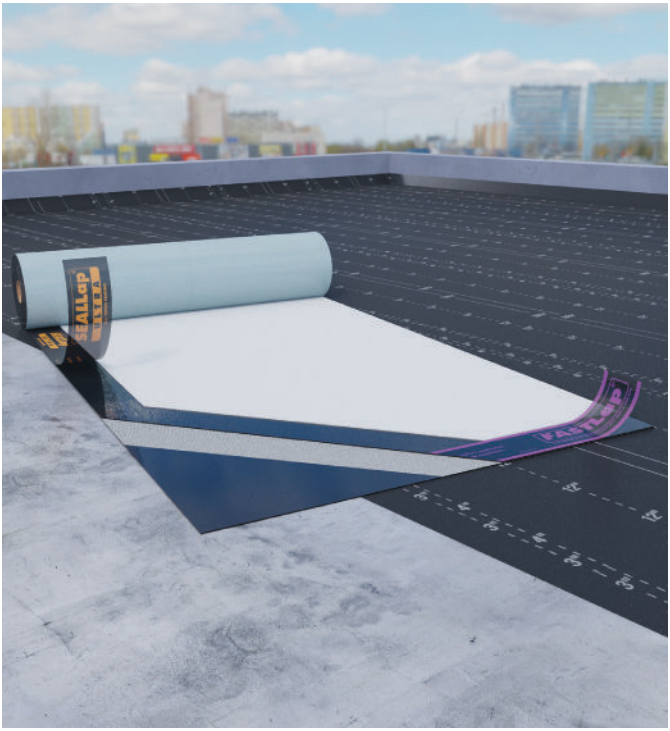
ADESO®
SELF-ADHERED TECHNOLOGY

INSTALLATION GUIDE

Self-Adhered Membranes for Low Slope Applications

POLYGLASS®
MAPEI GROUP

ADESO
SELF-ADHERED TECHNOLOGY



ADESO
SELF-ADHERED TECHNOLOGY

As a leader in the roofing industry, Polyglass products and systems provide years of proven performance. Our durable, multiply roof systems with ADESO® Self-Adhered Technology feature:

- Versatile roof systems for commercial and residential projects
- Granule free side laps and end laps for superior watertight sealing
- Cap sheet color options that complement most shingle roofs

For additional information, visit polyglass.us

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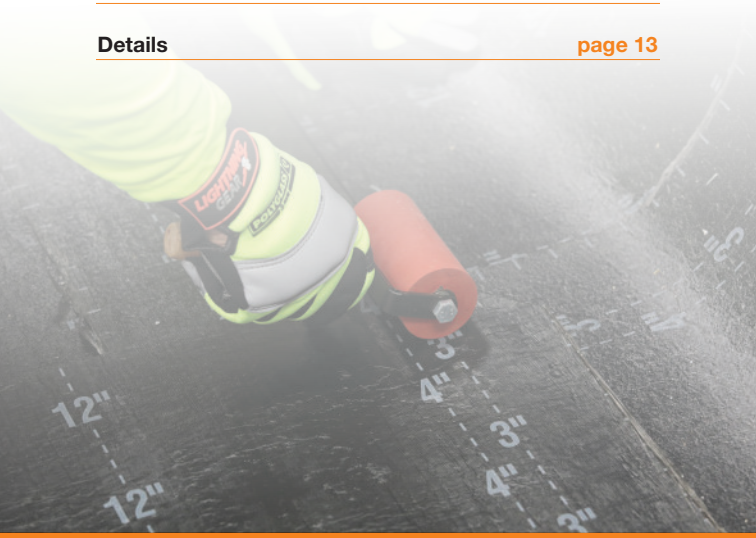


What is ADESO® Technology?

ADESO Technology revolutionized the modified bitumen industry by manufacturing dual-compound self-adhered (SA) membranes using a true APP or SBS formulation on the top weathering side and an aggressive self-adhered formulation on the bottom side of the reinforcement. ADESO Technology integrates patented features that enhance lap sealing and allows product design with a variety of customized surfaces. Polyglass versatile solutions deliver maximum roof design flexibility with a full range for project specifications.

Years of proven performance in the field, ADESO Self-Adhered membranes comprise the latest in asphalt adhesive technology as well as substantial, proven waterproofing compounds. When installed properly, ADESO products will provide a long lasting and durable roof covering.

Dual Compound

Combines a true APP or SBS compound top weathering surface with an aggressive self-adhesive compound on the bottom surface.

FASTLap®

Save time and labor with granule free end laps.

SEALLap® ULTRA

Instant side lap bond, tested stronger than all other application methods. This SA to SA bond provides a completely monolithic seal.

Multiple Surface Solutions

Provides solution to any roofing system need, allows a wide variety of surfacing options

Features & Benefits:

- Labor savings with fast and clean installation
- Safe, no open flame application; may reduce insurance costs
- Dried-in fast; superior and immediate water-tight protection upon installation
- Versatile roof systems for commercial and residential projects
- Long-term warranty protection
- Adheres to a variety of substrates – Polyglass approves ADESO base sheet installation direct to ISO, no primer required
- Polyester or fiberglass reinforced

6.3 billion square feet produced and counting!

Recognizing the need for a safer application method, Polyglass was the first to manufacture a proprietary self-adhesive compound in the US in the mid-1990's.

TOOLS & ACCESSORIES

Before you begin the installation of Polyglass ADESO Self-Adhered roof system, be sure to have the following tools available:

1. 3" - 4" wide hand rollers (Silicone and Metal)
2. 80 lb linoleum roller for pressing the membrane in place
3. Paint brush for application of primer
4. Trowel for applying adhesive
5. Caulk gun
6. Hand held hot air welding gun
7. Roofers knife with hooked blade
8. Soft soled shoes
9. Gloves

TOOLS & ACCESSORIES (cont.)

Accessories that you may use when installing the Polyglass ADESO Self-Adhered low-slope roof system include:

1. Polyglass PG 500 Modified Cement or PolyPlus® 50
2. Polyglass PG 100 Fast Drying Asphalt Primer
3. WB 3000 Fast-Drying, Water-Based Primer
4. Metal edge flashing
5. Fasteners (if applicable)

Basic Installation & Best Practices

STORAGE

When storing and handling Polyglass self-adhered membranes:

- Store rolls upright on pallets in dry ventilated indoor areas; do not
- store rolls on their sides
- Protect rolls from exposure to elements
- Stage the project as products are needed

BASIC INSTRUCTIONS:

- Low-Slope self-adhered roof systems are primarily designed for roofs at 2/12 pitch or less.
- When applying Polyglass ADESO Self-Adhered roof systems, ambient temperatures should be 40°F and rising. For temperatures between 25°F-60°F, use Polyglass Elastoflex SA V Polar Base® and Elastoflex SA P Polar Cap® – ADESO Self- Adhered membranes for cold weather application.
- Do not install when water in any form exists.
- All roof deck application areas must have positive drainage,continuous support, and be structurally sound to support all load requirements of the roofing system.
- Prior to the application, be sure to properly prepare the substrate.
- In re-roofing applications, be sure to remove existing materials and obsolete penetrations and repair any voids or imperfections in the substrate.

Acceptable Substrates

- Polyisocyanurate insulation standard facer
- DensDeck® Prime Roof Board or DuraGuard® Roof Board
- Securock® Gypsum-Fiber Reinforced Roof Board
- Primed concrete
- Plywood sheathing with bond breaker tape at all joints
- Polyglass Elastobase® Base Sheet
- Polyglass Elastoflex SA V Base Sheet
- Polyglass Elastoflex SA V PLUS Base Sheet

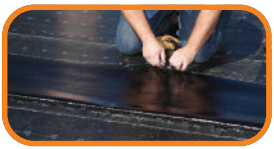
Ensure installation of self-adhered plies do not prevent or interfere with ventilation of the existing structure.

For more information, contact your Polyglass sales or technical representative.

Installing ADESO Self-Adhered Base Sheets

Prior to installation, allow the membranes to relax in the sun for a minimum of 15 minutes.

- Ambient temperatures should be 40°F and rising when installing Polyglass self-adhered base sheets. For temperatures between 25ºF-60ºF, use Polyglass Elastoflex SA V Polar Base® – ADESO Self-Adhered membranes for cold weather application.
- Do not install when water in any form exists.
- All roof deck application areas must have positive drainage, continuous support, and be structurally sound to support the dead load requirements of the roofing system.
- Prior to installing self-adhered cap sheets, be sure the surface is clean of dirt and debris.
- Start installation by cutting Elastoflex SA V base sheet to suitable lengths.
- Lay the membrane flat and align the membrane at the lowest edge of the roof
- Once Elastoflex SA V base sheet is in place, fold sheet in half to remove split release film at a 90 degree angle in a constant motion
- After both sides of release film are removed, position the next Elastoflex SA V membrane by overlapping seams of the top sheet selvage edge a minimum of 6"
- Press the membrane with firm and even pressure
- Cut a 45 degree angle at the top corner of sheet, and at all build-up of joints such as T-joints and press next membrane at seam
- Use hand roller at laps to ensure full adhesion
- Once Elastoflex SA V membrane is installed, be sure to run 80 lb roller over the roof surface to ensure full adhesion



Installing Metal Edging

When installing metal edging, prime with either Polyglass PG 100 or other asphaltic primer that meets ASTM D41, WB 3000 primer, PolyBrite® 745 or other commercially available water-based acrylic primer.

1. The roof flange of the edge metal should be 3" – 4" wide.
2. Install the roof flange of the edge metal over the base sheet strip-in at the lowest point on the roof. Nail the edge metal 4" on center in a staggered pattern.
3. Install Elastoflex SA V base sheet onto the edge metal leaving 1/2" of edge metal exposed at the eaves.

Installing ADESO Self-Adhered Cap Sheets

Polyglass self-adhered cap sheets are available in SBS and APP formulas in eleven colors. See page 10 for full list of ADESO Self-Adhered Membranes.

- Ambient temperatures should be 40°F and rising when installing Polyglass self-adhered cap sheets. For temperatures between 25ºF-60ºF, use Polyglass Elastoflex SA P Polar Cap® – ADESO Self-Adhered membranes for cold weather application.
- Do not install when water in any form exists.
- All roof deck application areas must have positive drainage, continuous support, and be structurally sound to support the dead load requirements of the roofing system.
- Prior to installing self-adhered cap sheets, be sure the surface is clean of dirt and debris.
- Cut the self-adhered cap sheet to manageable lengths for the conditions and allow the cut sheets to relax prior to installation.
- The cap sheet should be installed with the selvage edge away from the eaves edge.

Lay the membrane on the roof aligned with the eaves edge at the lowest point on the roof.

- Once self-adhered cap sheet is in place, fold sheet in half to remove split release film at a 90 degree angle in a constant motion firmly holding the half of the sheet that is in contact with the roof in place as the liner is removed.
- After both sides of release film are removed, position the next self-adhered cap sheet by overlapping seams of the top sheet selvage edge SEALLap ULTRA®.
- Do not remove the remaining release film covering the side lap selvage edge at this time
- The end of each roll of ADESO Self-Adhered cap sheet has FASTLap®; a granule-free end lap covered with a release film. Remove the FASTLap release film and press the overlapping sheet into place.
- In cooler weather, it is recommended to hot air weld or apply modified asphalt flashing cement at all end lap seams.
- Cut 45 degree angle at all build-up on seams and T-joints.

- Press each sheet into place with firm, even pressure.
- Roll edges and all lap seams firmly with a hand roller to ensure full adhesion.
- After each roll is completed, go over with an 80 pound roller with uniform pressure. Start at the center and work outward to remove trapped air.
- For the succeeding sheet, position it by completely overlapping the SEALLap ULTRA®, selvage edge of the previous sheet.
- Only remove enough of the SEALLap ULTRA®, selvage edge release film on the preceding roll to complete each section of the install.
- When self-adhered cap sheets are installed, be sure to run 80 lb roller over roof surface to ensure full adhesion.
- After 3 full thermal cycles, the roof system can provide a watertight, membrane system.

DO'S

Polyglass ADESO Self-Adhered roof systems:

1. Store rolls upright in packaging on pallets in dry ventilated indoor areas
2. Install material when ambient temperatures are 40°F degrees and rising. For temperatures between 25°F-60°F, use Polyglass Elastoflex SA V Polar Base® and Elastoflex SA P Polar Cap® – ADESO Self-Adhered membranes for cold weather application.
3. Only store and remove product from packaging on the same day of installation
4. Prime all concrete, masonry, metal or metallic surfaces
5. Prime all vertical surfaces
6. Apply to clean, dry, dust-free surfaces
7. Remove split release film at 90 degree angle
8. Roll all SEALLap ULTRA® and FASTLap® seams to ensure 100% adhesion
9. Reinforce all inside and outside corners
10. Lap granule to granule end laps at 6"
11. Heat weld or use SBS mastic at all laps and joints where adhesive compound laps onto granule surfaces.

DON'TS

Polyglass ADESO Self-Adhered roof systems:

12. Don't store material in direct sunlight
13. Don't install during inclement weather
14. Don't apply to dirty, wet or dusty substrate
15. Don't apply directly to shingles or similar roof coverings

Transition from a low- to steep-slope

To ensure a watertight transition between the low slope system and the sloped roof, the Elastoflex SA V base sheet should extend at least 12" beyond the steep slope transition. The Polyglass self-adhered cap sheet should extend up the steep slope part of the roof a minimum of 18" beyond the transition point.

Flashing of walls, roof terminations and penetrations can be done with the Polyglass self-adhered roof system.

Begin installation of steep slope underlayment beginning 2" above slope transition.

Refer to available illustrative details at polyglass.us.

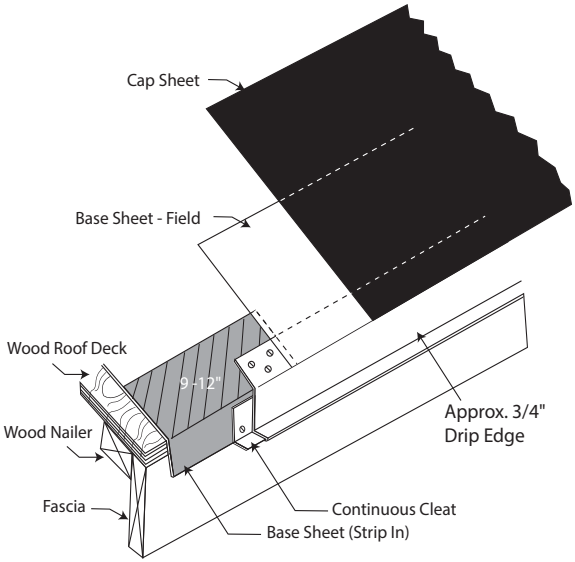
Products Raange

Polyglass ADESO Self-Adhered Membranes meet or exceed industry code approvals*:

Product Name	Modifier	ASTM
Base Sheets		
Elastobase SA	SBS	D1970/D4601
Elastoflex SA Base	SBS	D6164
Elastoflex SA V	SBS	D6163
Elastoflex SA V FR	SBS	D6163
Elastoflex SA V Polar Base®	SBS	D6164
Elastoflex SA V Plus	SBS	D6163
Elastoflex SA V Plus FR	SBS	D6163
Cap Sheets		
Polyflex SA P	APP	D6222
Polyflex SA P FR	APP	D6222
Polyfresko® G SA	APP	D6222
Polyfresko® G SA FR	APP	D6222
Elastoflex SA P	SBS	D6164
Elastoflex SA P FR	SBS	D6164
Elastoflex SA P Polar Cap®	SBS	D6164
Polyfresko® G SBS SA	SBS	D6164
Polyfresko® G SBS SA FR	SBS	D6164
Accessories		
Elastoflex SA V Flashing Strips	SBS	D1970/D6163/E2578

*See Product Data Sheets for product-specific approvals.

TYPICAL ROOF EDGE DETAIL



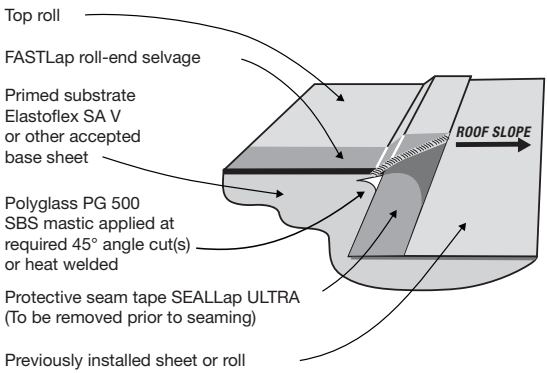
1. Elastoflex SA V starter strip cut to required width, adhered to deck. Ensure the surface is clean and dust free.

2. Prime deck when required or acceptable roof insulation attached to deck. Adhere Elastoflex SA V strip-in-piece to deck and over nailer below edge metal.

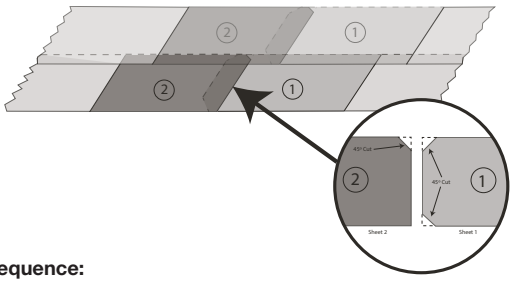
3. Drip edge fastened in accordance with ANSI-SPRI ES-1 standards. Stagger roof nails at 4".

4. Apply Elastoflex SA V membrane to entire roof area and onto the metal drip edge keeping 1/2" back from down-turn in metal. SA cap sheet installed over Elastoflex SA V and onto primed metal.

SEAMING DETAIL FOR SELF-ADHERED CAP SHEET



SEAM INTERSECTION TREATMENT - FIELD (REQUIRED T-JOINT)



Sequence:

A. Sheet 1 is applied to substrate.
B. Triangle piece of approx. 45° is cut off at the bottom corner of sheet 2 (usually at the FASTLap® end of the sheet) and at the top corner of sheet 3 (the side lap selvage edge SEALLap ULTRA®).
C. Sheet 2 is aligned and applied to the substrate.
D. A bead of PolyPlus 50 or Polyglass PG 500 SBS mastic is applied at the angle cuts (see inset) or heat weld.
E. Sheet 3 is applied.
F. Top sheet is carefully rolled parallel to both sides of the sealant not on the sealant.

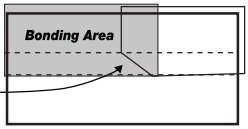
Notes:

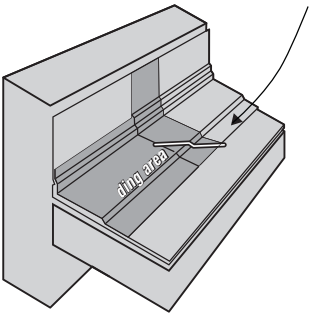
The angle cut and seam sealant is to be applied at all self-adhered sheet overlaps (base & cap).

SEAM INTERSECTION TREATMENT - FLASHINGS

1

45° angle cut
at sheet corners &
PolyPlus 50 or PG 500
or heat weld





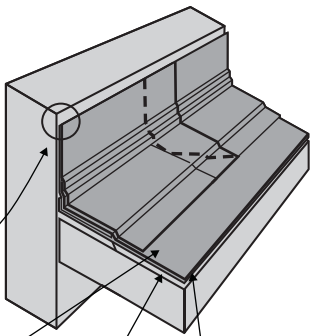
2

Provide POLYGLASS approved detail termination, as required by specification for wall treatment

Self-Adhered cap sheet

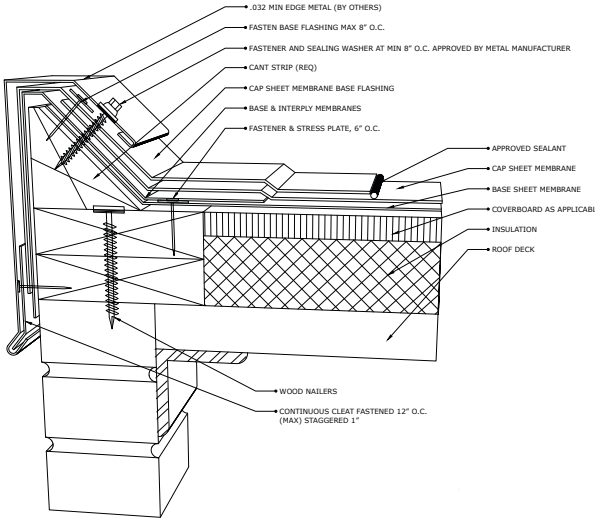
Self-Adhered base sheet

Approved substrate



Refer To Notes On Page 11

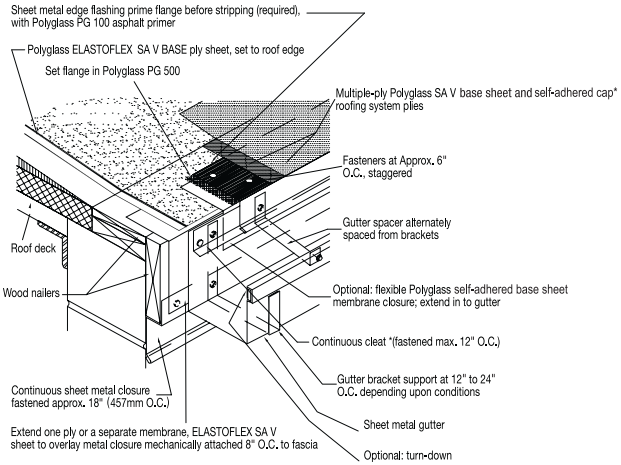
SELF-ADHERED EDGE METAL (TYPICAL)



Notes:

1. Metal edge flashing, wood blocking and attachments to comply with ANSI/SPRI ES-1.
2. Heat fused membrane applications, set metal flashing into softened membrane.

SELF-ADHERED EDGE AND GUTTER

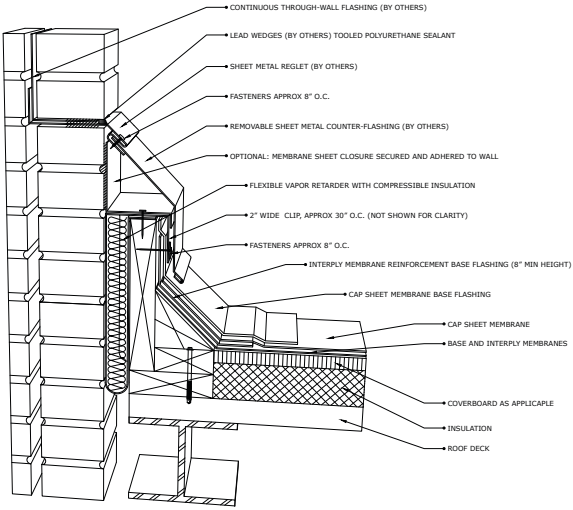


Notes:

1. Attach wood nailer and edge metal to wall/deck in accordance with ANSI/SPRI ES-1.
2. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
3. This detail should be used only where the deck is supported by the outside wall.
4. Refer to SMACNA recommendations and details regarding metal thickness and cleat requirements.
5. Membrane end laps must be 6" minimum and fully adhered to all membrane in all locations where FASTLap is not present.

*Continuous cleat is recommended to be at least one gauge heavier than edge flashing metal.

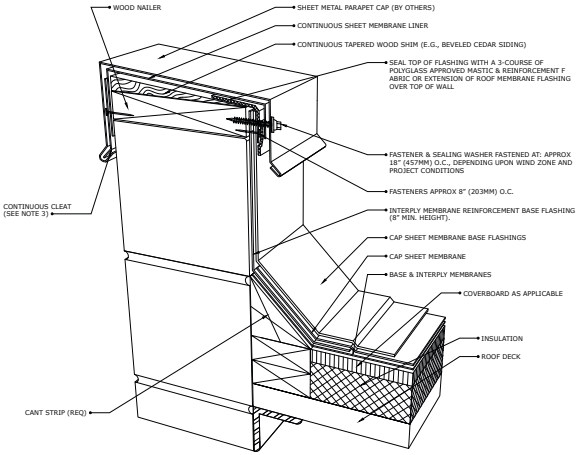
SELF-ADHERED BASE FLASHING FOR NON-WALL SUPPORTED DECK



Notes:

1. Attach wood nailer to wall/deck in accordance with FMRC guidelines, as per section 1-28, regarding windloads to roof systems and deck securement.
2. Wood blocking may be slotted for venting or wet-fill decks or other applicable constructions.
3. Polyglass recommends all roof edge terminations be designed and installed in accordance with ANSI/SPRI ES-1.

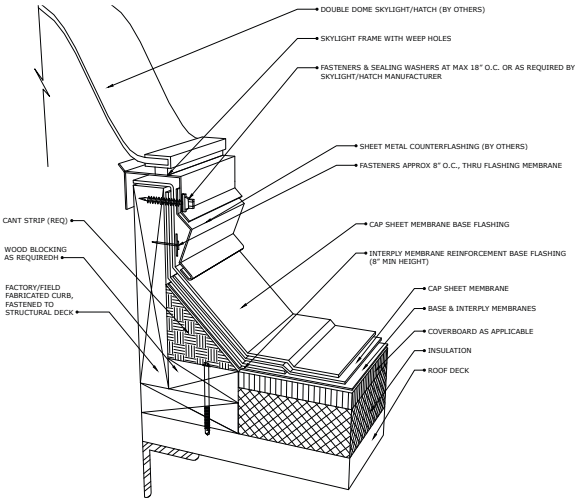
SELF-ADHERED PARAPET WALL BASE FLASHING WITH METAL COPING (TYPICAL) WALL SUPPORTED DECK



Notes:

1. This detail should only be used when the roof deck is supported by the wall.
2. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
3. Refer to SMACNA recommendations and details regarding metal thickness and cleat requirements.
4. Polyglass recommends all roof edge terminations be designed and installed in accordance with ANSI/SPRI ES-1.

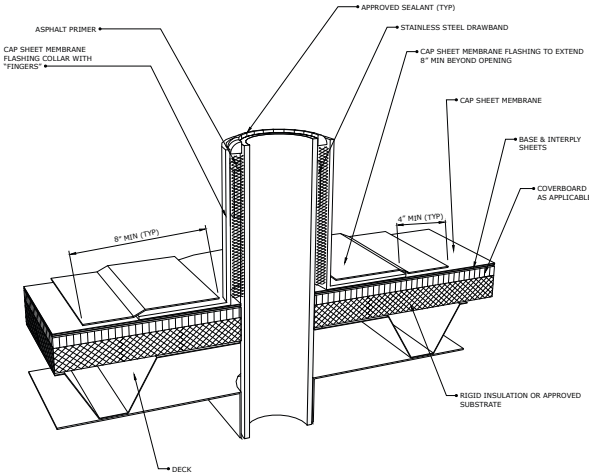
SELF-ADHERED SKYLIGHT / ROOF HATCH DETAIL (TYPICAL)



Notes:

1. Attach wood nailer to wall/deck in accordance with FMRC guidelines, as per section 1-28, regarding windloads to roof systems and deck securement.
2. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
3. Extension of Polyglass field plies above head of cant, required. (Not shown for clarity.)
4. Refer to SMACNA recommendations and details regarding metal thickness and cleat requirements.

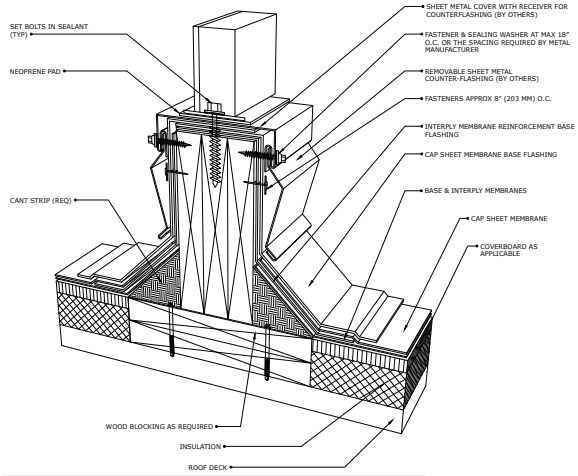
SELF-ADHERED VENT PIPE FLASHING (TYPICAL)



Notes:

1. Detail only applicable for membrane field wrap applications.

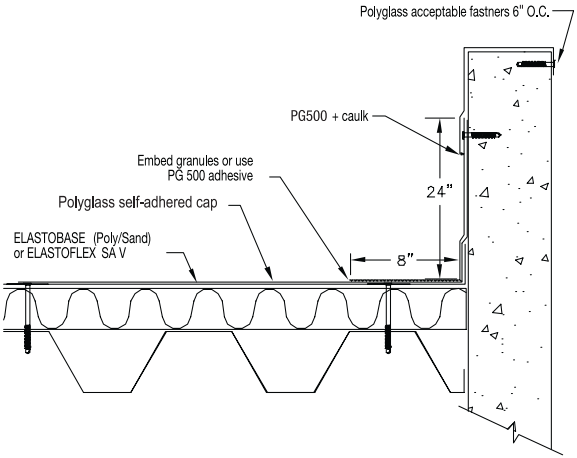
SELF-ADHERED LIGHT/MEDIUM WEIGHT EQUIPMENT CURB



Notes:

1. Attach wood nailer to wall/deck in accordance with FMRC guidelines, as per section 1-28, regarding windloads to roof systems and deck securement.
2. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
3. Extension of Polyglass field plies above head of cant, required. (Not shown for clarity.)
4. Refer to SMACNA recommendations and details regarding metal thickness and cleat requirements.

SELF-ADHERED CAP SHEET VERTICAL WALL DETAIL



Notes:

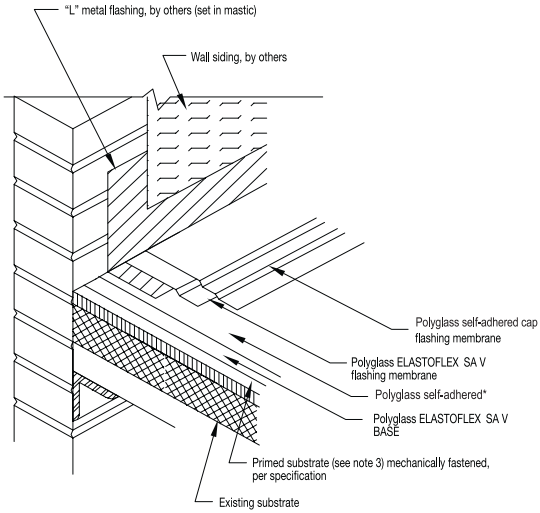
1. Intermittent fastening is to be at 6" O.C.
2. Maximum wall height without intermittent fastening is 24" unless accepted in writing by Polyglass Technical Services, prior to application.
3. All areas where salvage edge is not present shall have granules embedded by utilizing heat, prior to overlapping.

An alternative application is to use PolyPlus 35 cold adhesive.

SELF-ADHERED BASE FLASHING PARAPET WALL - 2-PLY DETAIL

Notes:

Flashing membranes to be set in bed of PG 500 or approved equal, modified asphalt adhesive (trowel grade)



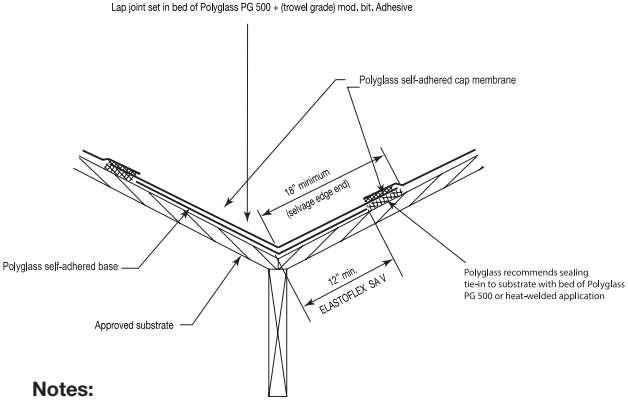
*Polyglass self-adhered membranes are available in APP and SBS formulations for both base and cap sheets.

Notes:

1. Refer to SMACNA recommendations and details regarding metal thickness and cleat requirements.
2. Membrane end laps must be 6" minimum and fully adhered to all membrane in all locations where FASTLap is not present.
3. Polyglass requires all metal surfaces to be cleaned and primed with Polyglass PG 100 asphalt primer or an ASTM D41 equal or WB 3000 Water-Based Primer.

SELF-ADHERED VALLEY FLASHING DETAIL

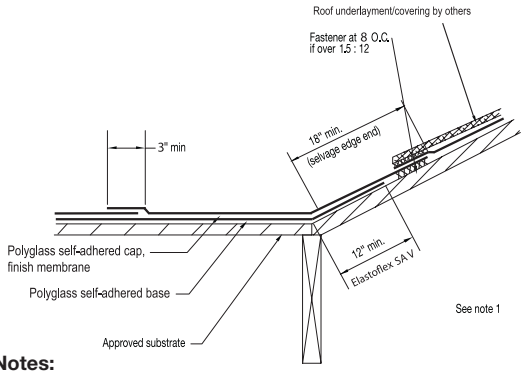
JOINTS IN VALLEY



Notes:

1. Valley to be lined with Elastoflex SA base sheet and ADESO Self-Adhered cap sheets to run parallel through the valley.
2. All laps in valley or other laps of which occur over granulated materials, are to be set in bed of Polyglass PG 500 or approved trowel grade, modified asphalt adhesive.
3. Valleys can be lined using the Polyglass membrane roll or metal flashing by others, consult Polyglass Technical Services at (866) 794-9659 for such applications.

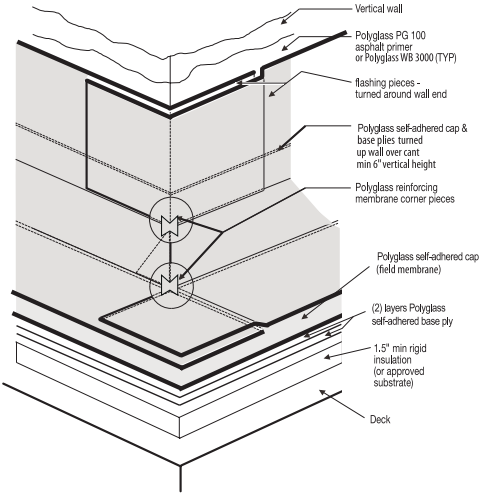
SELF-ADHERED TIE IN JOINT FLASHING DETAIL



Notes:

1. ADESO Polyflex SA P or Elastoflex SA P membrane to tie-in under steep-slope roofing system. Polyglass recommends sealing tie-in to substrate with bed of Polyglass PG 500 or heat-welded application.

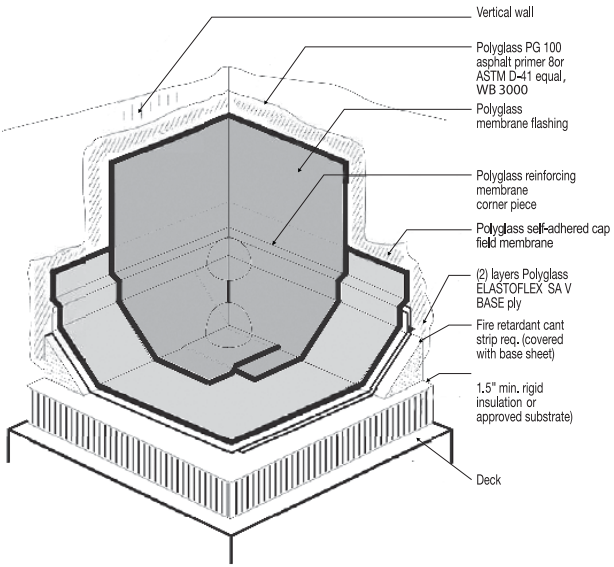
SELF-ADHERED OUTSIDE CORNER FLASHING DETAIL



Notes:

1. Membrane end laps must be a minimum 6" and fully adhered at all membrane to membrane seams, and 3" minimum where overlapped and adhered to a primed metal surface.

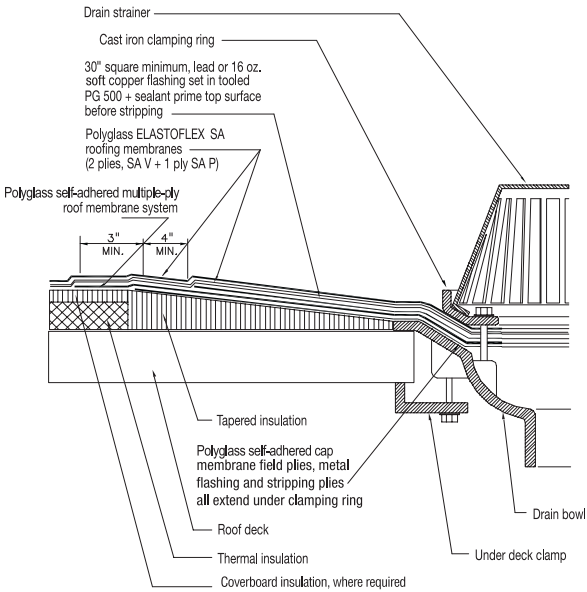
SELF-ADHERED INSIDE CORNER FLASHING DETAIL



Notes:

1. Membrane end laps must be a minimum 6" and fully adhered at all membrane to membrane seams and a minimum 3" where overlapped and adhered to primed metal surface.

SELF-ADHERED ROOF DRAIN DETAIL - ALTERNATE



Notes:

1. Attached wood nailer to wall/deck in accordance with ANSI/SPRI ES-1.
2. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
3. This detail should used only where the deck is supported by the outside wall.
4. Refer to SMACNA recommendations and detail regarding metal thickness and cleat requirements.
5. Membrane end laps must be 6" minimum and fully adhered to all membrane in all locations where FASTLap® is not present.

04/2022- Apple 1,500

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