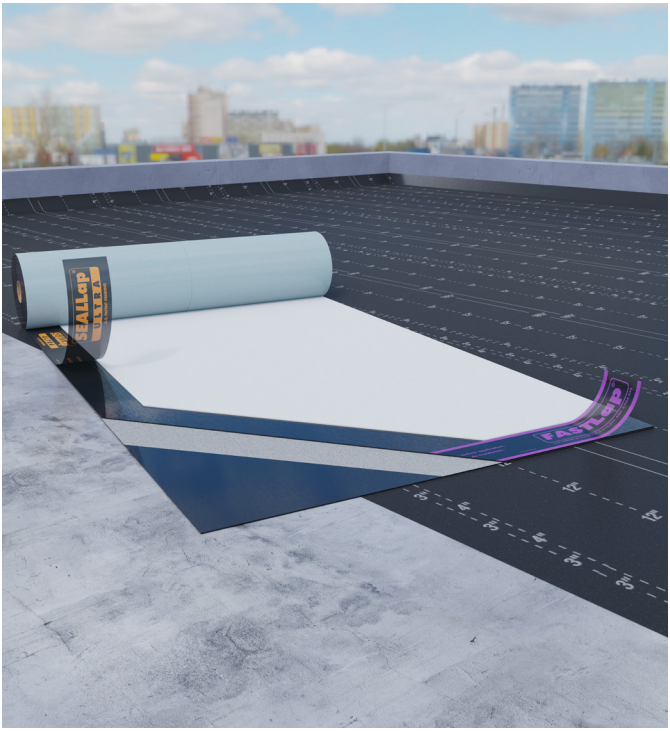
ADESO®
SELF-ADHERED TECHNOLOGY

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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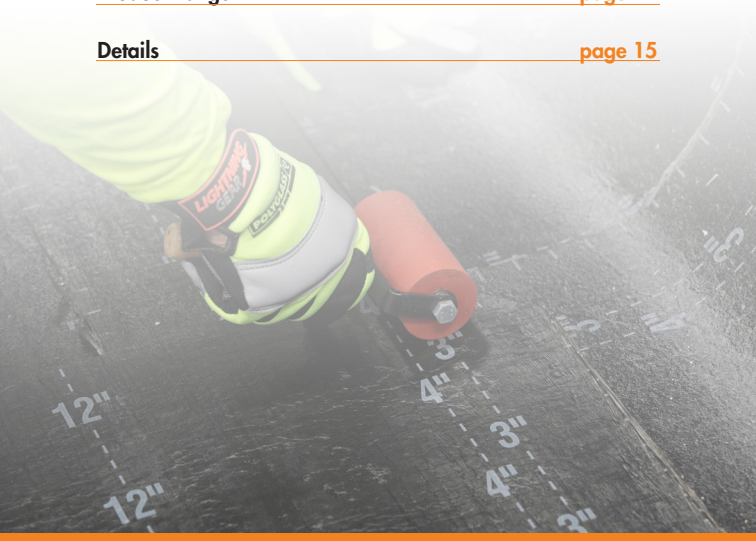


What is ADESO® Technology?

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:

- 3" - 4" wide hand rollers (Silicone and Metal)
- 75 lb linoleum roller for pressing the membrane in place
- Paint brush for application of primer
- Trowel for applying adhesive
- Caulk gun
- Hand held hot air welding gun
- Roofers knife with hooked blade
- Soft soled shoes
- 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. Polyglass PolyBrite® 745 Water-Based Primer / Adhesive
5. Metal edge flashing
6. Fasteners (if applicable)

Basic Installation & Best Practices

Material Handling And Storage

- Ensure all materials are stored in a manner which prevents them being exposed to moisture.
- Materials should be examined when received. Damaged or unlabeled materials should not be used.
- Materials must be stored in a dry area with adequate ventilation. Care should be taken to only remove stored materials that can be installed in a reasonable amount of time. All excess materials must be kept in storage.
- Rolls shall be stored in an upright position with selvage edge up on pallets.
- Prior to beginning installation, remove all roll wrapping tape by cutting carefully and not ripping/damaging the material.
- Polyglass does allow double stacking of pallets of membranes with the use of slip boards. Please see the Technical Bulletin online at www.polyglass.us for Rotation and Storage of Roll Products.
- Polyglass self-adhered membranes to be stored at room temperature whenever possible and in an upright position on a flat surface. Avoid storing out of packaging for prolonged periods, especially above 88°F (31°C), in direct sunlight. Do not take the roll out of the packaging until it is ready for application. Refer to technical bulletins found at www.polyglass.us for more instruction on storage and handling.
- Polyglass ADESO® membranes shall remain stored in boxes or wraps until time of application.
- Polyglass Cold Applied Cements, Adhesives and Mastics shelf life is typically 18 months, if stored in original unopened containers – between 40°F–100°F (4°C–38°C). All containers should be sealed when not in use.

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.
- Back-nailing in seams are required for steeper slopes.

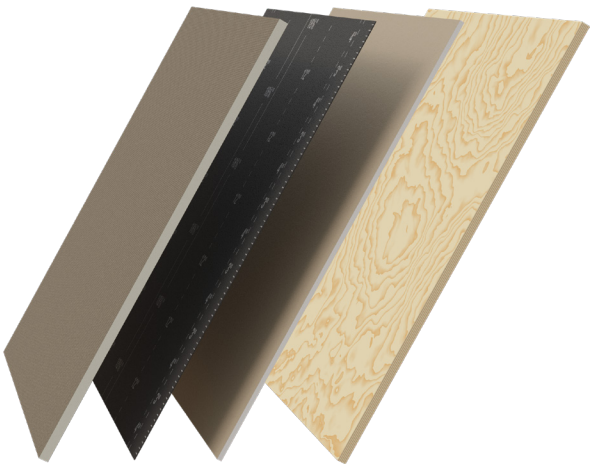
Acceptable Substrates

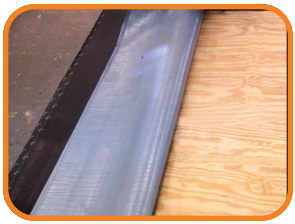
- Polyisocyanurate insulation standard facer
- DensDeck® Prime Roof Board or DuraGuard® Roof Board
- Securock® Gypsum-Fiber Reinforced Roof Board
- Primed concrete
- Plywood sheathing with bond breaker at all unsupported joints
- Polyglass Elastobase® Base Sheet
- Polyglass Elastoflex SA V Base Sheet
- Polyglass Elastoflex SA V PLUS Base Sheet
- EPS (Expanded Poly Styrene)
- Polyglass Elastobase P
- Polyglass Elastoflex SA Base
- Polyglass Elastoflex VP Ultra
- Polyglass Elastoflex SA Polar Base*
- Polyglass Elastoflex SA V Polar Base*
- Polyboard E
- Polyboard W

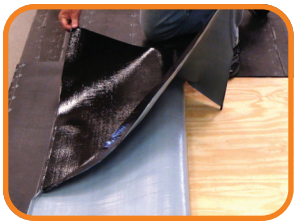
Ensure installation of self-adhered plies do not prevent or interfere with ventilation of the existing structure.

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

For use in temperatures between 25°F-60°F







Installing ADESO Self-Adhered Base Sheets

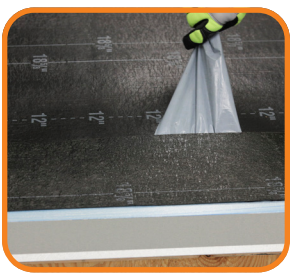
Prior to installation, allow the membranes to relax for a minimum of 15 minutes.

- Ambient temperatures should be 40°F and rising when installing Polyglass self-adhered base sheets. For temperatures between 25°F-60°F, use Polyglass Elastoflex SA V Polar Base® – ADESO Self-Adhered membranes for cold weather application.
- Start installation by cutting Polyglass Self-Adhered base sheet to suitable lengths.
- Lay the membrane flat and align the membrane at the lowest edge of the roof
- Once Polyglass Self-Adhered 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 Polyglass Self-Adhered 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 (Reference detail enclosed in guide)
- Use hand roller at laps to ensure full adhesion
- Once the Polyglass Self-Adhered membrane is installed, be sure to run 75lb roller over the roof surface to ensure full adhesion

Installing Metal Edging

When installing metal edging, prime with either Polyglass PG 100 or approved alternate D-41 primer that meets ASTM D41, Polyglass WB 3000 primer, Polyglass PolyBrite® 745 or other commercially available water-based acrylic primer.

- The roof flange of the edge metal should be 3" – 4" wide.
- 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.
- Install Polyglass Self-Adhered base sheet onto the edge metal leaving 1/2" of edge metal exposed at the eaves.



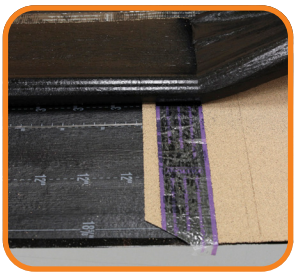
Installing ADESO Self-Adhered Cap Sheets

Polyglass self-adhered cap sheets are available in SBS and APP formulas in eleven colors. See page 14 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 25°F-60°F, use Polyglass Elastoflex SA P Polar Cap® – ADESO Self-Adhered membranes for cold weather application.

- 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 Polyglass PolyPlus® 50 or PG 500 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 a 75 lb 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 75lb 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:

- Store rolls upright in packaging on pallets in dry ventilated indoor areas
- 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.
- Only store and remove product from packaging on the same day of installation
- Prime all concrete, masonry, metal or metallic surfaces
- Prime all vertical surfaces
- Apply to clean, dry, dust-free surfaces
- Remove split release film at 90 degree angle
- Roll all SEALLap ULTRA® and FASTLap® seams to ensure 100% adhesion
- Reinforce all inside and outside corners where applicable
- Lap granule to granule end laps at 6"
- Heat weld or use Polyglass PolyPlus® 50 or PG 500 at all laps and joints where adhesive compound laps onto granule surfaces.
- Prime all substrates in a recover application, as roofing substrate may not be free of all dirt and debris

DON'TS
Polyglass ADESO Self-Adhered roof systems:

- Don't store material in direct sunlight
- Don't install during inclement weather
- Don't apply to dirty, wet or dusty substrate
- Don't apply directly to shingles or similar roof coverings
- Do not drop rolls when ambient temperature is below 40 degrees. Rolls may crack due to cold compound

Transition from a low- to steep-slope

To ensure a watertight transition between the low slope system and the sloped roof, the Polyglass Self-Adhered 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. Reference Polyglass wall flashing details found online at polyglass.us

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

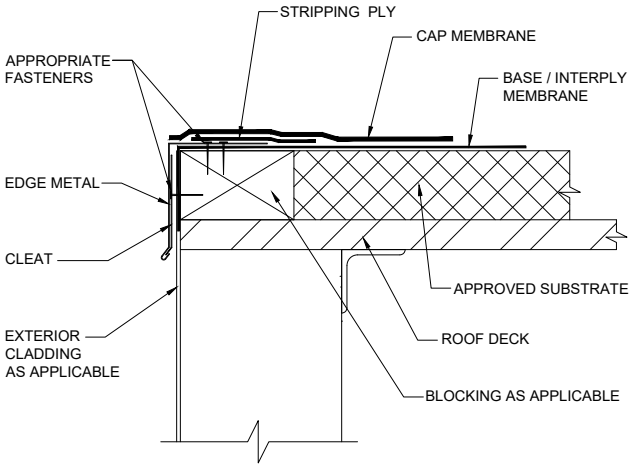
Products Range

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.

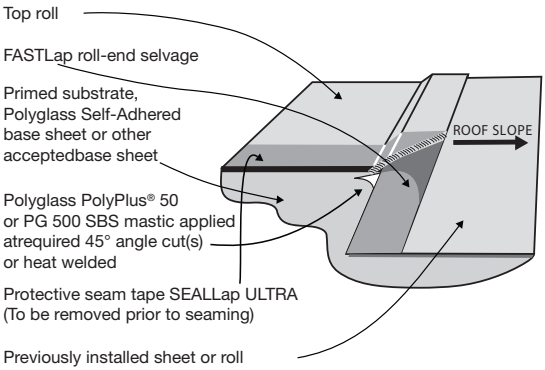
EDGE METAL DETAIL (TYPICAL) PG-LS-EDGE-01



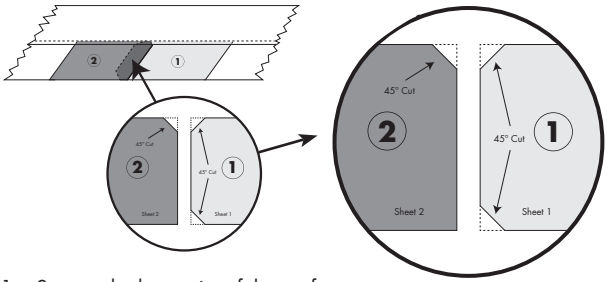
Notes:

1. Metal Edge Flashing, Wood Blockings and Attachments shall comply with ANSI/SPRI ES-1
2. Refer to SMACNA recommendations and details regarding metal thickness and cleat requirements. Continuous cleats are recommended at all edges and coping flashings, cleats to be at least one gauge heavier than the edge/coping metal.
3. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
4. For heat fused membrane applications, set metal flashing onto heated softened membrane.
5. Membrane end laps to be a minimum 6" and fully adhered at all membrane to membrane seams.
6. Membrane laps at flanged metal to be 3" minimum and fully bonded to primed metal surface.
7. Use only when roof deck is support by the wall.
8. For Self-Adhered Membranes, in areas prone

SEAMING DETAIL FOR SELF-ADHERED CAP SHEET



Seam Intersection Treatment - Field (Required T-Joint)



1. Start at the low point of the roof.
2. Unroll the material and allow to relax.
3. Start by removing the first 18–24" of release film.
4. Press the membrane into place with firm and even pressure. Roll the edges with a silicone hand roller to ensure complete adhesion.
5. Gradually remove the remaining release film applying pressure from the center to the edges as you go.
6. Position successive rolls using the 5" FASTLap at the endlap and 3" SEALLap ULTRA granule free side lap. Ensure a watertight seal.
7. After installation of the entire roof surface, roll with an 75 lbs.# split-face linoleum roller. Take care on sloped roofs by securing the roller and applicator with the appropriate safety equipment

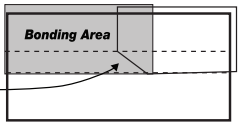
Notes:

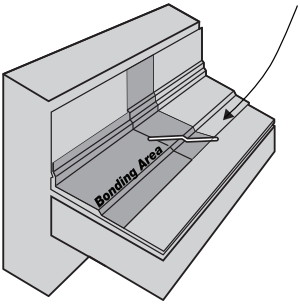
Details and flashing may be installed with a hot air welder or with PG 500 Roof Cement or PolyPlus 50 Premium Modified Wet/Dry Cement. Refer to manufacturer's published details for proper design and installation of detail work.

SEAM INTERSECTION TREATMENT - FLASHINGS

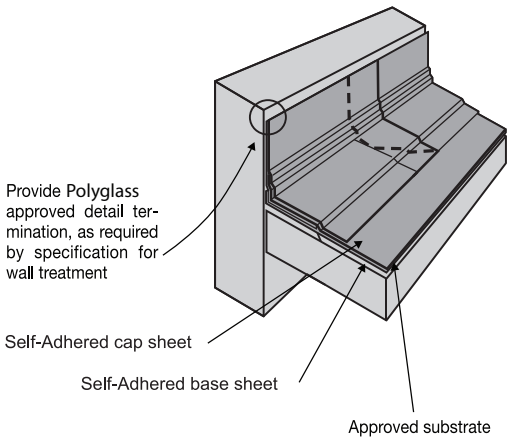
STEP 1

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



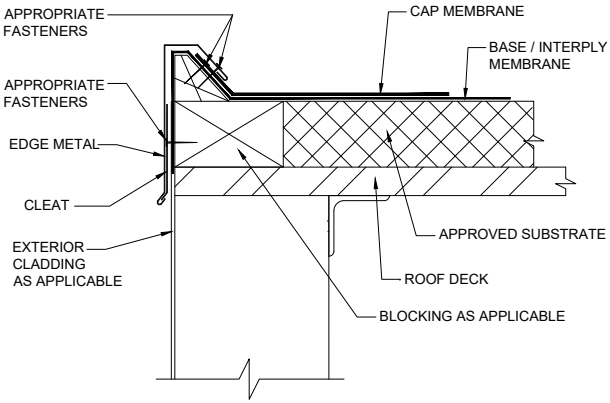


STEP 2



Refer To Notes On Page 11

RAISED EDGE METAL DETAIL (TYPICAL)
PG-LS-EDGE-02



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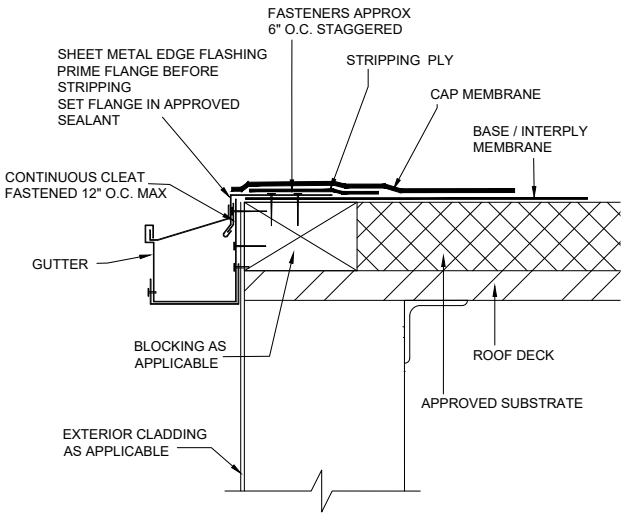
2. Refer to SMACNA recommendations and details regarding metal thickness and cleat requirements. Continuous cleats are recommended at all edges and coping flashings, cleats to be at least one gauge heavier than the edge/coping metal.
3. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
4. For heat fused membrane applications, set metal flashing onto heated softened membrane.
5. Membrane end laps to be a minimum 6" and fully adhered at all membrane to membrane seams.
6. Membrane laps at flanged metal to be 3" minimum and fully bonded to primed metal surface.
7. Use only when roof deck is support by the wall.

EDGE METAL DETAIL WITH GUTTER (TYPICAL)
PG-LS-EDGE-03



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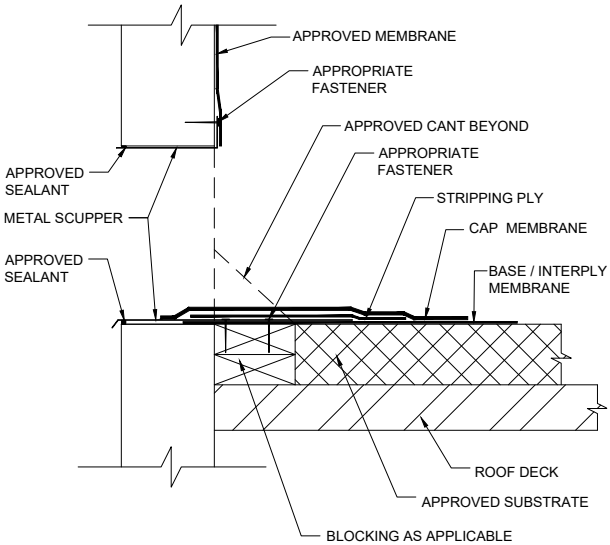
8. For Self-Adhered Membranes, in areas prone to freezing conditions, membrane shall be heat welded or sealed with an approved sealant at 90° bend of edge metal.
9. Gutter bracket as required.

THROUGH WALL SCUPPER DETAIL (TYPICAL)
PG-LS-SCUP-01



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4. For heat fused membrane applications, set metal flashing onto heated softened membrane.
5. Extension of field base/plies 1" min above top of cant, required (not shown for clarity).
6. Membrane end laps to be a minimum 6" and fully adhered at all membrane to membrane seams.
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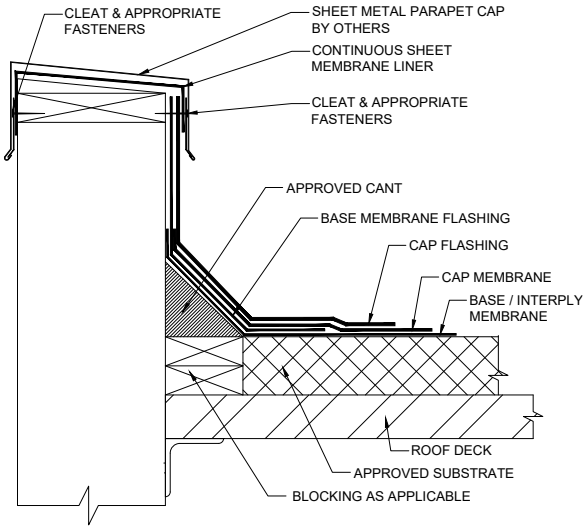
WALL TO ROOF FLASHING WITH METAL COPING (TYPICAL) PG-LS-WALL-02



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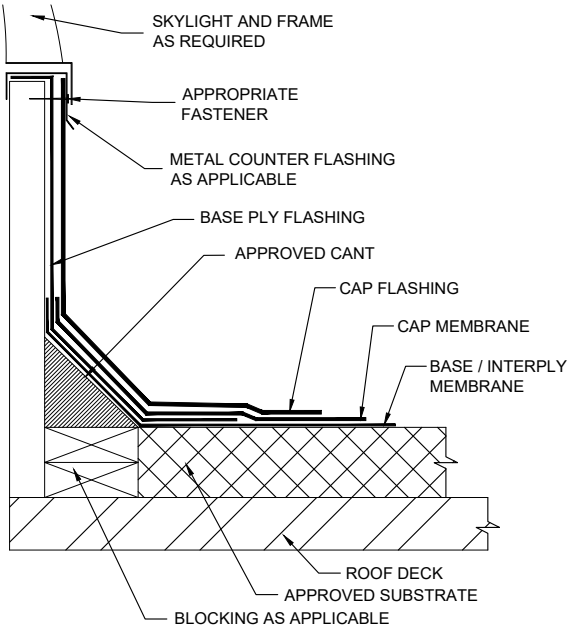
CURB DETAIL WITH SKYLIGHT (TYPICAL)
PG-LS-CURB-03



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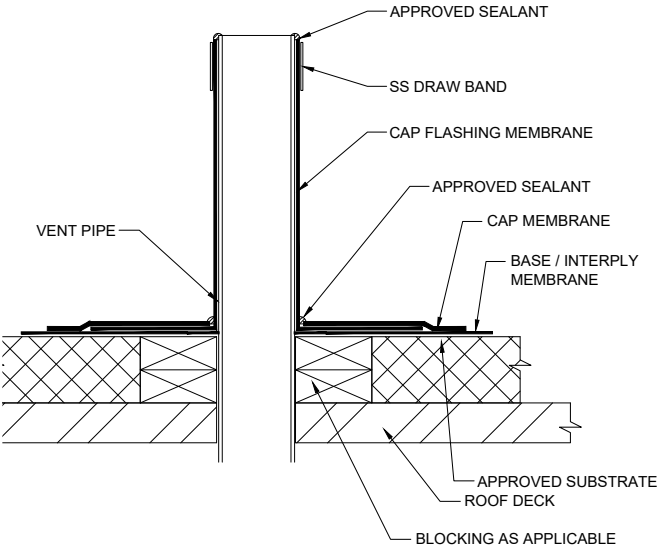
VENT PIPE FLASHING WITH MEMBRANE SLEEVE DETAIL (TYPICAL) PG-LS-PEN-01



Notes:

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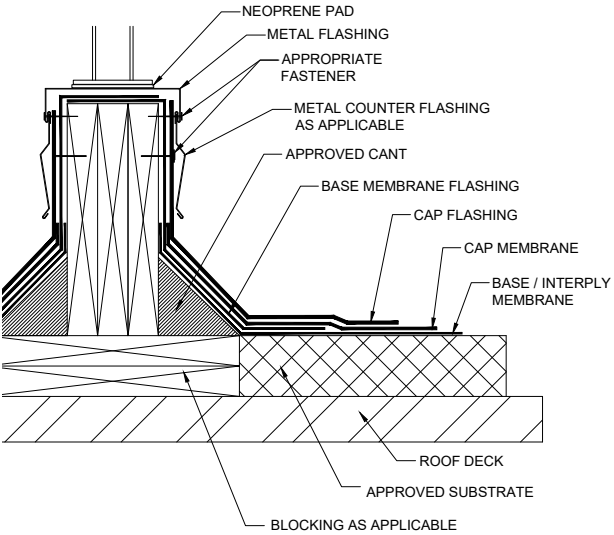
EQUIPMENT CURB DETAIL (TYPICAL)
PG-LS-CURB-02



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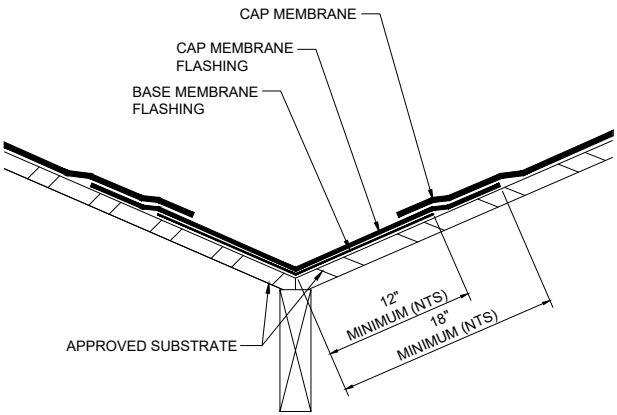
5. Extension of field base/plies 1" min above top of cant, required (not shown for clarity).
6. Membrane end laps to be a minimum 6" and fully adhered at all membrane to membrane seams.
7. Membrane laps at flanged metal to be 3" minimum and fully bonded to primed metal surface.
8. Use only when roof deck is support by the wall.

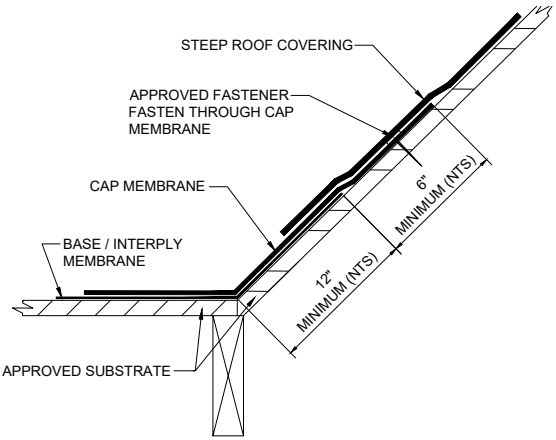
VALLEY FLASHING DETAIL (TYPICAL)
PG-SS-VLY-01



Notes:

1. Metal Edge Flashing, Wood Blockings and Attachments shall comply with ANSI/SPRI ES-1
2. Refer to SMACNA recommendations and details regarding metal thickness and cleat requirements. Continuous cleats are
3. Recommended at all edges and coping flashings, cleats to be at least one gauge heavier than the edge/coping metal. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
4. For heat fused membrane applications, set metal flashing onto heated softened membrane.
5. Extension of field base/plies 1" min above top of cant, required (not shown for clarity).
6. Membrane end laps to be a minimum 6" and fully adhered at all membrane to membrane seams.
7. Membrane laps at flanged metal to be 3" minimum

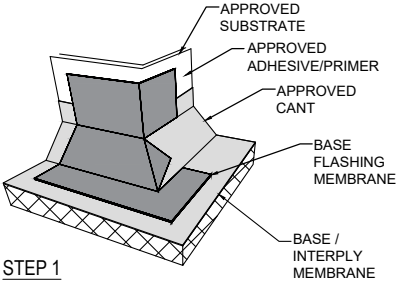
STEEP SLOPE TO LOW SLOPE TRANSITION DETAIL (TYPICAL) PG-SS-VLY-02



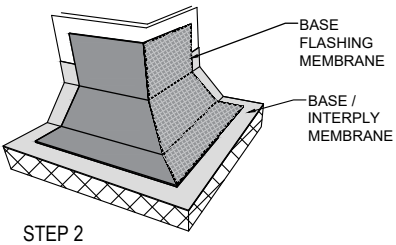
Notes:

1. Metal Edge Flashing, Wood Blockings and Attachments shall comply with ANSI/SPRI ES-1
2. Refer to SMACNA recommendations and details regarding metal thickness and cleat requirements. Continuous cleats are recommended at all edges and coping flashings, cleats to be at least one gauge heavier than the edge/coping metal.
3. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
4. For heat fused membrane applications, set metal flashing onto heated softened membrane.
5. Extension of field base/plies 1" min above top of cant, required (not shown for clarity).
6. Membrane end laps to be a minimum 6" and fully adhered at all membrane to membrane seams.
7. Membrane laps at flanged metal to be 3" minimum and fully bonded to primed metal surface.
8. Use only when roof deck is support by the wall.

OUTSIDE CORNER FLASHING DETAIL (TYPICAL)
PG-LS-WALL-03



STEP 1

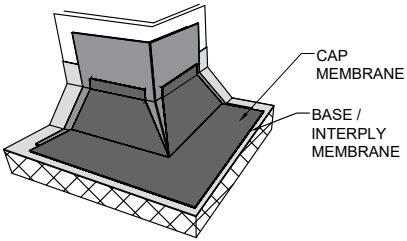


STEP 2

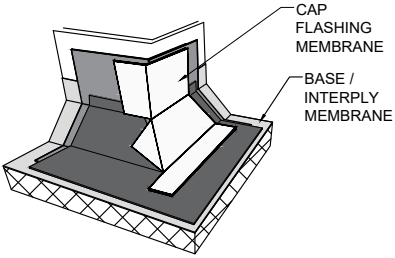
Notes:

1. For heat fused membrane applications, set metal flashing onto heated softened membrane.
2. Extension of field base/plies 1" min above top of cant, required (not shown for clarity).

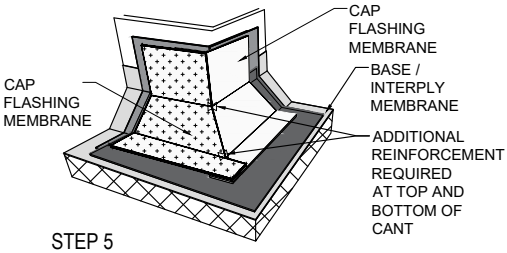
OUTSIDE CORNER FLASHING DETAIL (TYPICAL)
PG-LS-WALL-03 (CONT.)



STEP 3



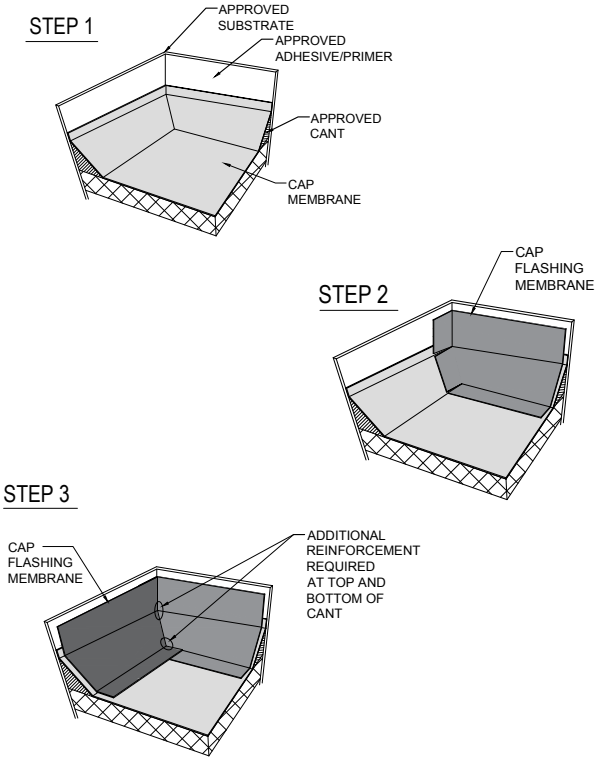
STEP 4



STEP 5

3. Membrane end laps to be a minimum 6" and fully adhered at all membrane to membrane seams.
4. Membrane laps at flanged metal to be 3" minimum and fully bonded to primed metal surface.

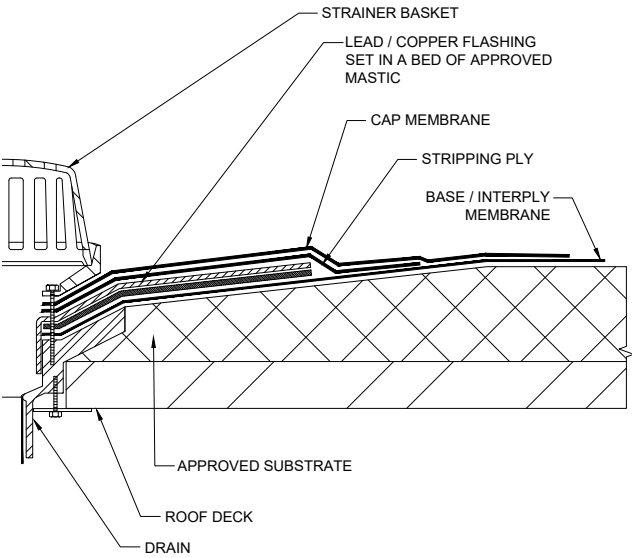
INSIDE CORNER FLASHING DETAIL (TYPICAL)
PG-LS-WALL-04



Notes:

1. For heat fused membrane applications, set metal flashing onto heated softened membrane.
2. Extension of field base/plies 1" min above top of cant, required (not shown for clarity).
3. Membrane end laps to be a minimum 6" and fully adhered at all membrane to membrane seams.
4. Membrane laps at flanged metal to be 3" minimum and fully bonded to primed metal surface.

ROOF DRAIN DETAIL (TYPICAL) PG-LS-DRN-01



Notes:

1. Wood blocking may be slotted for venting of wet-fill decks or other applicable constructions.
2. Wood blocking may be required at drain, depending on insulation thickness and type (not shown for clarity).
3. For heat fused membrane applications, set metal flashing onto heated softened membrane.
4. Membrane end laps to be a minimum 6" and fully adhered at all membrane to membrane seams.
5. Drain Installation and re-equipment by others.

PROJECT NEEDS AND CHALLENGES

This project called for a 20,000-square-foot new roof installation on a new construction climate-controlled storage facility on Martha's Vineyard. Since the facility was to be used for the storage of residents' valuables during the off-seasons when they were not on the island, the roof had to have flawless waterproofing and be able to withstand the occasional hurricanes and Nor'Easters that sometimes affect the area, especially in the fall and winter. Additionally, since the roof was being installed in November with shortened days and the possibility of inclement weather, so the team needed a quick-apply base layer to provide immediate waterproofing protection while construction continued.

Project type Commercial

Application type Self-Adhered

Square Footage 20,000

State/Region Massachusetts, USA

Year 2021

Substrate Tapered ISO

05/2023- Apple 2,000

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