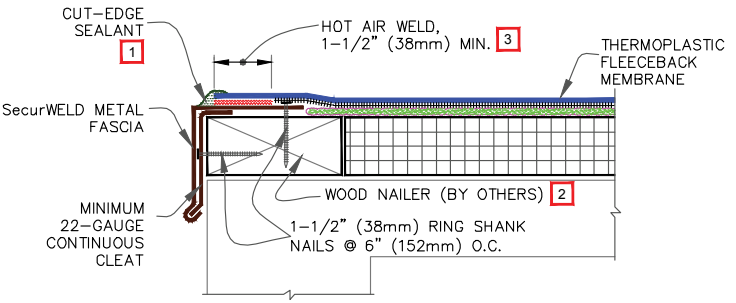
SecurSeal DRIP EDGE FASCIA

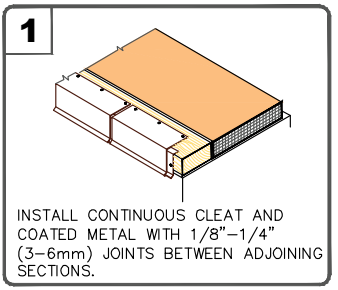
For additional information, refer to Specifications

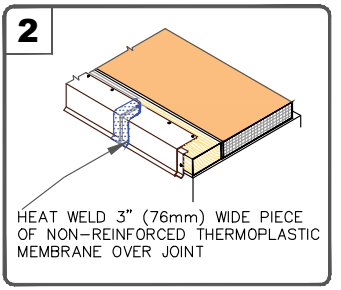
DETAIL NO. FB-1A

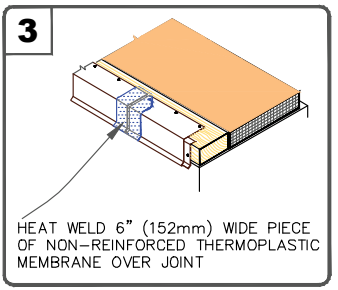
FLEECEBACK ADHERED

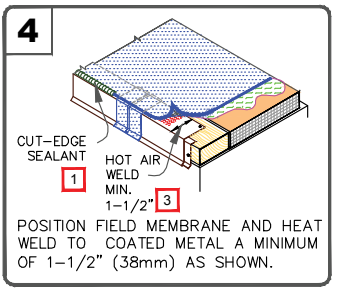
SHEET 01









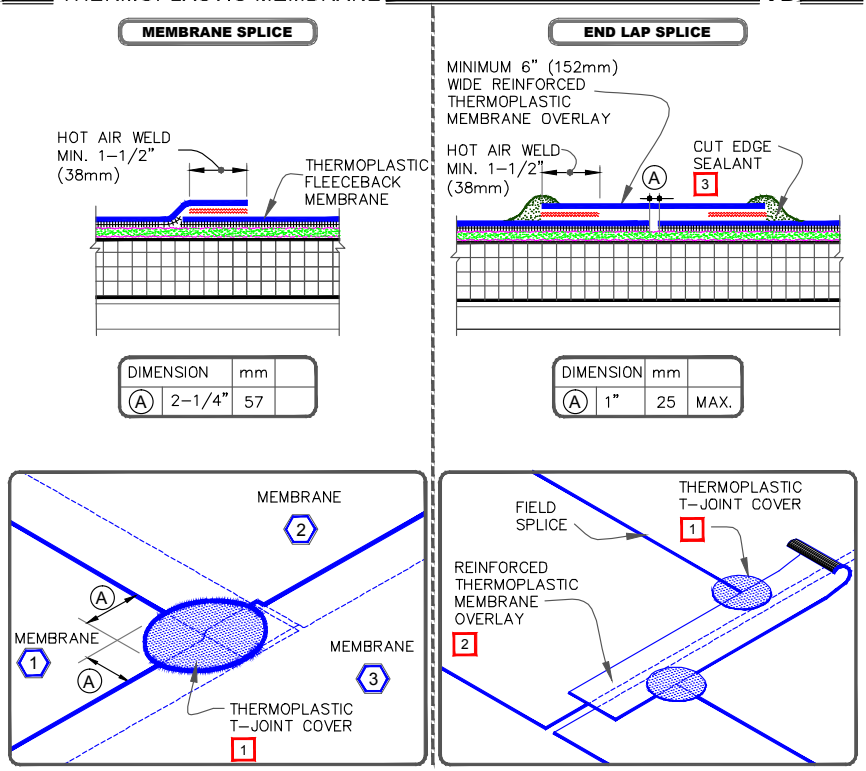


NOTES:

1. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT–EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE AND RECOMMENDED ON CUT EDGES OF SURE–FLEX PVC MEMBRANE.
2. WOOD NAILER MUST EXTEND PAST TOTAL WIDTH OF METAL FASCIA DECK FLANGE.
3. POSITION MEMBRANE WITH SELVAGE EDGE TO AVOID REMOVAL OF FLEECE BACKING.

FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**SecurWeld COATED DRIP EDGE FASCIA** For additional information, refer to Specifications	DETAIL NO. FB-1B FLEECEBACK ADHERED

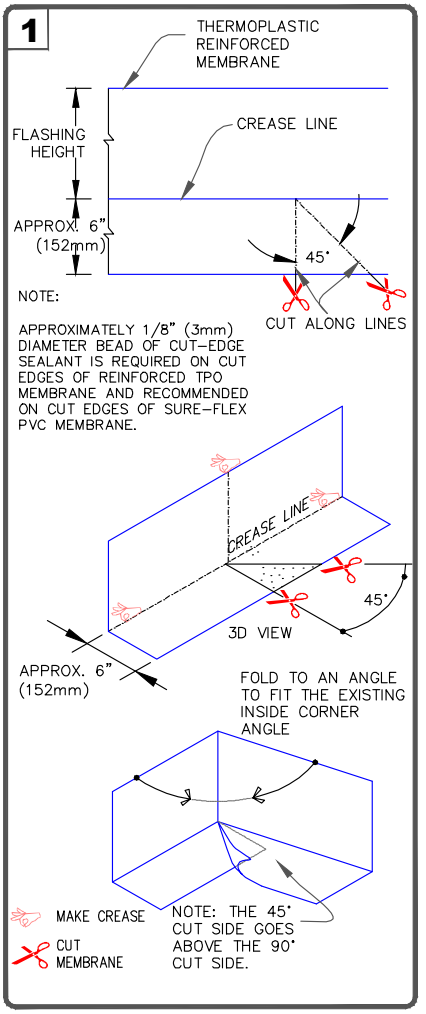
SHEET 02

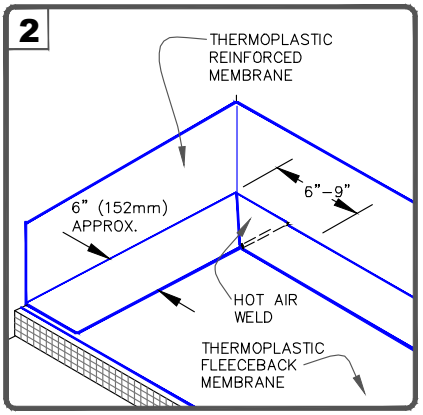


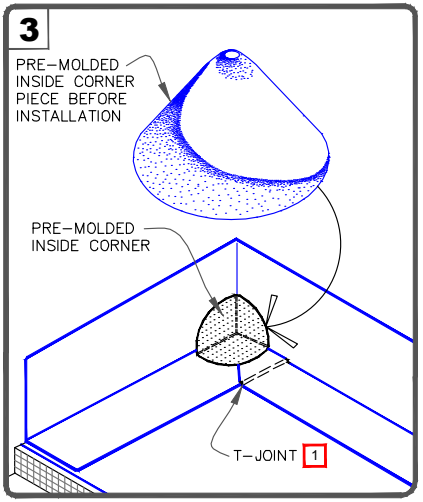
NOTES:

1. WHEN USING 115 OR 135–MIL THERMOPLASTIC FLEECEBACK MEMBRANE, APPLY A 4–1/2" DIAMETER THERMOPLASTIC "T–JOINT" COVER AT ALL FIELD SPLICE INTERSECTIONS.
2. WHEN USING 60 OR 80 MIL THERMOPLASTIC REINFORCED MEMBRANE OVERLAY, INTERSECTIONS BETWEEN SPLICES MUST BE OVERLAID WITH A 4–1/2" (114mm) DIAMETER THERMOPLASTIC "T–JOINT" COVER.
3. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT–EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE AND RECOMMENDED ON CUT EDGES OF SURE–FLEX PVC MEMBRANE.

FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**THERMOPLASTIC MEMBRANE SPLICES** For additional information, refer to Specifications	DETAIL NO. FB-2B FLEECEBACK ADHERED



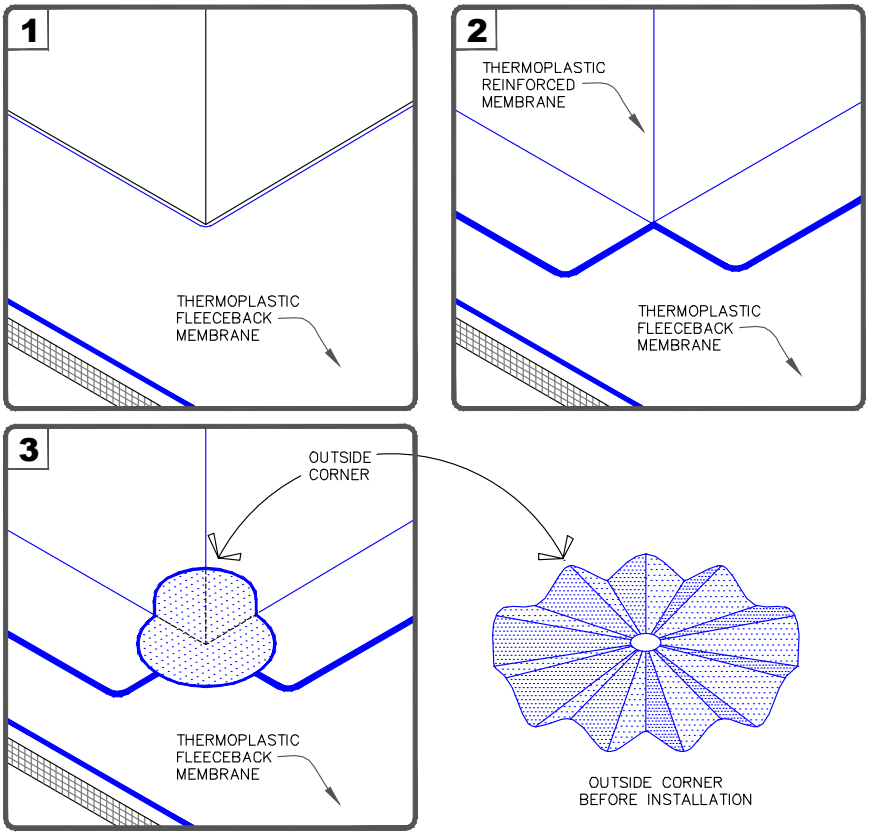




NOTES:

1. WHEN USING 60 OR 80-MIL MEMBRANE, APPLY A 4-1/2" (114mm) DIAMETER "T-JOINT" COVER AT ALL FIELD SPLICE INTERSECTIONS.

FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**THERMOPLASTIC PRE-MOLDED INSIDE CORNER** For additional information, refer to Specifications	DETAIL NO. FB-15C FLEECEBACK ADHERED



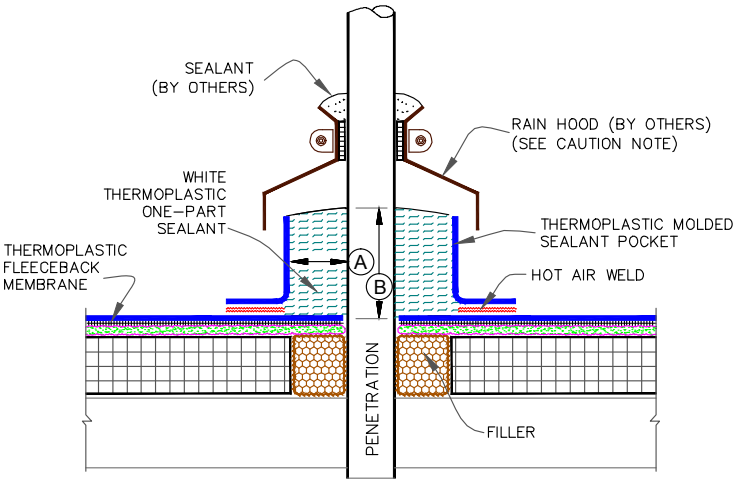
NOTE:

1. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT-EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE AND RECOMMENDED ON CUT EDGES OF SURE-FLEX PVC MEMBRANE.

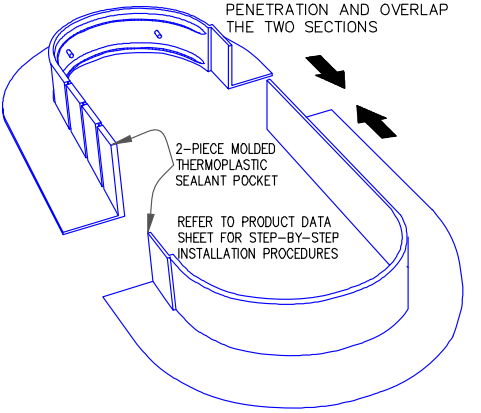
FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**THERMOPLASTIC PRE-MOLDED OUTSIDE CORNER** For additional information, refer to Specifications	DETAIL NO. FB-15D FLEECEBACK ADHERED

CAUTION

MOLDED SEALANT POCKETS MUST BE USED IN CONJUNCTION WITH RAIN HOODS FOR PROJECTS WITH 25 AND 30–YEAR WARRANTIES.



DIMENSIONS	mm	
(A) 1"	25	MIN.
(B) 2"	51	MIN.



NOTES:

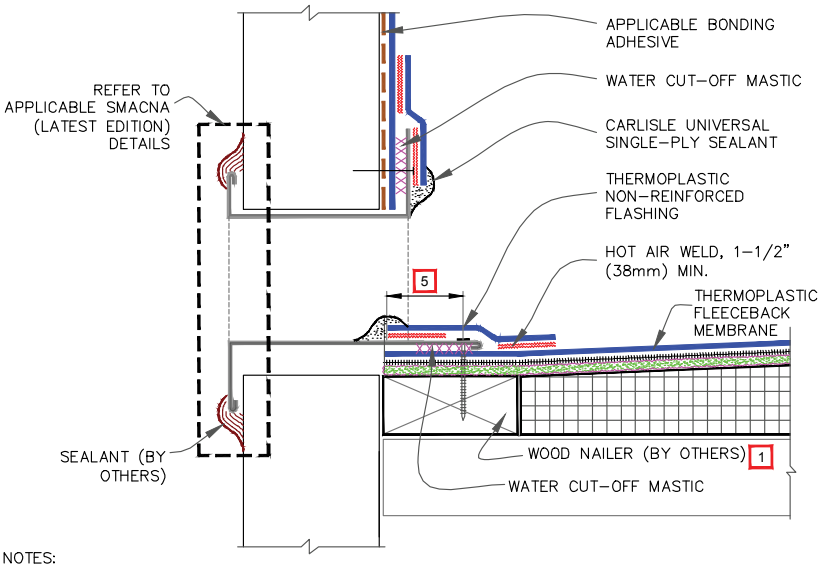
1. TEMPERATURE OF PIPE MUST NOT EXCEED 160°F (71°C).
2. WHEN USING TPO MEMBRANE/MOLDED SEALANT POCKET, APPLY A THIN COAT OF TPO PRIMER TO THE INSIDE AND AROUND THE TOP RIM OF THE POCKET, TO THE DECK MEMBRANE ENCLOSED BY THE POCKET AND TO THE PENETRATION USING A SMALL PAINT BRUSH.
3. ONE–PART SEALANT MUST COMPLETELY FILL MOLDED SEALANT POCKET TO PREVENT PONDING OF WATER.
4. PIPE CLUSTERS MUST HAVE MINIMUM 1" (25mm) CLEARANCE BETWEEN PENETRATIONS.

FleeceBACK MEMBRANE
FAST ADHESIVE/AQUABASE
APPROVED SUBSTRATE
0 SEE NOTE(S)

THERMOPLASTIC MOLDED SEALANT POCKET

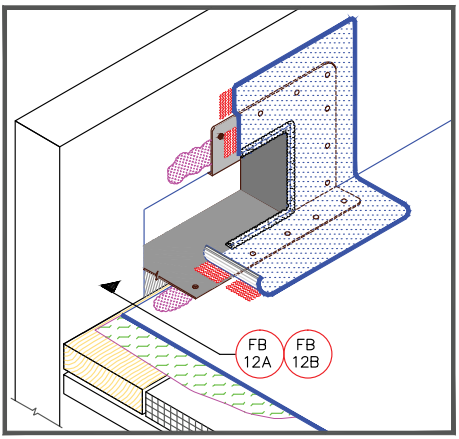
For additional information, refer to Specifications

DETAIL NO.
FB-16B
FLEECEBACK ADHERED



NOTES:

1. WOOD NAILERS ARE INSTALLED ONLY AT SCUPPERS TO SECURE METAL SLEEVE AND MUST EXTEND PAST THE WIDTH OF METAL SLEEVE FLANGE.
2. INSTALL WALL FLASHING PRIOR TO SCUPPER INSTALLATION.
3. METAL SCUPPER BOX MUST HAVE CONTINUOUS FLANGES WITH ROUNDED CORNERS. SOLDER ALL SCUPPER SEAMS WATER–TIGHT.
4. WATER CUT–OFF MASTIC UNDER SCUPPER FLANGE MUST BE UNDER CONSTANT COMPRESSION.
5. SCUPPER FLANGES MUST BE TOTALLY COVERED BY THERMOPLASTIC NON–REINFORCED FLASHING WITH MINIMUM 2" (51mm) COVERAGE PAST NAIL HEADS.
6. UNIVERSAL SINGLE–PLY SEALANT IS REQUIRED AT FLASHING EDGES ON SCUPPER EDGE. WHEN USING TPO MEMBRANE, TPO PRIMER MUST BE USED TO PREPARE SURFACES PRIOR TO THE APPLICATION OF SEALANT.



FleeceBACK MEMBRANE
FAST ADHESIVE/AQUABASE
APPROVED SUBSTRATE
0 SEE NOTE(S)

THROUGH-WALL SCUPPER WITH SecurWeld METAL

For additional information, refer to Specifications

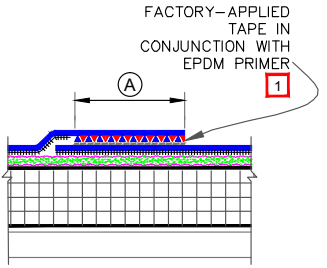
DETAIL NO.
FB-18B
FLEECEBACK ADHERED

SHEET 27

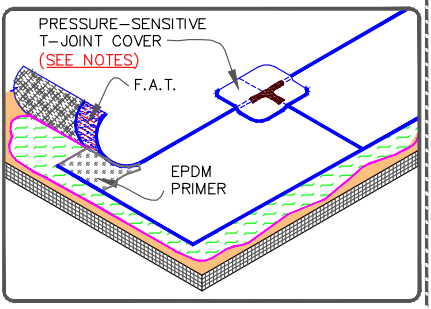
CAUTION

FOR PROJECTS WITH 25 AND 30-YEAR WARRANTIES OR WHEN USING 145-MIL FLEECEBACK MEMBRANE, REFER TO DETAIL FB-2A.1.

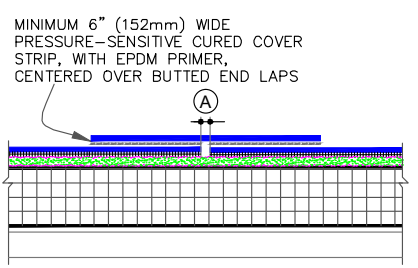
MEMBRANE SPLICE



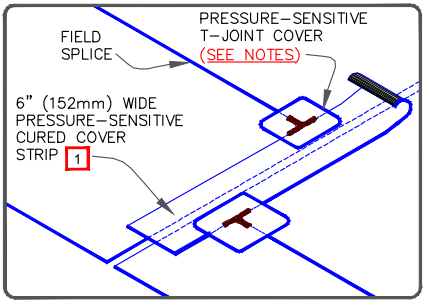
DIMENSION	mm	
A 3"	76	OR
6"	152	



END LAP SPLICE

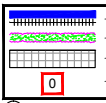


DIMENSION	mm	
A 1"	25	MAX.



NOTES:

1. APPLY EPDM PRIMER TO MEMBRANE SURFACES PRIOR TO INSTALLING PRESSURE-SENSITIVE FLASHING AND/OR FACTORY APPLIED SecurTAPE.
2. APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPLICE (UNDER THE 6"x6" T-JOINT COVER) COVERING THE EXPOSED SPLICE TAPE 2" (51mm) IN EACH DIRECTION FROM THE SPLICE INTERSECTION.
3. 6" (152mm) WIDE PRESSURE-SENSITIVE ELASTOFORM FLASHING MAY ALSO BE CENTERED OVER THE FIELD SPLICE INTERSECTION.
4. FOR PROJECTS WITH 20-YEAR WARRANTIES, AQUA BASE 120 ADHESIVE CAN ONLY BE USED WITH WHITE FLEECEBACK MEMBRANES (SURE-WHITE EPDM, SURE-WELD TPO AND SURE-FLEX PVC).



EPDM MEMBRANE SPLICES-PROJECTS WITH 10, 15 AND 20-YEAR WARRANTIES

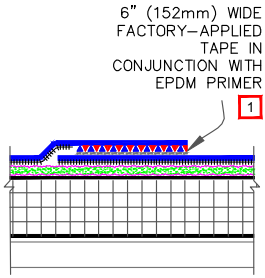
For additional information, refer to Specifications

DETAIL NO. FB-2A

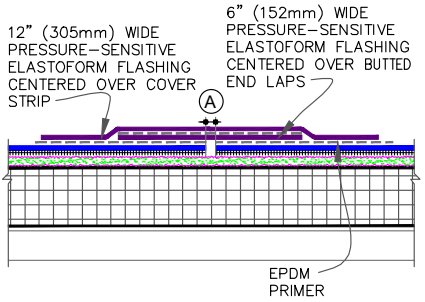
FLEECEBACK ADHERED

SHEET 07

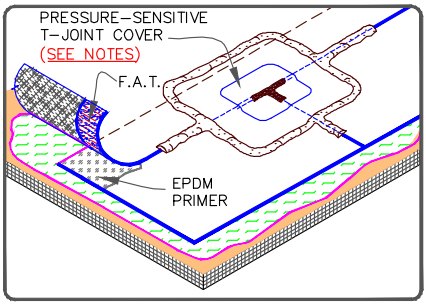
MEMBRANE SPLICE

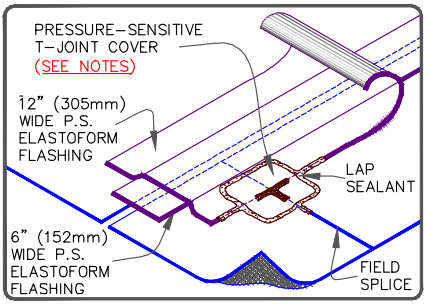


END LAP SPLICE



DIMENSION	mm	
A	1"	25 MAX.





NOTES:

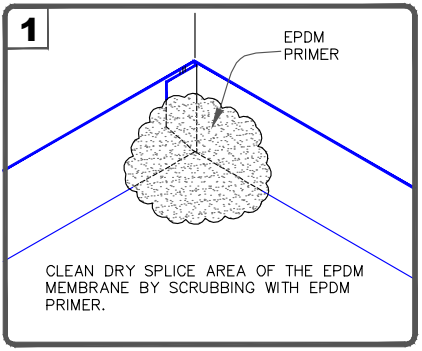
1. APPLY EPDM PRIMER TO MEMBRANE SURFACES PRIOR TO INSTALLING PRESSURE–SENSITIVE FLASHING AND/OR FACTORY APPLIED SecurTAPE.

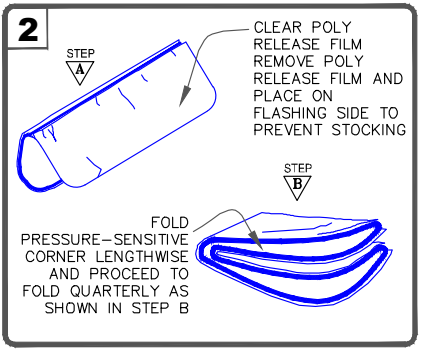
2. APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPLICE (UNDER THE 6"x6" T–JOINT COVER) COVERING THE EXPOSED SPLICE TAPE 2" (51mm) IN EACH DIRECTION FROM THE SPLICE INTERSECTION.

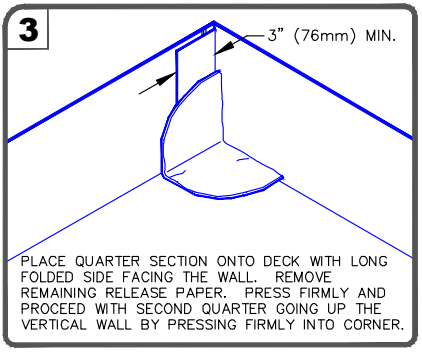
3. ALL EPDM SPLICE INTERSECTIONS MUST BE OVERLAID WITH TWO LAYERS OF PRESSURE–SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6"X6" (152mm X 152mm) COVERED WITH A 12"X12" TOP LAYER (305mm X 305mm). BOTH LAYERS SHALL BE CENTERED OVER THE SPLICE INTERSECTION AND SEALED WITH CONTINUOUS LAP SEALANT, AS SHOWN.

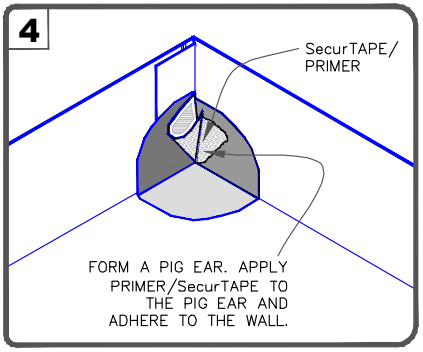
FleeceBACK MEMBRANE FAST ADHESIVE APPROVED SUBSTRATE 0 SEE NOTE(S)	**EPDM MEMBRANE SPLICES-PROJECTS WITH 145-MIL MEMBRANE OR 25 and 30-YEAR WARRANTIES** For additional information, refer to Specifications	DETAIL NO. FB-2A.1 FLEECEBACK ADHERED

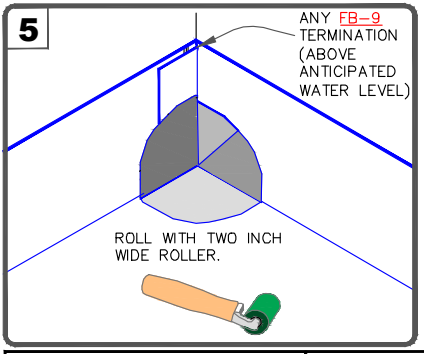
SHEET 08











NOTE:

1. FOR PROJECTS WITH 25 AND 30-YEAR WARRANTIES, ALL INSIDE CORNERS MUST BE OVERLAID WITH TWO LAYERS OF PRESSURE-SENSITIVE FLASHING. THE BOTTOM LAYER SHALL BE A 7"X9" (178mm X 229mm) PRESSURE-SENSITIVE PRE-CUT INSIDE/OUTSIDE CORNER OR A 6'X6" (152mm X 152mm) PRESSURE-SENSITIVE ELASTOFORM FLASHING PIECE COVERED WITH A 12"X12" TOP LAYER (305mm X 305mm) OF PRESSURE-SENSITIVE ELASTOFORM FLASHING. BOTH LAYERS SHALL BE CENTERED AND SEALED WITH CONTINUOUS LAP SEALANT.
2. EPDM PRIMER MUST BE APPLIED TO ALL SPLICE AREAS AND FOR EACH LAYER OF PRESSURE-SENSITIVE FLASHING.

FleeceBACK MEMBRANE
FAST ADHESIVE/AQUABASE
APPROVED SUBSTRATE
0 SEE NOTE(S)

EPDM PRESSURE-SENSITIVE INSIDE CORNER

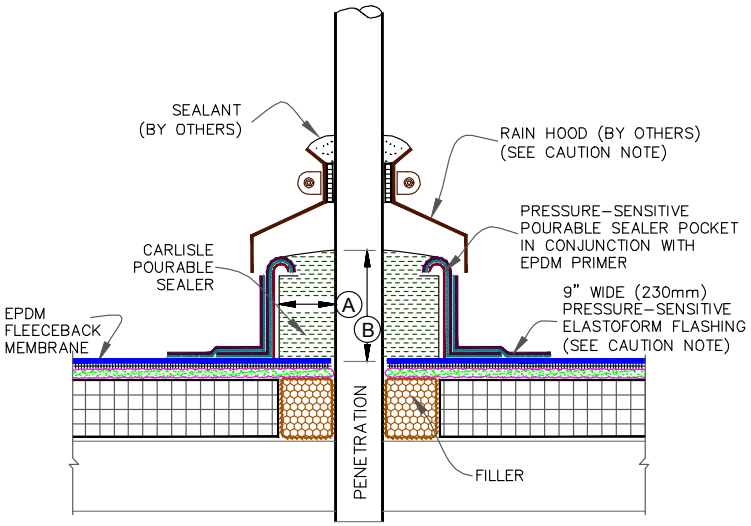
For additional information, refer to Specifications

DETAIL NO. FB-15A

FLEECEBACK ADHERED

CAUTION

POURABLE SEALER POCKETS MUST BE USED IN CONJUNCTION WITH RAIN HOODS AND AN EXTRA LAYER OF PRESSURE SENSITIVE ELASTOFORM FLASHING FOR PROJECTS WITH 25 AND 30–YEAR WARRANTIES.



DIMENSIONS		mm	
A	1"	25	MIN.
B	2"	51	MIN.

NOTES:

1. TEMPERATURE OF PIPE MUST NOT EXCEED 180° F (82° C).
2. ALL DEBRIS (PAINT, RUST, LEAD, OTHER FLASHINGS, ETC.) MUST BE REMOVED FROM THE PENETRATION.
3. PENETRATIONS, MEMBRANE, FLASHING AND INSIDE POCKET MUST BE PRIMED WITH EPDM PRIMER PRIOR TO APPLYING POURABLE SEALER.
4. POURABLE SEALER MUST COMPLETELY FILL POURABLE SEALER POCKET TO PREVENT PONDING OF WATER.
5. POURABLE SEALER MUST CONTACT PRIMED PRESSURE–SENSITIVE ELASTOFORM FLASHING AND DECK MEMBRANE.
6. PIPE CLUSTERS MUST HAVE MINIMUM 1" (25mm) CLEARANCE BETWEEN PENETRATIONS.
7. WHEN AQUA BASE 120 ADHESIVE IS USED TO ADHERE THE FLEECEBACK MEMBRANE TO AN APPROVED SUBSTRATE, SECUREMENT IS REQUIRED FOR POURABLE SEALER POCKETS WHICH ARE GREATER THAN 18" (457mm) IN DIAMETER. REFER TO CARLISLE SPECIFICATIONS.

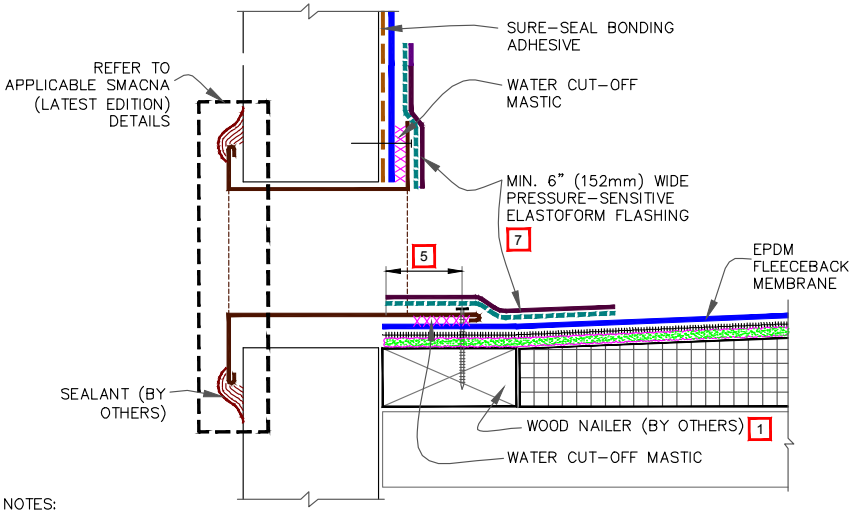
FleeceBACK MEMBRANE
FAST ADHESIVE/AQUABASE
APPROVED SUBSTRATE
0 SEE NOTE(S)

EPDM PRESSURE-SENSITIVE POURABLE SEALER POCKET

For additional information, refer to Specifications

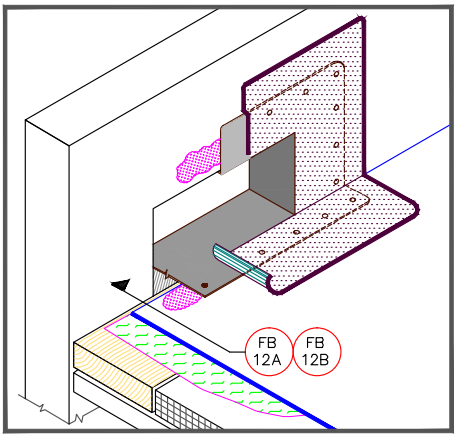
DETAIL NO. FB-16A

FLEECEBACK ADHERED



NOTES:

1. WOOD NAILERS ARE INSTALLED ONLY AT SCUPPERS TO SECURE METAL SLEEVE AND MUST EXTEND PAST THE WIDTH OF METAL SLEEVE FLANGE.
2. INSTALL WALL FLASHING PRIOR TO SCUPPER INSTALLATION.
3. METAL SCUPPER BOX MUST HAVE CONTINUOUS FLANGES WITH ROUNDED CORNERS. SOLDER ALL SCUPPER SEAMS WATER-TIGHT.
4. WATER CUT-OFF MASTIC UNDER SCUPPER FLANGE MUST BE UNDER CONSTANT COMPRESSION.
5. SCUPPER FLANGES MUST BE TOTALLY COVERED BY PRESSURE-SENSITIVE ELASTOFORM FLASHING WITH MINIMUM 2" (51mm) COVERAGE PAST NAIL HEADS.
6. TO REMOVE FINISHING OILS, SCRUB METAL FLANGE WITH WEATHERED MEMBRANE CLEANER; ALLOW TO DRY PRIOR TO APPLYING EPDM PRIMER.
7. APPLY EPDM PRIMER TO METAL FLANGE AND MEMBRANE SURFACE PRIOR TO INSTALLING PRESSURE-SENSITIVE ELASTOFORM FLASHING.

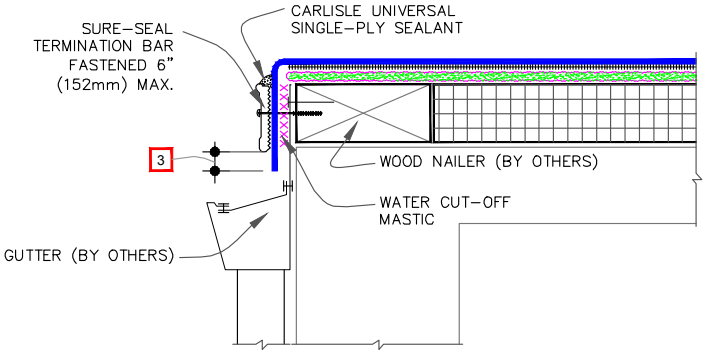


FleeceBACK MEMBRANE
FAST ADHESIVE/AQUABASE
APPROVED SUBSTRATE
0 SEE NOTE(S)

THROUGH-WALL SCUPPER WITH PRESSURE-SENSITIVE EPDM FLASHING

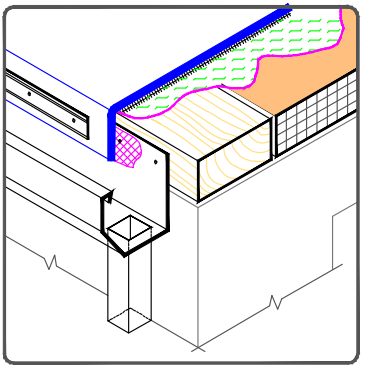
For additional information, refer to Specifications

DETAIL NO.
FB-18A
FLEECEBACK ADHERED



NOTE:

1. POSITION MEMBRANE WITH SELVAGE EDGE AT TERMINATION BAR LOCATION TO AVOID REMOVAL OF FLEECE BACKING.
2. FASTENING OF METAL TERMINATION BAR MUST PROVIDE CONSTANT COMPRESSION ON WATER CUT–OFF MASTIC.
3. ALLOW MEMBRANE SHEET TO EXTEND 1/2" (13mm) MINIMUM BELOW THE METAL TERMINATION BAR.

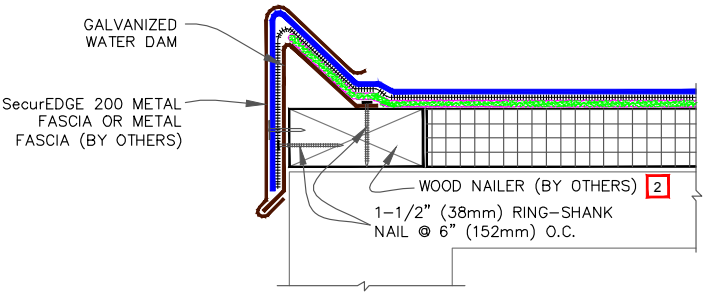


FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**METAL BAR EDGE TERMINATION** For additional information, refer to Specifications	DETAIL NO. FB-1C FLEECEBACK ADHERED

SHEET 03

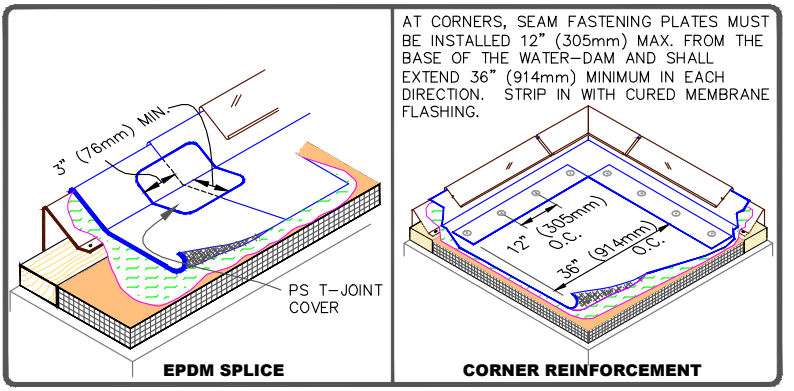
CAUTION

FOR PROJECTS WITH 25 & 30–YEAR WARRANTIES, ALL EPDM SPLICE INTERSECTIONS MUST BE OVERLAID WITH TWO LAYERS OF PRESSURE–SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6"X6" (152mm X 152mm) COVERED WITH A 12"X12" TOP LAYER (305mm X 305mm). BOTH LAYERS SHALL BE CENTERED OVER THE SPLICE INTERSECTION AND SEALED WITH CONTINUOUS LAP SEALANT.



NOTES:

1. REFER TO SecurEdge 200 INSTALLATION INSTRUCTION MANUAL FOR STEP–BY–STEP INSTALLATION PROCEDURES.
2. WOOD NAILER MUST EXTEND PAST TOTAL WIDTH OF GRAVEL STOP DECK FLANGE.
3. WHEN METAL FASCIA BY OTHERS IS USED, FASTENER TYPE AND FASTENING FREQUENCY SHALL BE RECOMMENDED BY METAL EDGE MANUFACTURER.

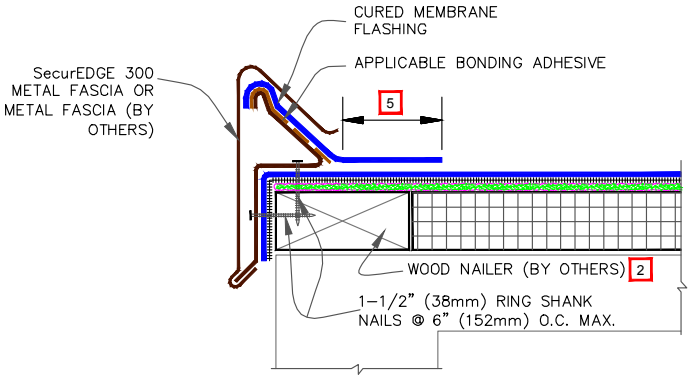


FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**CARLISLE SecurEdge 200** For additional information, refer to Specifications	DETAIL NO. **FB-1D** FLEECEBACK ADHERED

SHEET 04

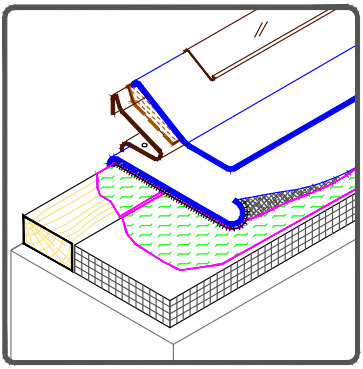
CAUTION

EPDM MEMBRANE SPLICES SHALL INCORPORATE 6" (152mm) WIDE FIELD APPLIED SecurTAPE FOR PROJECTS WITH 20, 25 & 30–YEAR WARRANTIES.



NOTES:

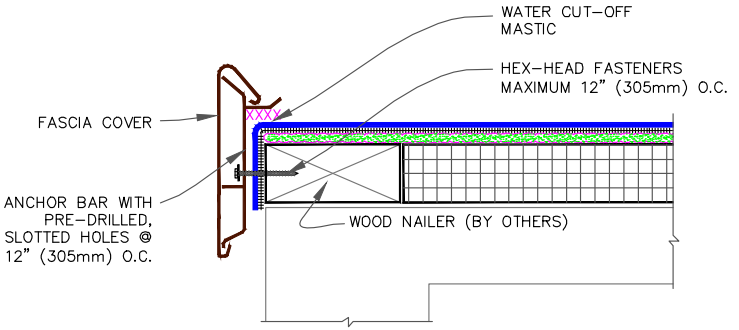
1. REFER TO SecurEdge 300 INSTALLATION INSTRUCTION MANUAL FOR STEP–BY–STEP INSTALLATION PROCEDURES.
2. WOOD NAILER MUST EXTEND PAST TOTAL WIDTH OF GRAVEL STOP DECK FLANGE.
3. PRESSURE–SENSITIVE T–JOINT COVER OR 6" (152mm) WIDE PRESSURE–SENSITIVE FLASHING, IN CONJUNCTION WITH EPDM PRIMER, MUST BE CENTERED OVER EPDM FIELD SPLICES AT THE ANGLE CHANGE. PROJECTS WITH 25 OR 30–YEAR WARRANTIES OR WHEN USING 145–MIL MEMBRANE, FIELD SPLICES SHALL BE OVERLAID WITH TWO LAYERS OF PRESSURE–SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6" (152mm) WIDE COVERED WITH A 12" WIDE TOP LAYER (305mm). BOTH LAYERS SHALL BE CENTERED AND SEALED WITH CONTINUOUS LAP SEALANT.
4. WHEN METAL FASCIA BY OTHERS IS USED, FASTENER TYPE AND FASTENING FREQUENCY SHALL BE RECOMMENDED BY METAL EDGE MANUFACTURER.



5. MEMBRANE SPLICES SHALL BE COMPLETED USING MINIMUM 3" (76mm) WIDE SecurTAPE/EPDM PRIMER WITH EPDM MEMBRANE AND MINIMUM 1–1/2" (38mm) HOT AIR WELD WITH TPO/PVC.
6. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT–EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE AND RECOMMENDED ON CUT EDGES OF SURE–FLEX PVC MEMBRANE.

FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**CARLISLE SecurEdge 300** For additional information, refer to Specifications	DETAIL NO. FB-1E FLEECEBACK ADHERED

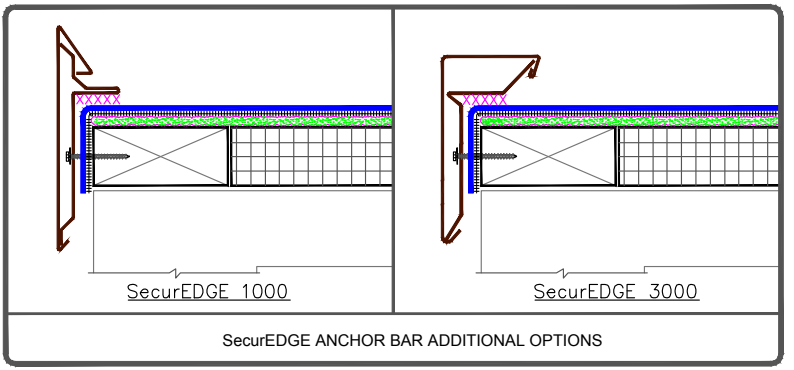
SHEET 05



SecurEDGE 2000

NOTES:

1. REFER TO SecurEdge 1000, 2000 OR 3000 INSTRUCTION MANUALS FOR THE STEP BY STEP INSTALLATION PROCEDURES.
2. IF INCIDENTAL/TEMPORARY PONDED WATER IS EXPECTED, THE SecurEdge MUST BE ELEVATED AND SCUPPERS PROVIDED FOR DRAINAGE.
3. ENSURE ROOF SLOPES AWAY FROM SecurEDGE.



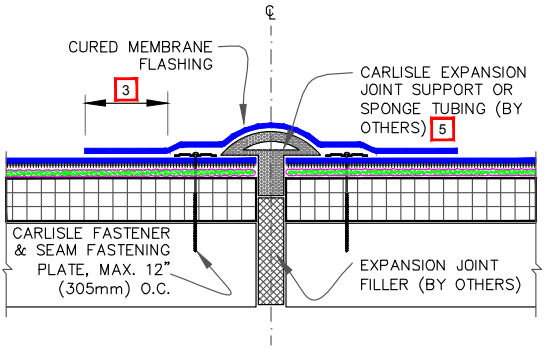
SecurEDGE ANCHOR BAR ADDITIONAL OPTIONS

FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**CARLISLE Securedge 1000, 2000 & 3000** For additional information, refer to Specifications	DETAIL NO. FB-1F FLEECEBACK ADHERED

SHEET 06

CAUTION

EPDM MEMBRANE SPLICES SHALL INCORPORATE 6" (152mm) WIDE FIELD APPLIED SecurTAPE FOR PROJECTS WITH 20, 25 & 30–YEAR WARRANTIES.



NOTES:

1. WHEN CARLISLE EXPANSION JOINT SUPPORT IS USED, WIDTH OF JOINT SHALL BE A MINIMUM OF 3/4" (19mm) AND SHALL NOT EXCEED 3" (76mm).

2. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT–EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE AND RECOMMENDED ON CUT EDGES OF SURE–FLEX PVC MEMBRANE.

3. MEMBRANE SPLICES SHALL BE COMPLETED USING MINIMUM 3" (76mm) WIDE SecurTAPE/ PRIMER WITH EPDM MEMBRANE AND MINIMUM 1–1/2" (38mm) HOT AIR WELD WITH TPO/PVC.

4. WHEN USING 60 OR 80–MIL REINFORCED THERMOPLASTIC MEMBRANE FLASHING, APPLY A 4–1/2" DIAMETER THERMOPLASTIC "T–JOINT" COVER AT ALL FIELD SPLICE INTERSECTIONS.

   ALL EPDM SPLICE INTERSECTIONS MUST BE OVERLAID WITH A PRESSURE–SENSITIVE T–JOINT COVER. PRIOR TO DOING SO, APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPLICE (UNDER THE 6"x6" T–JOINT COVER) COVERING THE EXPOSED SPLICE TAPE 2" (51mm) IN EACH DIRECTION FROM THE SPLICE INTERSECTION. PROJECTS WITH 25 & 30–YEAR WARRANTIES OR WHEN USING 145–MIL MEMBRANE, INTERSECTIONS MUST BE OVERLAID WITH TWO LAYERS OF PRESSURE–SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6"X6" (152mm X 152mm) COVERED WITH A 12"X12" TOP LAYER (305mm X 305mm). BOTH LAYERS SHALL BE CENTERED OVER THE SPLICE INTERSECTION AND SEALED WITH CONTINUOUS LAP SEALANT, REFER TO FB–2 DETAILS.

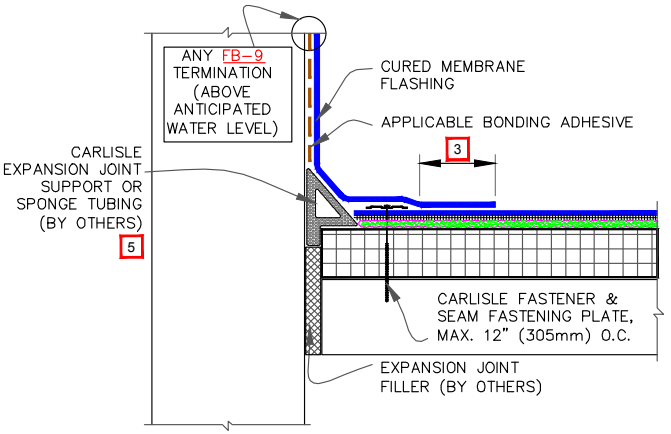
5. ROOF MEMBRANE SHALL NOT BE ADHERED OVER THE EXPANSION JOINT SUPPORT OR SPONGE TUBING.

6. FOR EPDM APPLICATIONS, USE TWO LAYERS OF PRESSURE–SENSITIVE ELASTOFORM FLASHING WITH EACH LAYER 3" (76mm) LARGER THAN THE PREVIOUS LAYER IN ALL DIRECTIONS FOR EXPANSION JOINT INTERSECTIONS BETWEEN EXPANSION JOINTS TO WALL OR EDGING.

FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**DECK-TO-DECK EXPANSION JOINT** For additional information, refer to Specifications	DETAIL NO. **FB-3A** FLEECEBACK ADHERED

CAUTION

EPDM MEMBRANE SPLICES SHALL INCORPORATE 6" (152mm) WIDE FIELD APPLIED SecurTAPE FOR PROJECTS WITH 20, 25 & 30–YEAR WARRANTIES.



NOTES:

1. WHEN CARLISLE EXPANSION JOINT SUPPORT IS USED, WIDTH OF JOINT SHALL BE A MINIMUM OF 3/4" (19mm) AND SHALL NOT EXCEED 2" (51mm).

2. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT–EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE AND RECOMMENDED ON CUT EDGES OF SURE–FLEX PVC MEMBRANE.

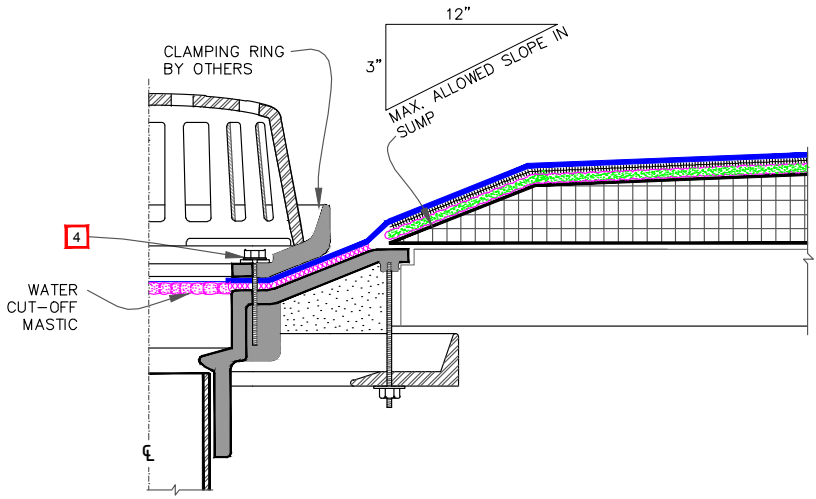
3. SPLICES SHALL BE COMPLETED USING MINIMUM 3" (76mm) WIDE SecurTAPE/ PRIMER WITH EPDM MEMBRANE AND MINIMUM 1–1/2" (38mm) HOT AIR WELD WITH TPO/PVC.

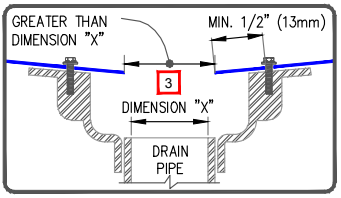
4. WHEN USING 60 OR 80–MIL REINFORCED THERMOPLASTIC MEMBRANE FLASHING, APPLY A 4–1/2" DIAMETER THERMOPLASTIC "T–JOINT" COVER AT ALL FIELD SPLICE INTERSECTIONS.

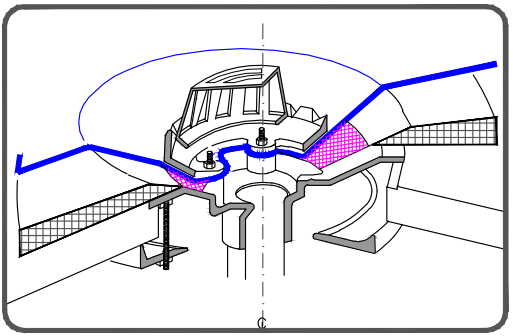
   ALL EPDM SPLICE INTERSECTIONS MUST BE OVERLAID WITH A PRESSURE–SENSITIVE T–JOINT COVER. PRIOR TO DOING SO, APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPLICE (UNDER THE 6"x6" T–JOINT COVER) COVERING THE EXPOSED SPLICE TAPE 2" (51mm) IN EACH DIRECTION FROM THE SPLICE INTERSECTION. PROJECTS WITH 25 & 30–YEAR WARRANTIES OR WHEN USING 90–MIL EPDM FLASHING, INTERSECTIONS MUST BE OVERLAID WITH TWO LAYERS OF PRESSURE–SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6"X6" (152mm X 152mm) COVERED WITH A 12"X12" TOP LAYER (305mm X 305mm). BOTH LAYERS SHALL BE CENTERED OVER THE SPLICE INTERSECTION AND SEALED WITH CONTINUOUS LAP SEALANT, REFER TO FB–2 DETAILS.

5. ROOF MEMBRANE SHALL NOT BE ADHERED OVER THE EXPANSION JOINT SUPPORT OR SPONGE TUBING.

FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**DECK-TO-WALL EXPANSION DETAIL** For additional information, refer to Specifications	DETAIL NO. FB-3B FLEECEBACK ADHERED







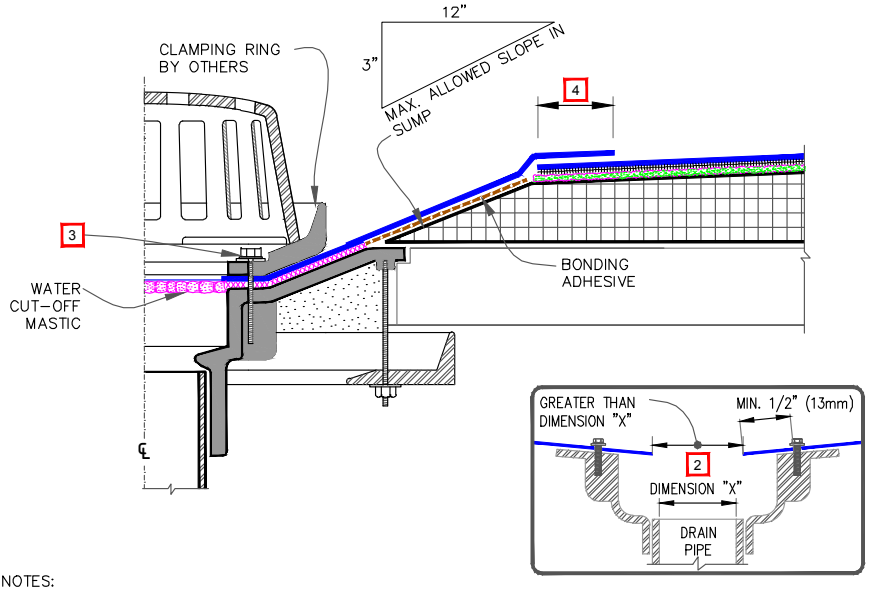
NOTES:

1. REMOVE EXISTING LEAD, FLASHING MATERIAL & ENSURE THE DRAIN RING IS COMPLETELY CLEAN DOWN TO BARE METAL.
2. FLEECE–BACKING MUST BE REMOVED FROM THE MEMBRANE SO THAT WATER CUT–OFF MASTIC IS IN DIRECT CONTACT.
3. THE HOLE IN THE MEMBRANE SHALL EXCEED THE DIAMETER OF THE DRAIN PIPE, BUT SHALL BE NO LESS THAN 1/2" (13mm) FROM THE ATTACHMENT POINTS OF THE DRAIN CLAMPING RING.
4. ALL BOLTS OR CLAMPS MUST BE IN PLACE TO PROVIDE CONSTANT COMPRESSION ON WATER CUT–OFF MASTIC.
5. ROOF DRAIN SIZE AND NUMBER OF DRAINS SHALL BE IN ACCORDANCE WITH THE LOCAL CODES.

FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**ROOF DRAIN WITH CONTINUOUS MEMBRANE** For additional information, refer to Specifications	DETAIL NO. FB-6A FLEECEBACK ADHERED

CAUTION

EPDM MEMBRANE SPLICES SHALL INCORPORATE 6" (152mm) WIDE FIELD APPLIED SecurTAPE FOR PROJECTS WITH 20, 25 & 30–YEAR WARRANTIES.

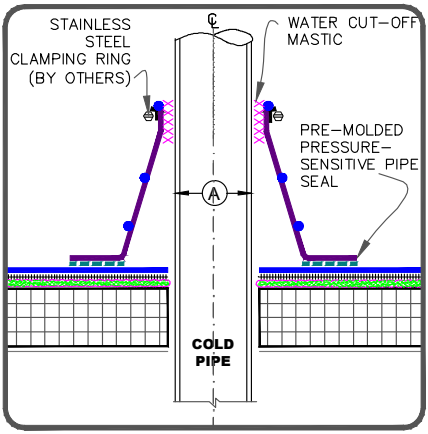


NOTES:

1. REMOVE EXISTING LEAD, FLASHING MATERIAL & ENSURE THE DRAIN RING IS COMPLETELY CLEAN DOWN TO BARE METAL.
2. THE HOLE IN THE MEMBRANE SHALL EXCEED THE DIAMETER OF THE DRAIN PIPE, BUT SHALL BE NO LESS THAN 1/2" (13mm) FROM THE ATTACHMENT POINTS OF THE DRAIN CLAMPING RING.
3. ALL BOLTS OR CLAMPS MUST BE IN PLACE TO PROVIDE CONSTANT COMPRESSION ON WATER CUT–OFF MASTIC.
4. SPLICES SHALL BE COMPLETED USING MIN. 3" (76mm) WIDE SecurTAPE/ PRIMER WITH EPDM MEMBRANE AND MINIMUM 1–1/2" (38mm) HOT AIR WELD WITH TPO/PVC.
5. FIELD SPLICES MUST BE LOCATED AT LEAST 6 INCHES (152mm) OUTSIDE THE DRAIN SUMP.
6. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT–EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE AND RECOMMENDED ON CUT EDGES OF SURE–FLEX PVC MEMBRANE.
7. ROOF DRAIN SIZE AND NUMBER OF DRAINS SHALL BE IN ACCORDANCE WITH THE LOCAL CODES.

FleeceBACK MEMBRANE FAST ADHESIVE/AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**ROOF DRAIN WITH SEPARATE TARGET SPLICE** For additional information, refer to Specifications	DETAIL NO. FB-6B FLEECEBACK ADHERED

EPDM

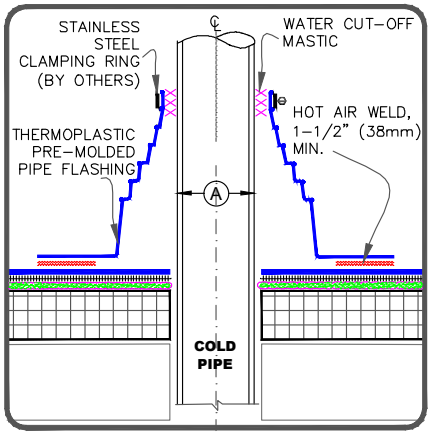


DIMENSIONS	mm	
A 1/2"	13	TO
6"	152	

NOTES:

1. REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD FABRICATED PIPE SEAL.
2. TEMPERATURE OF PIPE MUST NOT EXCEED 180°F (82°C).
3. APPLY EPDM PRIMER TO SPLICE AREA.
4. PIPE SEAL MUST HAVE INTACT RIB AT TOP EDGE, REGARDLESS OF PIPE DIAMETER.
5. DECK FLANGES OF THE PRE–MOLDED PIPE SEAL SHALL NOT BE OVERLAPPED, CUT OR APPLIED OVER ANY ANGLE CHANGE.
6. WHEN A FIELD SPLICE INTERSECTS A PIPE SEAL, APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPLICE COVERING THE EXPOSED SPLICE TAPE 2" (51mm) IN EACH DIRECTION FROM THE SPLICE INTERSECTION & OVERLAY WITH A 6"X6" (152 X 152mm) T–JOINT COVER.

TPO/PVC



DIMENSIONS	mm	
A 3/4"	8	TO
8"	203	

NOTES:

1. REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD FABRICATED PIPE SEAL.
2. TEMPERATURE OF THE PIPE PENETRATION MUST NOT EXCEED 140°F (60°C) WHEN USING PVC AND 160°F (71°C) WHEN USING TPO FLASHING.
3. PIPE SEAL MUST HAVE INTACT RIB AT TOP EDGE, REGARDLESS OF PIPE DIAMETER.
4. DECK FLANGES OF THE PRE–MOLDED PIPE SEAL SHALL NOT BE OVERLAPPED, CUT OR APPLIED OVER ANY ANGLE CHANGE.

FleeceBACK MEMBRANE
FAST ADHESIVE/AQUABASE
APPROVED SUBSTRATE
0 SEE NOTE(S)

PRE-MOLDED PIPE SEALS

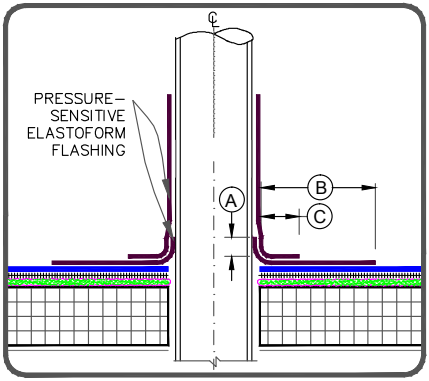
For additional information, refer to Specifications

DETAIL NO.
FB-8A
FLEECEBACK ADHERED

CAUTION

DETAIL NOT FOR USE ON 25 & 30–YEAR WARRANTY PROJECTS. ACCEPTABLE PIPE FLASHINGS SHALL CONFORM WITH FB–8A DETAIL OR REFER TO THERMOSET/THERMOPLASTIC UNIVERSAL DETAILS.

EPDM

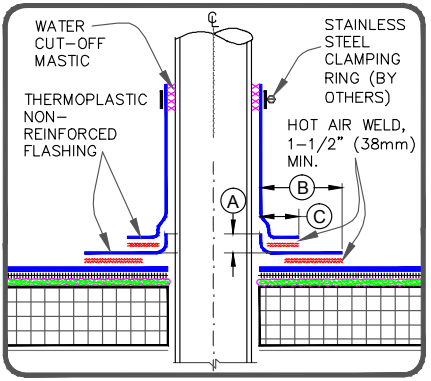


DIMENSIONS		mm	
A	1/2"	13	MIN.
B	3"	76	MIN.
C	1"	25	MIN.

NOTES:

1. REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD–FABRICATED PIPE SEAL.
2. TEMPERATURE OF PIPE MUST NOT EXCEED 180°F (82°C).
3. PRIOR TO APPLYING PRESSURE–SENSITIVE ELASTOFORM FLASHING, APPLY EPDM PRIMER TO SPLICE AREAS.
4. MECHANICAL SECUREMENT IS REQUIRED AROUND ALL PIPES GREATER THAN 18" (457mm) IN DIAMETER.
5. IN COLDER TEMPERATURES A HEAT GUN MUST BE USED WHEN FORMING PRESSURE–SENSITIVE ELASTOFORM FLASHING.
6. REFER TO EPDM UNIVERSAL DETAILS FOR HOT STACK, STEEL TUBING & FLEXIBLE PIPE PENETRATIONS.

TPO/PVC



DIMENSIONS		mm	
A	1/2"	13	MIN.
B	1–1/2"	38	TO
	2"	51	
C	1"	25	MIN.

NOTES:

1. REMOVE ALL LEAD AND OTHER FLASHING BEFORE INSTALLING FIELD FABRICATED PIPE SEAL.
2. TEMPERATURE OF THE PIPE PENETRATION MUST NOT EXCEED 140°F (60°C) WHEN USING PVC AND 160°F (71°C) WHEN USING TPO FLASHING.
3. APPLY HEAT TO FLASHING AND FORM BY HAND PRIOR TO HOT AIR WELDING
4. MECHANICAL SECUREMENT IS REQUIRED AROUND ALL PIPES GREATER THAN 18" (457mm) IN DIAMETER.
5. REFER TO THERMOPLASTIC UNIVERSAL DETAILS FOR HOT STACK, STEEL TUBING & FLEXIBLE PENETRATIONS.

FleeceBACK MEMBRANE
FAST ADHESIVE/AQUABASE
APPROVED SUBSTRATE
0 SEE NOTE(S)

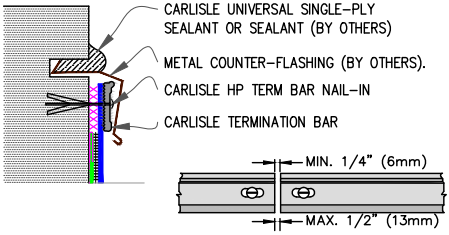
FIELD FABRICATED PIPE FLASHING

For additional information, refer to Specifications

DETAIL NO.
FB-8B
FLEECEBACK ADHERED

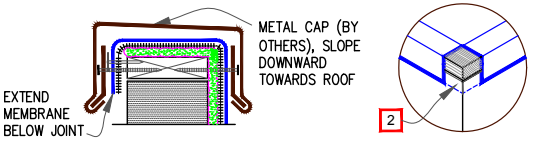
THERMOSET / THERMOPLASTIC MEMBRANE — FB

9A MECHANICAL TERMINATION WITH COUNTER FLASHING



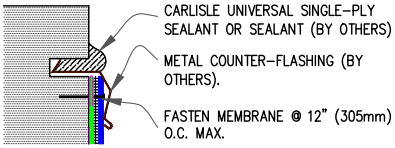
NOTES:
1. APPLY ON HARD SMOOTH SURFACE ONLY; NOT FOR USE ON EXPOSED WOOD.
2. DO NOT WRAP COMPRESSION TERMINATION BAR AROUND CORNERS.
3. FLEECE–BACKING MUST BE REMOVED FROM THE MEMBRANE SO THAT WATER CUT–OFF MASTIC IS IN DIRECT CONTACT.
4. DETAIL REQUIRED FOR USE ON WARRANTY PROJECTS EXCEEDING 20–YEARS. MAY BE USED FOR ANY PROJECT REGARDLESS OF WARRANTY.

9B SHEET METAL COPING



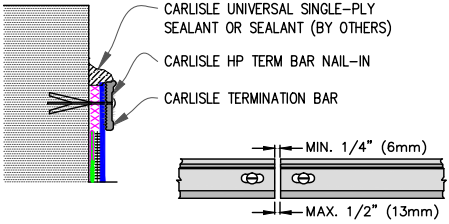
NOTES:
1. FOR CARLISLE SecurEdge COPING, REFER TO INSTALLATION INSTRUCTIONS PUBLISHED SEPARATELY.
2. MEMBRANE MUST BE EXTENDED TO CORNERS TO PROVIDE COMPLETE COVERAGE OF THE TOP WALL SURFACE.

9C COUNTER FLASHING TERMINATION



NOTES:
1. WHEN MECHANICAL FASTENERS ARE USED TO PENETRATE THE METAL COUNTER–FLASHING, USE EPDM WASHERS, APPLY WATER CUT–OFF MASTIC UNDER THE COUNTER–FLASHING OR CAULK THE FASTENER HEADS.
2. DETAIL NOT FOR USE ON WARRANTY PROJECTS EXCEEDING 10–YEARS.

9D MECHANICAL TERMINATION



NOTES:
1. APPLY ON HARD SMOOTH SURFACE ONLY; NOT FOR USE ON EXPOSED WOOD.
2. DO NOT WRAP COMPRESSION TERMINATION BAR AROUND CORNERS.
3. FLEECE–BACKING MUST BE REMOVED FROM THE MEMBRANE SO THAT WATER CUT–OFF MASTIC IS IN DIRECT CONTACT.
4. DETAIL NOT FOR USE ON WARRANTY PROJECTS EXCEEDING 20–YEARS.

XXXXXXXX CARLISLE WATER CUT–OFF MASTIC MUST BE UNDER COMPRESSION

- FleeceBACK MEMBRANE
- FAST ADHESIVE/AQUABASE
- APPROVED SUBSTRATE
- 0 SEE NOTE(S)

MEMBRANE TERMINATIONS

For additional information, refer to Specifications

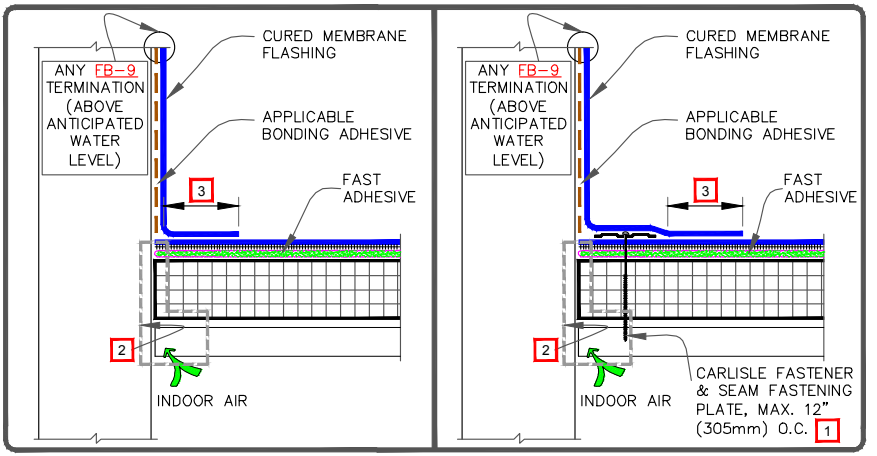
DETAIL NO. FB-9

FLEECEBACK ADHERED

REV 8/2013

CAUTION

- EPDM MEMBRANE SPLICES SHALL INCORPORATE 6" (152mm) WIDE FIELD APPLIED SecurTAPE FOR PROJECTS WITH 20, 25 & 30-YEAR WARRANTIES.
- REFER TO DETAIL FB-12C WHEN USING AQUA BASE 120 ADHESIVE.



NOTES:

1. MECHANICALLY FASTENED BASE SECUREMENT IS REQUIRED WHEN ANY ONE OF THE FOLLOWING MAY OCCUR:
   1.1. SPECIFIED WARRANTIES GREATER THAN 20-YEARS.
   1.2. WARRANTY WIND SPEEDS GREATER THAN 90MPH.
   1.3. PROJECTS WITH CONTROL OR EXPANSION JOINTS OR ANTICIPATED BUILDING MOVEMENT.

2. REFER TO SPECIAL CONDITION SPEC. SUPPLEMENTS G-01-11 OR G-08-11:
   2.1. TO BLOCK INDOOR AIR INFILTRATION AND HUMIDITY AT THE JUNCTION (G-01-11).
   2.2. WHERE ROOF SYSTEM IS DESIGNED WITH A VAPOR RETARDER (G-08-11).

3. SPLICES SHALL BE COMPLETED USING MINIMUM 3" (76mm) WIDE SecurTAPE/ PRIMER WITH EPDM MEMBRANE AND MINIMUM 1-1/2" (38mm) HOT AIR WELD WITH TPO/PVC.

4. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT-EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE AND RECOMMENDED ON CUT EDGES OF SURE-FLEX PVC MEMBRANE.

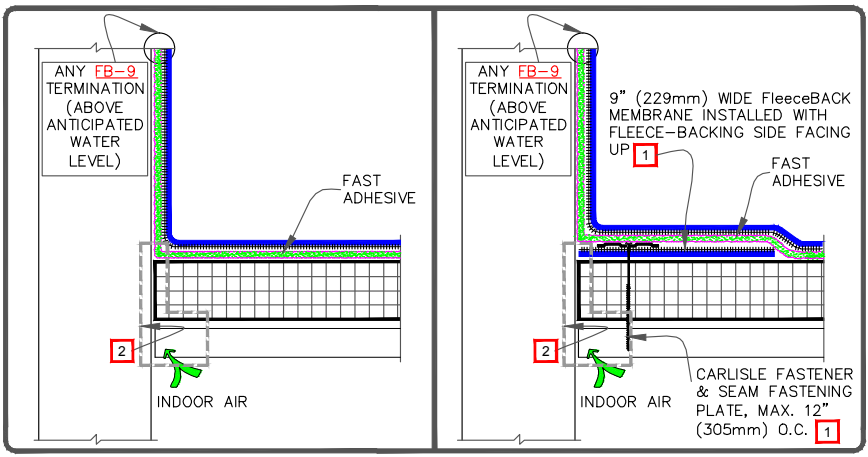
5. WHEN USING 60 OR 80-MIL REINFORCED THERMOPLASTIC MEMBRANE FLASHING, APPLY A 4-1/2" DIAMETER THERMOPLASTIC "T-JOINT" COVER AT ALL FIELD SPLICE INTERSECTIONS.

   ALL EPDM SPLICE INTERSECTIONS MUST BE OVERLAID WITH A PRESSURE-SENSITIVE T-JOINT COVER. PRIOR TO DOING SO, APPLY LAP SEALANT ALONG THE EDGE OF THE MEMBRANE SPLICE (UNDER THE 6"x6" T-JOINT COVER) COVERING THE EXPOSED SPLICE TAPE 2" (51mm) IN EACH DIRECTION FROM THE SPLICE INTERSECTION. PROJECTS WITH 25 & 30-YEAR WARRANTIES OR WHEN USING 90-MIL EPDM FLASHING, INTERSECTIONS MUST BE OVERLAID WITH TWO LAYERS OF PRESSURE-SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6"X6" (152mm X 152mm) COVERED WITH A 12"X12" TOP LAYER (305mm X 305mm). BOTH LAYERS SHALL BE CENTERED OVER THE SPLICE INTERSECTION AND SEALED WITH CONTINUOUS LAP SEALANT, REFER TO FB-2 DETAILS.

FleeceBACK MEMBRANE FAST ADHESIVE APPROVED SUBSTRATE 0 SEE NOTE(S)	**PARAPET/CURB WITH SEPARATE MEMBRANE** For additional information, refer to Specifications	DETAIL NO. **FB-12A** FLEECEBACK ADHERED

CAUTION

REFER TO DETAIL FB–12C WHEN USING AQUA BASE 120 ADHESIVE.



NOTES:

1. MECHANICALLY FASTENED BASE SECUREMENT IS REQUIRED WHEN ANY ONE OF THE FOLLOWING MAY OCCUR:
   1.1. SPECIFIED WARRANTIES GREATER THAN 20–YEARS.
   1.2. WARRANTY WIND SPEEDS GREATER THAN 90MPH.
   1.3. PROJECTS WITH CONTROL OR EXPANSION JOINTS OR ANTICIPATED BUILDING MOVEMENT.

2. REFER TO SPECIAL CONDITION SPEC. SUPPLEMENTS G–01–11 OR G–08–11:
   2.1. TO BLOCK INDOOR AIR INFILTRATION AND HUMIDITY AT THE JUNCTION (G–01–11).
   2.2. WHERE ROOF SYSTEM IS DESIGNED WITH A VAPOR RETARDER (G–08–11).

3. PRESSURE–SENSITIVE EPDM T–JOINT COVER OR 6" (152mm) WIDE PRESSURE–SENSITIVE FLASHING, IN CONJUNCTION WITH EPDM PRIMER, MUST BE CENTERED OVER EPDM FIELD SPLICES AT THE ANGLE CHANGE. PROJECTS WITH 25 OR 30–YEAR WARRANTIES OR WHEN USING 145–MIL MEMBRANE, FIELD SPLICES SHALL BE OVERLAID WITH TWO LAYERS OF PRESSURE–SENSITIVE ELASTOFORM FLASHING. THE BOTTOM LAYER SHALL BE 6" (152mm) WIDE COVERED WITH A 12" WIDE TOP LAYER (305mm). BOTH LAYERS SHALL BE CENTERED AND SEALED WITH CONTINUOUS LAP SEALANT.

4. WHEN THE USE OF FAST ADHESIVE (FULL SPRAY) IS NOT FEASIBLE ON THE VERTICAL SUBSTRATE, APPLICABLE BONDING ADHESIVE MAY BE USED. APPLY A COAT TO THE FLEECE SIDE OF THE MEMBRANE AND ALLOW TO DRY. ONCE THE ADHESIVE ON THE FLEECE IS DRY, APPLY BONDING ADHESIVE AT THE COVERAGE RATE OF 60 SQUARE FEET PER GALLON TO THE WALL SUBSTRATE AND A SECOND COAT TO THE FLEECEBACK MEMBRANE.

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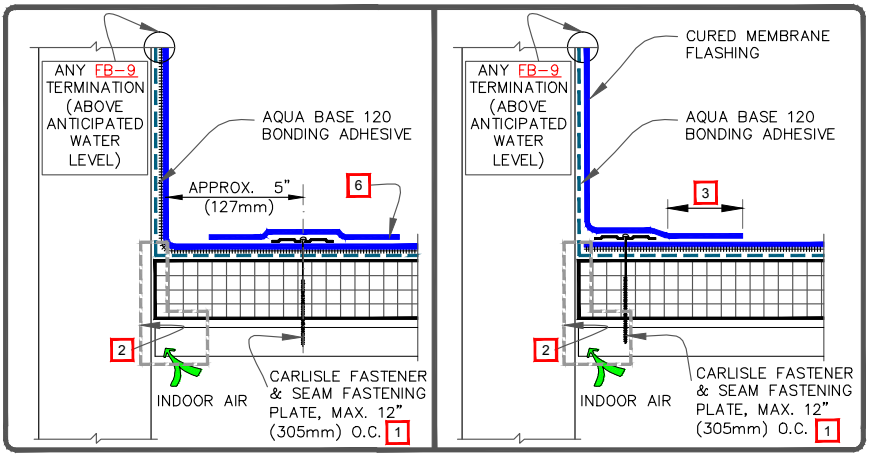
FleeceBACK MEMBRANE FAST ADHESIVE APPROVED SUBSTRATE 0 SEE NOTE(S)	**PARAPET/CURB WITH CONTINUOUS MEMBRANE** For additional information, refer to Specifications	DETAIL NO. **FB-12B** FLEECEBACK ADHERED

CAUTION

EPDM MEMBRANE SPLICES SHALL INCORPORATE 6" (152mm) WIDE FIELD APPLIED SecurTAPE FOR PROJECTS WITH 20-YEAR WARRANTIES.



NOTES:

1. REGARDLESS OF WARRANTY/ WARRANTY WIND SPEEDS, MECHANICAL SECUREMENT MUST BE PROVIDED AT THE PERIMETER OF EACH ROOF LEVEL, ROOF SECTION, EXPANSION JOINT, CURB FLASHING, SKYLIGHT, INTERIOR WALL, PENTHOUSE, ETC., AT ANY INSIDE ANGLE CHANGE WHERE SLOPE EXCEEDS 2" IN ONE HORIZONTAL FOOT.

2. REFER TO SPECIAL CONDITION SPEC. SUPPLEMENTS G-01-11 OR G-08-11:
   2.1. TO BLOCK INDOOR AIR INFILTRATION AND HUMIDITY AT THE JUNCTION (G-01-11).
   2.2. WHERE ROOF SYSTEM IS DESIGNED WITH A VAPOR RETARDER (G-08-11).

3. SPLICES SHALL BE COMPLETED USING MINIMUM 3" (76mm) WIDE SecurTAPE/ PRIMER WITH EPDM MEMBRANE AND MINIMUM 1-1/2" (38mm) HOT AIR WELD WITH TPO/PVC.

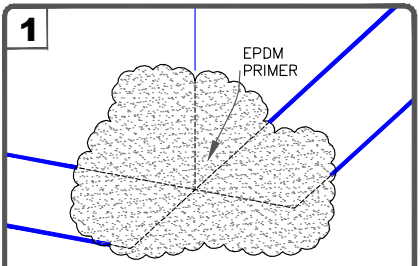
4. APPROXIMATELY 1/8" (3mm) DIAMETER BEAD OF CUT-EDGE SEALANT IS REQUIRED ON CUT EDGES OF REINFORCED TPO MEMBRANE AND RECOMMENDED ON CUT EDGES OF SURE-FLEX PVC MEMBRANE.

5. WHEN APPLYING AQUA BASE 120 BONDING ADHESIVE TO FLEECEBACK MEMBRANE ON THE VERTICAL WALL SUBSTRATE, APPLY A COAT OF AQUA BASE 120 ADHESIVE TO THE FLEECE SIDE OF THE MEMBRANE AND ALLOW TO DRY. ONCE THE ADHESIVE ON THE FLEECE IS DRY, APPLY BONDING ADHESIVE AT THE COVERAGE RATE OF 60 SQUARE FEET PER GALLON TO THE WALL SUBSTRATE AND A SECOND COAT TO THE FLEECEBACK MEMBRANE.

6. WHEN USING EPDM FB MEMBRANE, MINIMUM 6" (152mm) WIDE PRESSURE-SENSITIVE CURED COVER STRIP MUST BE CENTERED OVER THE MECHANICAL FASTENERS AND PLATES. WHEN USING TPO OR PVC FLEECEBACK MEMBRANE, MINIMUM 6" (152MM) WIDE REINFORCED THERMOPLASTIC MEMBRANE FLASHING SHALL BE CENTERED OVER THE MECHANICAL FASTENERS AND PLATES AND HEAT WELDED ON ALL SIDES.

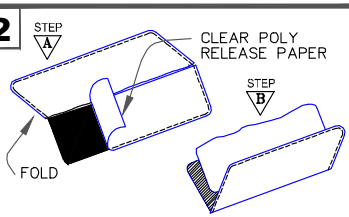
FleeceBACK MEMBRANE AQUABASE APPROVED SUBSTRATE 0 SEE NOTE(S)	**PARAPET/CURB WITH AQUA BASE 120 ADHESIVE** For additional information, refer to Specifications	DETAIL NO. FB-12C FLEECEBACK ADHERED

1



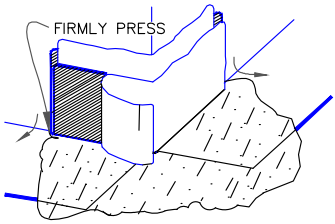
CLEAN THE DRY SPLICE AREA OF THE EPDM MEMBRANE BY SCRUBBING WITH EPDM PRIMER.

2



PRIOR TO PLACEMENT OF SURE-SEAL CORNER, PEEL OFF THE BLUE POLY RELEASE FILM AND HEAT THE FLASHING SIDE WITH A HEAT GUN. RE-APPLY THE POLY LOOSELY. FOLD THE FLASHING IN HALF.

3

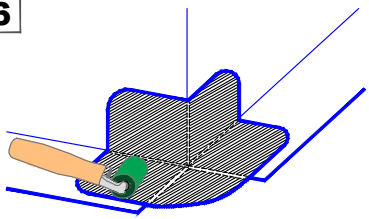


PLACE SURE-SEAL INSIDE/OUTSIDE CORNER AS SHOWN AND REMOVE RELEASE PAPER. PRESS FOLDED FLASHING TIGHTLY INTO ANGLE CHANGE AND FIRMLY PRESS FLASHING AGAINST THE VERTICAL SURFACE.

4

PLACE FOLDED FLASHING TIGHTLY INTO ANGLE CHANGE AND FIRMLY PRESS FLASHING ONTO THE DECK FLANGE BY PRESSING THE FLASHING AGAINST THE HORIZONTAL SURFACE.

6



ROLL WITH A TWO INCH WIDE ROLLER. PAY PARTICULAR ATTENTION TO THE STEP OFFS AND ANGLE CHANGE.

NOTES:

1. FOR PROJECTS WITH 25 AND 30-YEAR WARRANTIES OR WHEN USING 145-MIL MEMBRANE, REFER TO THERMOSET DETAIL U-15H FOR REQUIRED FLASHING ENHANCEMENTS.

FleeceBACK MEMBRANE
FAST ADHESIVE/AQUABASE
APPROVED SUBSTRATE
0 SEE NOTE(S)

EPDM PRESSURE-SENSITIVE OUTSIDE CORNER

For additional information, refer to Specifications

DETAIL NO.
FB-15B
FLEECEBACK ADHERED

Disclaimer:

Carlisle does not engage in the practice of engineering or architecture; Carlisle makes no representations as to the structural design or capabilities of the roof or its structural parts.

Carlisle makes no warranty of fitness for a particular purpose or merchantability and shall not be liable for incidental or consequential damages under any theory of law.

This manual represents the applicable information available at time of publication. Owners, specifiers and Carlisle Authorized Roofing Applicators should consult Carlisle or their Carlisle Manufacturer's Representative for any information, which has subsequently been made available. Review the appropriate Carlisle warranty for specific warranty coverage, terms, conditions and limitations.

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4 C's Spray Equipment Rental, Sales & Service - Hulk
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