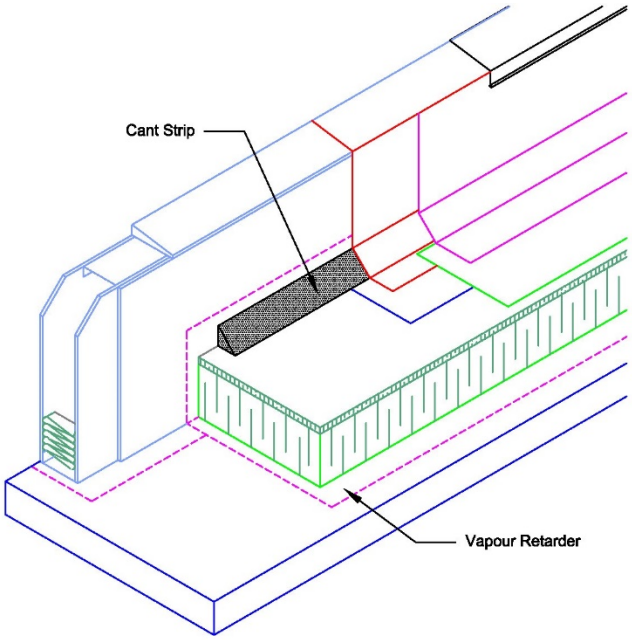
7. MB - SECTION 7 – MEMBRANE FLASHING

7.1. General

7.1.1. To ensure protection against water entry into a newly installed roofing system, membrane flashing shall be installed at all membrane terminations as the application of the membrane progresses to ensure the roof is water tight at the end of the day.

7.1.2. The use of cant strips at roof junctions is optional for modified bituminous membrane systems.



Modified Bituminous Cant Strip Detail

7.1.3. The membrane flashing shall be uniformly supported by and secured to an acceptable, solid substrate. Acceptable substrates consist of minimum 12.7mm (1/2”) thick plywood, dimensional lumber, smooth concrete, smooth surfaced concrete block or masonry and minimum 22-gauge flat sheet metal.[92]

7.1.4. A minimum 6.4mm (1/4”) factory-coated glass faced gypsum roof board or 6.4mm (1/4”) cement board are acceptable substrates for the application of self-adhesive SBS modified bituminous membrane flashing when a minimum 12.7mm (1/2”) thick wood sheathing is provided as a nailable support. Factory-coated glass faced gypsum roof board or cement board shall be uniformly fastened into the wood sheathing and/or parapet wall studs. Thickness subject to approval from the authority having jurisdiction to meet non-combustible requirements of the Alberta Building Code. Paper faced gypsum roof board and fiberglass mat gypsum board are not acceptable substrates.

7.1.5. When a self-adhering SBS modified bituminous base sheet membrane is used; all horizontal and vertical substrates must be treated with the manufacturer’s required primer.

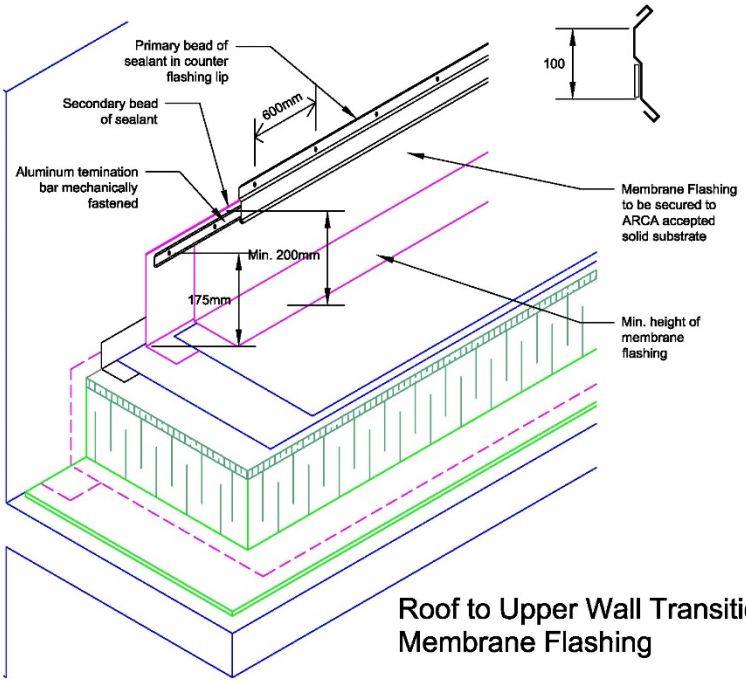
7.1.6. The minimum height of the membrane flashing at a wall, roof penetration, or curb shall be 200mm (8”) above the membrane surface in a conventional design and 200mm (8”) above the insulation or concrete paver ballast material in a protected membrane or combination

[92] MB 7.1.3. Revised October 10, 2019 (TB-2019-05)

design. The minimum height of membrane flashing at the width of door sills shall be 100mm (4”) above the membrane surface, or concrete paver surface measured at the door sill location.

7.1.7. The maximum membrane flashing height is 1067mm (42") above a surface of the membrane, concrete pavers or ballast. [93]

7.1.8. Where the upper termination of the membrane flashing on a vertical surface is exposed to water entry, the edge shall be protected with a continuous sheet metal flashing or sealed with an accepted liquid applied membrane.



Roof to Upper Wall Transition Membrane Flashing

7.1.9. The tops of parapet walls not covered by membrane flashing shall be covered with a water resistant sheet extending down from the top of the blocking a minimum distance of 50mm (2”) on each side.

7.1.10. Sheet metal flashing shall be installed to cover and protect a non-granule surfaced modified bituminous flashing membranes from ultra violet light damage.

7.1.11. SBS modified bituminous membrane flashings shall not be adhered with hot bitumen.

7.1.12. When preserved treated wood components are incorporated into a roof assembly, the potential for corrosion of some metal fasteners, sheet steel and roof decking exists when in direct contact with non-C.C.A. (Chromate Copper Arsenate) preservatives.

7.1.13. Exposed penetrations through the membrane flashing shall be placed a minimum of 200mm (8") above the finished roof surface.

7.1.14. Accepted liquid-applied or cold-applied membrane flashings, or combination thereof, may be used around areas where torch applications are not desired such as near wall cavities, roof-top units, or near combustible surfaces (i.e. wall siding).

7.1.15. Liquid-applied membranes are accepted for use with irregular, complex, or circular details where sheet membrane applications are not practical or where gum boxes are not desired. One component liquid-applied membranes may be used as a sealant at sheet membrane flashing or metal flashing terminations at walls, window and door sills, or curbs.

[93] MB 7.1.7. Revised April 1, 2019 (TB-2019-01)

7.2. Membrane Flashing Materials

7.2.1. Membrane flashing materials, adhesives, and primers shall be from the same manufacturer as the membrane materials.

7.2.2. Non-combustible combination membrane base sheets are accepted as the first ply of a two-ply membrane flashing system when covering the vertical face of a parapet or curb (See MB-7.3.5.2).

7.2.3. SBS membrane flashing materials shall comply with the requirements of CGSB 37-GP-56M / CSA A123.23-15.

7.2.4. This Section includes three alternative non-torched applications or combinations thereof categorized as such:

7.2.4.1. Liquid-applied

7.2.4.1.1. Polyurethane or Modified Silicone membranes (one component)

7.2.4.1.2. PMMA (Polymethyl Methacrylate) membrane (two component)

7.2.4.2. Cold-applied sheet membranes adhered with trowel applied adhesives.

7.2.4.3. Self-adhesive membranes adhered to primed surfaces.

7.2.5. Liquid-applied membranes shall be reinforced with a polyester fleece.

7.2.6. To qualify for an ARCA 15 Year Warranty Certificate, base ply membrane flashing materials shall be polyester or composite reinforced with a minimum thickness of 3.0mm (118 mils) conforming to ASTM D6162 or ASTM D6164.

7.2.7. To qualify for an ARCA 15 Year Warranty Certificate, cap ply membrane flashing materials shall be polyester or composite reinforced with a minimum thickness of 4.0mm (157 mils) conforming to ASTM D6162 or ASTM D6164.

7.3. Installation Procedures

7.3.1. General

7.3.1.1. Sheet membrane flashing shall be comprised of a minimum of two (2) plies of modified bituminous membrane.

7.3.1.2. Modified bituminous membrane flashings shall be installed using the “fingering” application method. The base ply of membrane flashing shall be installed onto the horizontal surface of the base ply of membrane. The cap ply of membrane flashing shall be installed onto the properly prepared horizontal surface of the cap ply of membrane (de-granulized for torched applications).

7.3.1.3. Both the base and cap plies of the membrane flashing shall be installed in roll width sections.

7.3.1.4. The base ply flashing membrane intersecting at all inside and outside corners require a membrane gusset made from a thermal-fusible, polyester reinforced membrane to maintain reinforcement and waterproofing continuity at the base of vertical junctions and intersecting angles at the top of parapets. Non-torched sheet membrane base flashings require a minimum 40mil thick self-adhesive membrane gusset.

7.3.1.5. All substrates shall be clean, dry, and free of loose or incompatible materials that may hinder adhesion of membrane. Refer to manufacturers’ written instructions for substrate preparation and priming requirements.

7.3.1.6. Sheet membranes shall have no poly film on the surface (i.e. lightly sanded or granular) to accept primers.

7.3.1.7. A cold-applied or self-adhesive field cap sheet, a minimum of 1000mm (39”) wide, may be applied over the base sheet surface prior to the application of cap ply flashing to avoid

torch application near the roof junction. Cap sheet may be laid perpendicular to the direction of the base sheet for this purpose.[94]

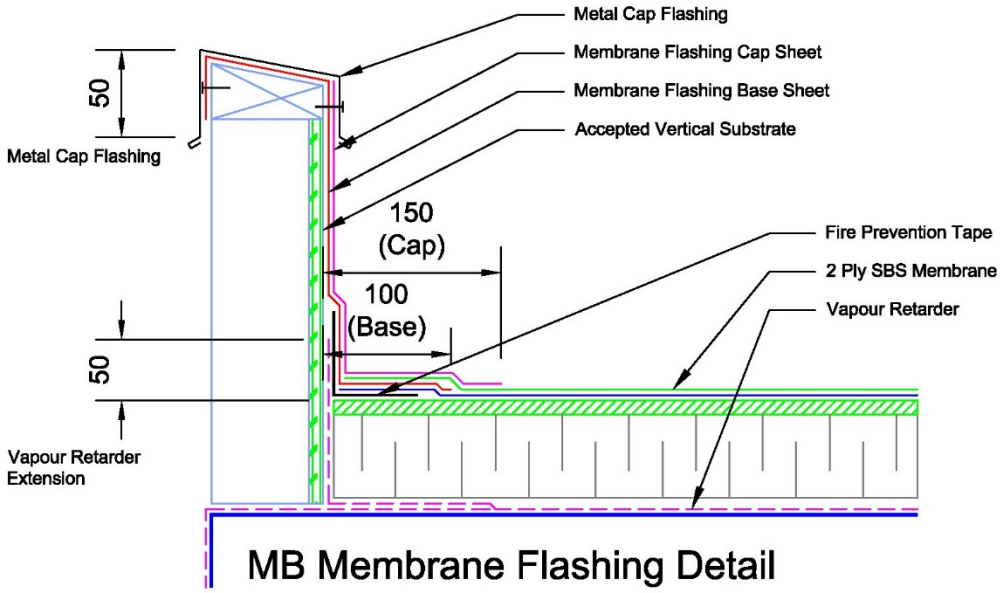
7.3.1.8. Cold-applied membrane adhesives shall be applied with notched trowels in accordance with manufacturer's written instructions. Avoid applying adhesive in excess of the specified notched thickness as this can affect the curing and performance of membranes.

7.3.1.9. Self-adhesive and cold-applied membranes used in non-torched applications (base and cap) requires all overlapping seam edges sealed with a hot-air welding device specifically designed for roofing membranes.

7.3.1.10. Applications of self-adhesive and cold-applied membranes require pressure from a hard roller to achieve optimum adhesion and uniform contact of substrates to surfaces.

7.3.1.11. To qualify for an ARCA 15-year Warranty Certificate, the membrane flashing cap sheet shall be thermally fused to the base sheet membrane.[95]

7.3.2. Base Ply Membrane Flashing



7.3.2.1. When the substrate is non-combustible, the base ply may be thermally fused to a properly prepared (primed if necessary) substrate. A fire prevention tape shall be installed at the transition of horizontal to vertical if there is a combustible material below the membrane base sheet and at any gaps or voids in the substrate where a flame could penetrate and reach a combustible material.

7.3.2.2. When the substrate is a combustible material the base ply shall be a self-adhering or cold applied base ply membrane flashing applied to the properly prepared (suitably primed) substrate and mechanically fastened. The alternative to a self-adhering or cold applied base ply is the installation of a fire separation material over the combustible substrate prior to thermally fusing a base ply membrane flashing.[96]

[94] MB 7.3.1.7. Revised April 1, 2019 (TB-2019-01)
[95] MB 7.3.1.11. Revised February 12, 2020 (TB-2020-01)
[96] MB 7.3.2.2 Revised April 30, 2020 (TB-2020-02)

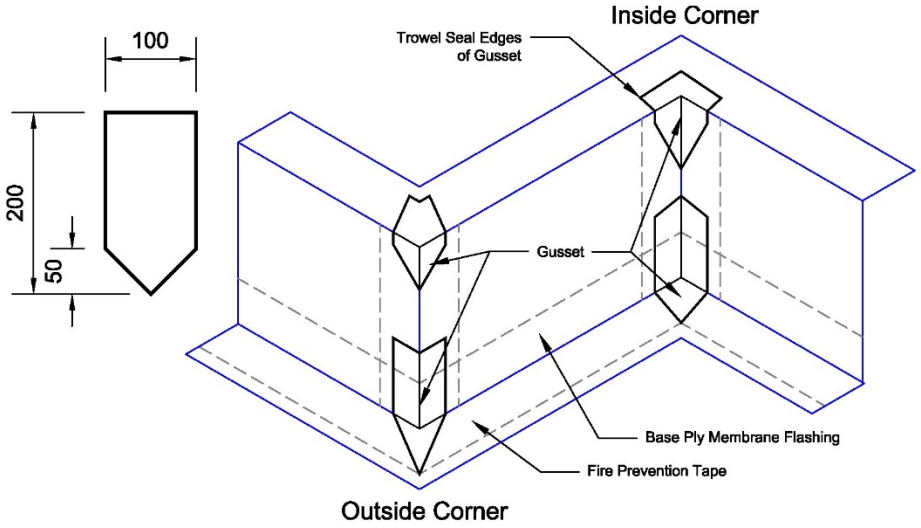
7.3.2.3. The mechanical fastening of a self-adhering or cold-applied base ply membrane flashing shall be with 25mm (1”) diameter round top nails or better. The round top nails shall be placed through the side laps and at the mid-width of each roll width section. The fasteners shall be positioned no lower than 75mm (3”) above the membrane base sheet surface and shall be spaced at no greater than 200mm (8”) intervals up the vertical surface. Additional fasteners may be used to enhance the contact of the self-adhering or cold applied membrane to the primed substrate surface.[97]

7.3.2.4. The base ply membrane flashing side laps shall overlap a minimum 75mm (3”), and be staggered and offset approximately 225mm (9”) from adjacent base membrane laps. The base ply membrane flashing shall be installed a minimum of 100mm (4”) onto the horizontal surface of the base membrane. When the base ply membrane flashing is a self-adhering or cold applied membrane the poly film on the surface of the base membrane must be melted off for the extent of the horizontal overlap. All seams shall be heated and buttered prior to installing any cap membranes.[98]

7.3.2.5. The cold-applied base ply membrane flashing applications shall be installed a minimum of 200mm (8”) onto the horizontal surface of the base membrane.

7.3.2.6. The base ply membrane flashing shall be carried across the top (horizontal) surface of the parapet, down the outside face a minimum of 50mm (2”) and be mechanically fastened to the exterior face of the parapet wood blocking.

7.3.2.7. Following the installation of fire prevention tape and the base ply flashing membrane, a gusset is back torched and pressed over the membrane flashing into the intersecting corner. The edges of the gusset are torched and trowel sealed.



Gusset Dimensions & Applications

7.3.2.8. The edge of self-adhesive membrane gussets in non-torched applications shall be sealed with a bead of compatible mastic. Fire prevention tape is not required in non-torched applications.

[97] MB 7.3.2.3 Revised April 30, 2020 (TB-2020-02)
[98] MB 7.3.2.4 Revised April 30, 2020 (TB-2020-02)

7.3.3. Cap Ply Membrane Flashing

7.3.3.1. Cap ply membrane flashing shall be thermally fused, self-adhered, or adhered with adhesive to the properly applied base ply membrane flashing.

7.3.3.2. Non-granular surfaces require a primer application for self-adhesive cap ply membranes.

7.3.3.3. Cap ply membrane flashing side laps shall overlap a minimum 75mm (3”), and shall be staggered and offset approximately 457mm (18”) from the side laps of the underlying base ply membrane flashing. The cap ply membrane flashing shall extend 150mm (6”) onto the properly prepared (de-granuled) horizontal surface of the cap membrane.

7.3.3.4. Adhesive applied and self-adhered cap ply membrane flashing overlapping onto granular surfaces shall be adhered with a full bed of adhesive troweled over the granule surface. Keep adhesive back from membrane edge approximately 25mm (1”) to accommodate a hot-air welded lap seal. Adhesive applied membranes require pressure from a hard roller to achieve optimum adhesion and uniform contact of substrates to surfaces.[99]

7.3.3.5. Seal all thermally fused membrane overlaps by achieving a small bleed-out of melted bitumen, approximately 3.2mm (1/8”), from under the cap ply membrane.

7.3.3.6. Where a sheet metal cap flashing is to be installed on a parapet wall the cap ply membrane flashing need not be carried over the top (horizontal) surface of the parapet and may be terminated at the upper inside face of the parapet detail. The membrane termination shall be sealed to the base ply by heating and troweling the edge.

7.3.3.7. Adhesive applied and self-adhered membrane flashing shall be carried across the top (horizontal) surface of the parapet wall and terminated along the outside edge of parapet. If the membrane “bulges” at the angle change, install round-top nails or a continuous fastening bar to prevent a void between membrane plies.[100]

7.3.3.8. Where a sheet metal cap flashing is not required, a granular surfaced cap ply membrane flashing may be carried across the top of the parapet and be thermally fused to the base ply. The cap ply membrane shall be terminated at a continuous sheet metal drip edge flashing attached over the base ply stripping at the exterior edge of the parapet's wood blocking. The horizontal flange of the metal drip flashing shall be sealed to the base ply with a continuous membrane reinforcement strip prior to the application of the cap ply membrane.

7.3.3.9. Cap ply membrane flashing terminations at top of curbs or walls shall be mechanically fastened with a continuous metal term bar (min. 24 gauge) with screw fasteners spaced a maximum of 200mm (8”) on center. Alternatively, a metal counter flashing may be used with same required fastener spacing penetrating through the membrane flashing approximately 25mm (1”) below the membrane edge termination.

7.3.4. Liquid Applied Membrane Flashing Application

7.3.4.1. Roof penetrations shall be secured to the roof deck and not move independently of the roof deck. Seal off air-intakes as well as openings where negative air leakage may draw odors into the interior of the building.

7.3.4.2. Surfaces to be coated shall be prepared in accordance with manufacturers written instructions which may include the use of a primer and/or cleaner, and patching of joints, cracks or gaps. Wipe surface of cured membrane with a manufacturer recommended cleaner prior to applying a liquid membrane tie-in or splice.

[99] MB 7.3.3.4 Revised February 15, 2023 (TB-2023-01)

[100] MB 7.3.3.7 Revised February 15, 2023 (TB-2023-01)

7.3.4.3. Liquid-applied membrane flashings are composed of one or two component polymer modified resin applied as a base coat and top (or finish) coat by brush or medium nap roller. Specific grades are available for winter or summer application temperatures. Consult the manufacturer for limitations as well as storage requirements.

7.3.4.4. Two-component PMMA liquid-applied membranes require a catalyst mixed in specific ratios as per manufacturers written instructions. Catalyze only the amount of material that can be used within the resins specified pot-life (ranges between 10 to 20 minutes).

7.3.4.5. Liquid-applied membranes shall be installed no less than 100mm (4”) onto the horizontal surface of the membrane or in accordance with the membrane manufacturers written instructions, whichever is greater.

7.3.4.6. At membrane terminations, use masking tape to ensure liquid membrane edges do not taper off and to achieve clean straight edges. Apply resin coat a minimum of 5mm beyond edge of fabric. Remove tape while resin finish coat is still wet. Broadcasting granules into the wet finish coat is not permitted prior to a final inspection by an ARCA accepted roofing inspector.

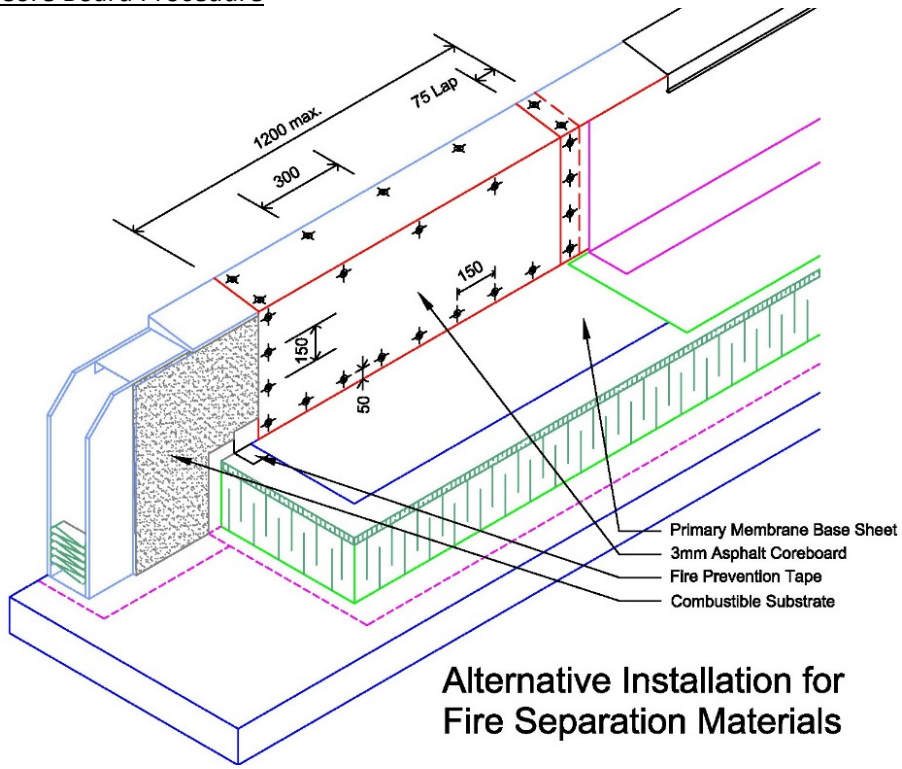
7.3.4.7. Refer to the manufacturers’ written instructions regarding proper cutting and fitting of the reinforcement fabric for particular details. Reinforcement fabric shall be embedded into a liberally applied, thick resin base coat (approximately 3mm) with no wrinkles, buckles, or ridges. Apply top/finish coat of resin to uniformly coat the reinforcement fabric. No fabric shall be left exposed.

7.3.4.8. Two component PMMA membrane applications require full coverage of the reinforcement fabric over the substrate. One component membrane applications require a minimum 150mm (6") wide continuous reinforcement fabric centered over all substrate junctions including joints/gaps greater than 3.2mm (1/8") wide. Lap fabric pieces a minimum of 50mm (2”) and ensure resin is applied between the fabric overlap.

7.3.4.9. To qualify for an ARCA 15 Year Warranty Certificate, liquid-applied membrane flashing shall consist of a two-component PMMA liquid-applied membrane.

7.3.5. Alternate Installation Procedures for Fire Separation Materials.

7.3.5.1. Asphalt Core Board Procedure



7.3.5.1.1. The SBS membrane flashing may be comprised of two (2) plies of thermally fused, torched, modified bituminous flashing membranes when adhered to minimum 3.2mm (1/8") thick asphalt core board panels heat formed and mechanically fastened to cover the combustible substrate.

7.3.5.1.2. The asphalt core board panels shall be applied in maximum 1200mm (4 ft.) widths, incorporating a minimum 75mm (3") wide overlap with the adjacent panel section.

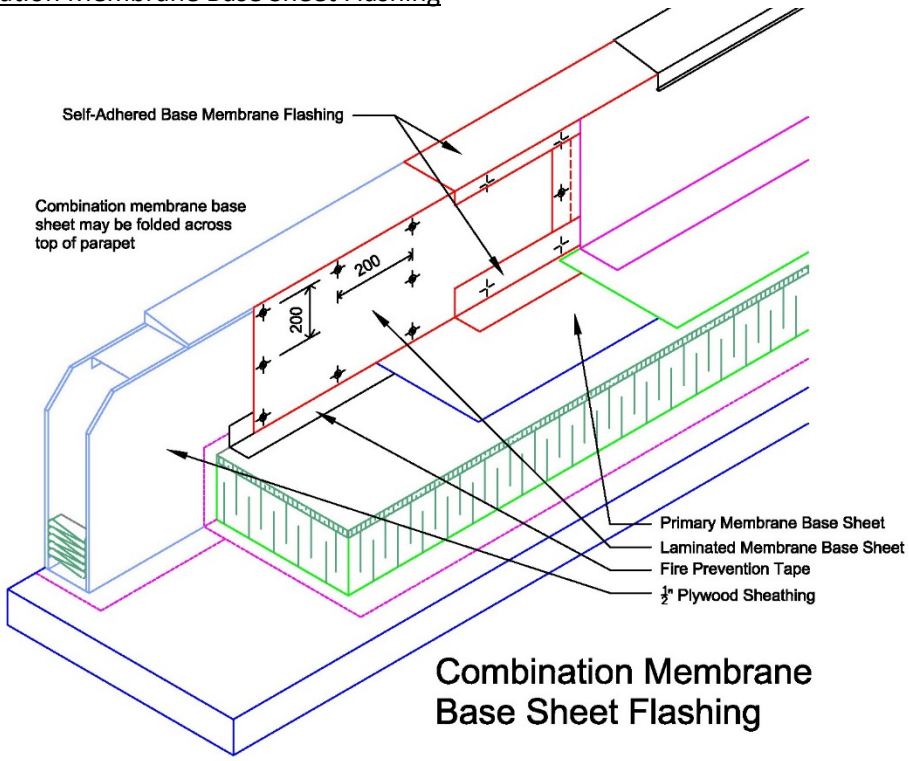
7.3.5.1.3. Prior to installing the core board, fire prevention tape shall be applied at bottom junction of the parapet or curb, the vertical spine at corners, and any abutted board joint locations.

7.3.5.1.4. Heat formed panels shall be fastened with minimum 25mm (1") diameter round top roofing nails placed at maximum 150mm (6") centers in the side laps and along the bottom of each panel.

7.3.5.1.5. The bottom row of round top nails shall be placed no lower than 50mm (2") above the membrane surface.

7.3.5.1.6. For the field of each panel, the fastener density shall be a minimum of one (1) round top nail per square foot of core board area.

7.3.5.2. Combination Membrane Base Sheet Flashing



7.3.5.2.1. The SBS membrane flashing may be comprised of a Combination Membrane Base Sheet comprised of supporting accepted mineral wool insulation, fire resistance fiberboard, asphalt core board or high-density polyisocyanurate insulation substrate with an attached factory laminated modified bituminous base sheet and an ARCA approved field applied membrane cap sheet flashing.[101]

7.3.5.2.2. Accepted cover boards shall be applied in maximum 900mm (3 ft.) panel width sections incorporating self-sealing side laps, when formed and mechanically fastening to cover combustible substrates.

7.3.5.2.3. Prior to installing the cover board, fire prevention tape shall be applied at bottom junction of the parapet or curb, the vertical spine at corners, and where abutted board joints require a torched membrane cover strip.

7.3.5.2.4. To prepare panel board sections for application of a stone-wool cover board, trim grooves using the cutting tool provided by the manufacturer and remove the insulation backing to coincide with top transition of the parapet. Fold the prepared cover board panel sections to completely cover the combustible substrate.

7.3.5.2.5. Terminate the Combination Membrane Base Sheet at the top of the vertical face of the parapet or curb. Apply a minimum 2.5mm (3/32”) thick self-adhesive SBS modified bituminous membrane over the primed wood blocking at the top of the parapet or curb; overlap onto the face of the Combination Membrane Base Sheet a minimum of 75mm (3") and minimum 50mm (2") down the exterior vertical face or to completely cover parapet wood blocking.

7.3.5.2.6. The prepared Combination Membrane Base Sheet shall be fastened to the nailable substrate with minimum 25mm (1") diameter round top roofing nails placed at a maximum 150mm (6") centres in the side laps and along the top and bottom of each panel or 200mm

[101] MB 7.3.5.2.1 Revised April 6, 2022 (TB-2022-02)

(8") spacing with screws and plates. The bottom row of fasteners shall be placed no lower than 50mm (2") above the membrane surface. To secure the balance of the cover board panel, additional fasteners shall be spaced vertically at maximum 200mm (8") centres at mid-span of the cover board panel.

7.3.5.2.7. Complete the membrane flashing base sheet application by cutting minimum 200mm (8") wide strips of the polyester reinforced SBS modified bituminous membrane to act as the membrane flashing tie-in between the cover board membrane and the combination membrane base sheet. Thermally fuse (torch) the membrane flashing tie-in strip so it extends a minimum distance of 100mm (4") onto the surface of both the cover board and combination membrane base sheet.

7.3.5.2.8. An accepted thermally fused polyester reinforced SBS modified bituminous membrane cap sheet flashing shall be uniformly torch-applied to the cover board membrane, and lap onto the membrane cap sheet in accordance with ARCA Warranty Ltd. application standards.

7.3.5.3. Alternate Combination Membrane Base Sheet Membrane Flashing (See Figure 4B)

7.3.5.3.1. The combination membrane base sheet may be comprised of supporting accepted mineral wool insulation, fire resistance fiberboard, asphalt core board or high-density polyisocyanurate insulation substrate with an attached factory laminated modified bituminous base sheet and an ARCA approved field applied membrane cap sheet flashing.[102]

7.3.5.3.2. Accepted combination membrane base sheets shall be applied in maximum 900mm (3 ft.) panel width sections with self-sealing side laps when formed and mechanically fastening to cover combustible substrates.

7.3.5.3.3. Prior to installing the cover board, fire prevention tape shall be applied at bottom junction of the parapet or curb, the vertical spine at corners, and where abutted board joins require it a torched membrane cover strip.

7.3.5.3.4. To prepare panel board sections for application of a combination membrane base sheet, score the board to coincide with top transition of the parapet. Heat and fold the prepared cover board panel sections to completely cover the combustible substrate.

7.3.5.3.5. Extend the combination membrane base sheet to the exterior edge of parapet and down a minimum 50mm (2") or install flush to exterior edge of parapet and install self-adhering membrane overlapped onto the cover board membrane face a minimum of 75mm (3") and a minimum 50mm (2") down the exterior vertical face or to completely cover parapet wood blocking.

7.3.5.3.6. The prepared combination membrane base sheets shall be fastened to the nailable substrate with minimum 25mm (1") diameter round top roofing nails placed at a maximum 150mm (6") centres in the side laps and along the top and bottom of each panel or 200mm (8") spacing with screws and plates. The bottom row of fasteners shall be placed no lower than 50mm (2") above the membrane surface. To secure the balance of the combination membrane base sheet, additional fasteners shall be spaced vertically at maximum 200mm (8") centres at mid-span of the cover board panel.

7.3.5.3.7. Complete the membrane flashing base sheet application by torch adhering a maximum 990mm (39") wide strips of the polyester reinforced SBS modified bituminous membrane to act as the membrane flashing tie-in between the combination membrane base sheet and membrane base sheet. Thermally fuse (torch) the membrane flashing tie-in strip so it

[102] MB 7.3.5.3.1 Revised April 6, 2022 (TB-2022-02)

extends s minimum distance of 100mm (4") onto the surface of both the combination membrane base sheet and membrane base sheet membranes.

7.3.5.3.8. An accepted thermally fused polyester reinforced SBS modified bituminous membrane cap sheet flashing shall be uniformly torch-applied to the cover board membrane, and lap onto the membrane cap sheet in accordance with ARCA Warranty Ltd. application standards.

7.3.5.4. Alternate Combination Membrane Base Sheet Membrane Flashing (See Figure 4C)[103]

7.3.5.4.1. The combination membrane base sheet may be comprised of supporting accepted mineral wool insulation, fire resistance fiberboard, asphalt core board or high-density polyisocyanurate insulation substrate with an attached factory laminated modified bituminous base sheet and an ARCA approved membrane cap sheet flashing.

7.3.5.4.2. Prior to installing the cover board, fire prevention tape shall be applied at bottom junction of the parapet or curb, the vertical spine at corners, and where abutted board joins require it to be a torched membrane cover strip.

7.3.5.4.3. To prepare panel board sections for application of a combination membrane base sheet, score the board to coincide with top transition of the parapet. Heat and fold the prepared cover board panel sections to completely cover the combustible substrate.

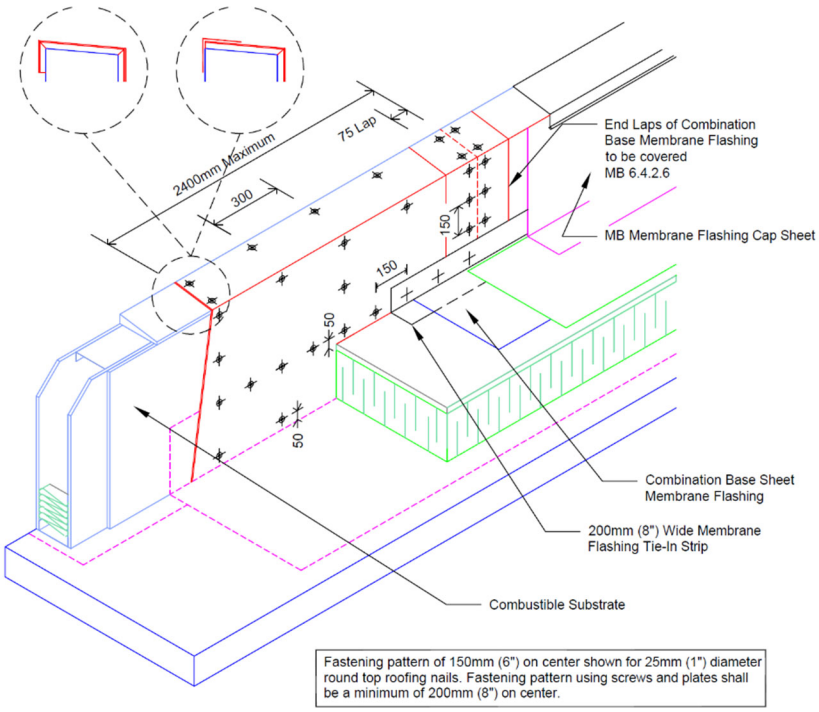
7.3.5.4.4. Extend the combination membrane base sheet to the exterior edge of parapet and down a minimum 50mm (2") or install flush to exterior edge of parapet and install self-adhering membrane overlapped onto the cover board membrane face a minimum of 75mm (3") and a minimum 50mm (2") down the exterior vertical face or to completely cover parapet wood blocking.

7.3.5.4.5. The prepared combination membrane base sheets shall be fastened to the nailable substrate with minimum 25mm (1") diameter round top roofing nails placed at a maximum 150mm (6") centres in the side laps and along the top and bottom of each panel or 200mm (8") spacing with screws and plates. Minimum 25mm (1”) diameter round top roofing nails shall also be placed no lower than 50mm (2") above the membrane surface at a maximum 150mm (6") centres or 200mm (8") spacing with screws and plates. To secure the balance of the combination membrane base sheet, additional fasteners shall be spaced vertically at maximum 200mm (8") centres at mid-span of the cover board panel.

7.3.5.4.6. Complete the membrane flashing base sheet application by cutting minimum 200mm (8") wide strips of the polyester reinforced SBS modified bituminous membrane to act as the membrane flashing tie-in between the cover board membrane and the combination membrane base sheet. Thermally fuse (torch) the membrane flashing tie-in strip so it extends a minimum distance of 100mm (4") onto the surface of both the cover board and combination membrane base sheet.

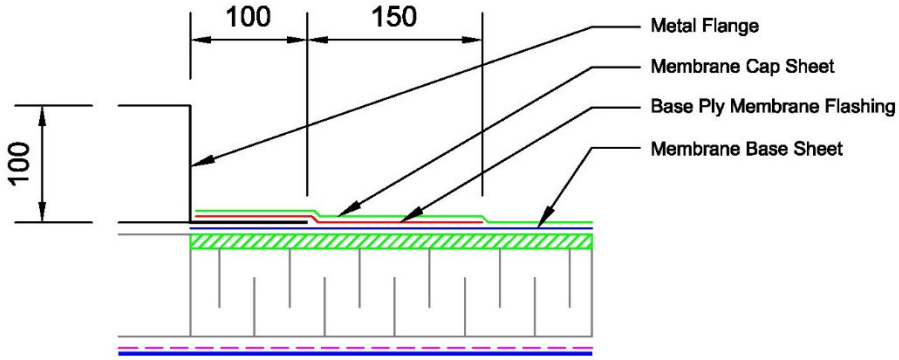
7.3.5.4.7. An accepted thermally fused polyester reinforced SBS modified bituminous membrane cap sheet flashing shall be uniformly torch-applied to the cover board membrane, and lap onto the membrane cap sheet in accordance with ARCA Warranty Ltd. application standards.

[103] MB 7.3.5.4 Added February 26, 2024 (TB-2024-01)



(Figure 4C)

7.3.6. Membrane Flashing at Horizontal Metal Flanges (See Figure 5)



Membrane Flashing at Horizontal Metal Flanges

7.3.6.1. The base ply membrane flashing shall be thermally fused to the properly prepared, primed as necessary, surface of the horizontal flange of the roof penetration flashing and a minimum distance of 150mm (6”) onto the surface of the base membrane.

7.3.6.2. The membrane cap sheet shall be thermally fused to cover the installed base ply membrane flashing.

7.3.6.3. The membrane termination at the vertical junction of gum boxes and similar metal flashings for roof penetrations not curbed shall be sealed with a compatible sealant approved by the membrane manufacturer.

7.3.7. Cast Roof Drains

7.3.7.1. Internal Roof Drains

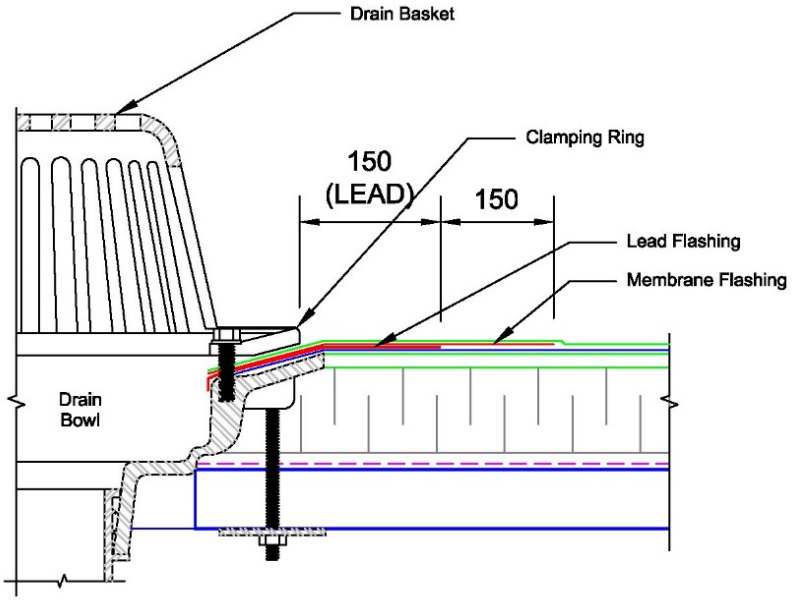
7.3.7.1.1. The roof drain hopper shall be properly secured in place to prevent its displacement in the supported roof deck opening.

7.3.7.1.2. The primed hopper flange shall be set approximately 19 mm (3/4") below the surface of the membrane and be contained within a drainage sump approximately 1000 x1000 mm square centered at the drain location.

7.3.7.1.3. The membrane base sheet extend up to the primed drain flange and terminated at the exterior face of the drain hopper.[104]

7.3.7.1.4. A minimum 25 kg/m (5 lbs./ft²) lead drain flashing, set in a bedding of compatible sealant, shall cover the base ply and extend a minimum distance of 150 mm (6") beyond the edges of the hopper flange.

7.3.7.1.5. The primed lead flashing shall be completely covered with a membrane flashing ply of polyester reinforced 180 g thermally fused S.B.S. base sheet extending a minimum distance of 150 mm (6") past the edges of the lead flashing. The base flashing reinforcing ply shall be positioned at a 45º degree angle to the membrane base sheet laps and extend to the interior face of the drain flange flashing.



MB Membrane Lead Drain Detail

7.3.7.1.6. The membrane cap sheet ply shall be thermally fused to cover the membrane flashing and terminate at the interior face of the drain hopper. Cap sheet laps shall be located a minimum of 300mm (12") from the exterior edge of the drainage bowl.[105]

7.3.7.1.7. All membranes and flashing components shall be secured in place by a tightened clamping ring and dome.

[104] MB 7.3.7.1.3 Revised December 14, 2022 (TB-2022-07)

[105] MB 7.3.7.1.6 Revised December 1, 2020 (TB-2020-11)

7.3.8. Retrofit Roof Drains

7.3.8.1. Retrofit drains shall be of one-piece copper, aluminum or stainless-steel construction incorporating a minimum 150mm (6") wide integral metal flashing flange. [106]

7.3.8.2. A lead flashing is not required with retrofit metal drains incorporating an integral metal flashing flange.

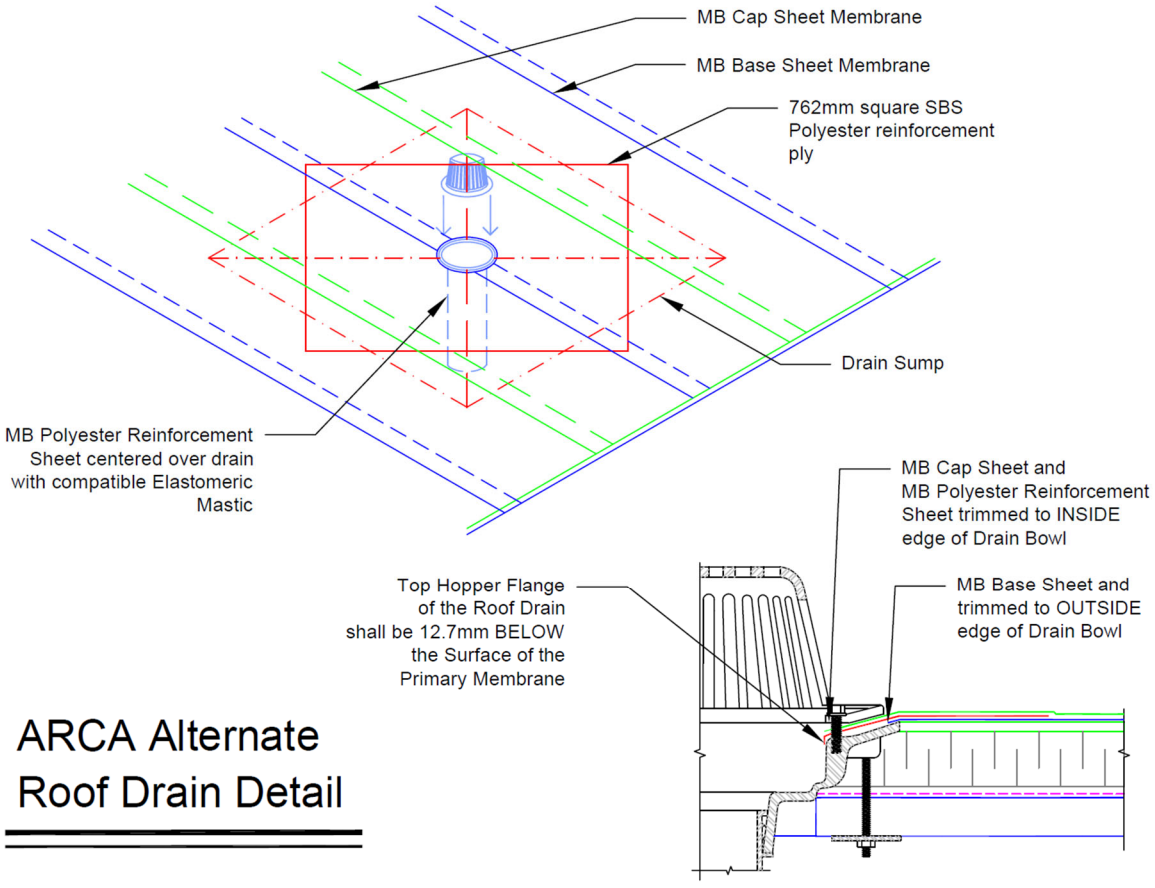
7.3.8.3. The retrofit drain outlet shall be placed within the existing drainage pipe opening without restricting existing drain opening size.

7.3.8.4. The sheet metal flashing flange shall be set in a compatible sealant over the membrane base sheet.

7.3.8.5. A ply of polyester reinforced 180 g thermally fused S.B.S. membrane base sheet shall terminate at the exterior face of the drainage flange clamping ring. The primed drain flashing flange shall be completely covered with the base flashing reinforcing ply and shall be positioned at a 45º degree angle to the membrane base sheet laps and terminate at the inside edge of the drain opening.[107]

7.3.8.6. The membrane cap sheet shall be thermal fused to cover the membrane flashing and terminate at the inside edge of the drain opening.[108]

7.3.8.7. All membranes and flashing components shall be secured in place by a tightened clamping ring and dome.



ARCA Alternate Roof Drain Detail

[106] MB 7.3.8.1 Revised April 30, 2020 (TB-2020-02)
[107] MB 7.3.8.5 Revised December 14, 2022 (TB-2022-07)
[108] MB 7.3.8.6 Revised December 14, 2022 (TB-2022-07)

7.4. Accepted Sheet Membrane Flashing Materials

7.4.1. Accepted Base Membrane Flashing [109][110][111][112]

IKO

Membrane Flashing Base Sheet	**Attachment Method**					**Surfaces (Bottom/Top)** *S=Sanded Surface SA=Self-Adhered TF=Thermofusible Film RF=Release Film O=Other*	**ARCA Warranty Certificate**		
	Adhered (adhesive)	*Adhered (asphalt)*	*Self Adhered*	*Mech. Fast.*	*Torch*		*5 Year*	*10 Year*	*15 Year*
Armourbond Flash Sand			●			SA / S	●	●	
Armourbond Flash			●			SA / TF	●	●	
Armourbond Flash HD			●			SA / TF	●	●	
Armourbond 180			●			SA / TF	●	●	●
ArmourStick HD-Base			●			SA / RF	●	●	
Fast-N-Stick 180 Base				●		S / TF	●	●	●
Modflex MP-180	●	●				S / TF	●	●	
Torchflex TF-95					●	TF / S	●	●	
Torchflex TP-180					●	TF / TF	●	●	●
Protectobase	●	●		●		O / TF	●	●	
Protectobase 180	●	●		●		O / TF	●	●	●
ShieldBase 180	●	●		●		O / TF	●	●	●
ShieldBase 180 Sanded	●	●		●		S / TF	●	●	●

Approved Adhesives: IKO Millenium Adhesive (Protectobase, Protectobase 180, ShieldBase 180 & ShieldBase 180 Sanded ONLY)
IKO Cold Gold Flashing Adhesive

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Polyglass

Base Sheet Membranes	**Attachment Method**					**Surfaces (Bottom/Top)** *S=Sanded Surface SA=Self-Adhered TF=Thermofusible Film O=Other*	**ARCA Warranty Certificate**		
	Adhered (adhesive)	*Adhered (asphalt)*	*Self Adhered*	*Mech. Fast.*	*Torch*		*5 Year*	*10 Year*	*15 Year*
Elastoflex S6	●	●		●	●	S / TF	●	●	
Elastoflex S6 22	●	●		●	●	S / TF	●	●	●
Elastoflex SA Base			●			SA / TF	●	●	
Elastoflex VP					●	TF / TF	●	●	
Elastoflex SA Base Plus			●			SA / TF	●	●	
Elastoflex SA Base Polar			●			SA / TF	●	●	

Approved Adhesives:

114115116

[109] MB 7.4.1. Revised April 30, 2020 (TB-2020-02)
[110] MB 7.4.1. Revised June 23, 2020 (TB-2020-06)
[111] MB 7.4.1 Revised June 16, 2022 (TB-2022-03)
[112] MB 7.4.1 Revised June 10, 2025 (TB-2025-04)
[113] MB 7.4.1 Revised June 21, 2021 (TB-2021-04)
[114] MB 7.4.1 Revised October 13, 2021 (TB-2021-06)
[115] MB 7.4.1 Revised April 6, 2022 (TB-2022-02)
[116] MB 7.4.1 Revised September 25, 2024 (TB-2024-03)

Soprema

Membrane Flashing Base Sheet	Attachment Method					Surfaces (Bottom/Top)	ARCA Warranty Certificate		
	Adhered (adhesive)	*Adhered (asphalt)*	*Self Adhered*	*Mech. Fast.*	*Torch*	*S=Sanded Surface SA=Self-Adhered TF=Thermofusible Film O=Other*	*5 Year*	*10 Year*	*15 Year*
Colply Base 410	●	●				S / S	●	●	
Colvent Base 830			●			SA / TF	●	●	
Colvent Base 840			●			SA / S	●	●	
Elastophene 180 PS		●				S / TF	●	●	
Sopraply Flam Stick			●			SA / S	●	●	●
Sopraply Stick Duo			●			SA / S	●	●	●
Sopraflash Stick			●			SA / S	●	●	
Sopraflash Stick Duo			●			SA / S	●	●	
Sopraflash Flam Stick			●			SA / S	●	●	
Soprafix Base 630				●		S / TF	●	●	●
Sopralene Flam 180					●	TF / TF	●	●	
Sopraply Base 510		●				S / TF	●	●	
Sopraply Base 520					●	TF / TF	●	●	●
2-1 Soprasmart FB	●	●		●		O / TF	●	●	
2-1 Soprasmart Board	●	●		●		O / TF	●	●	●
2-1 Soprasmart Board Sanded	●	●		●		O / S	●	●	●
2-1 Soprasmart ISO HD	●	●		●		O / TF	●	●	●
2-1 Soprasmart ISO HD Sanded	●	●		●		O / S	●	●	●
2-1 Soprasmart Rock		●		●		O / TF	●	●	

Approved Adhesives: Soprema Duotack Adhesive (2-1 Soprasmart FB, 2-1 Soprasmart Board / Sanded & 2-1 Soprasmart ISO HD / Sanded ONLY)
Soprema Duotack 365 Adhesive (2-1 Soprasmart FB, 2-1 Soprasmart Board / Sanded & 2-1 Soprasmart ISO HD / Sanded ONLY)

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7.4.2. Accepted Cap Sheets[119][120][121][122]

IKO

Membrane Flashing Cap Sheet	Attachment Method				Surfaces (Bottom/Top)	ARCA Warranty Certificate		
	Adhered (adhesive)	*Adhered (asphalt)*	*Self Adhered*	*Torch*	*S=Sanded Surface SA=Self-Adhered TF=Thermofusible Film GR=Granules O=Other*	*5 Year*	*10 Year*	*15 Year*
ArmourStick HD-Cap			●		SA / GR	●	●	
Modiflex MP-180-Cap	●				S / GR	●	●	
Prevent TP-250 Cap				●	TF / GR	●	●	●
Prevent TP-250 Cap 5.0				●	TF / GR	●	●	●
Prevent TP-HD-Cap				●	TF / GR	●	●	●
Torchflex TP-180 Cap				●	TF / GR	●	●	
Torchflex TP-250 Cap				●	TF / GR	●	●	●
Torchflex TP-250 Cap 5.0				●	TF / GR	●	●	●
Torchflex TP-HD-Cap				●	TF / GR	●	●	●

Approved Adhesives: IKO Cold Gold Flashing Adhesive

[117] MB 7.4.1 Revised February 5, 2021 (TB-2021-02)
[118] MB 7.4.1 Revised March 31, 2021 (TB-2021-03)
[119] MB 7.4.2. Revised April 30, 2020 (TB-2020-02)
[120] MB 7.4.2. Revised June 23, 2020 (TB-2020-06)
[121] MB 7.4.2 Revised June 16, 2022 (TB-2022-03)
[122] MB 7.4.2 Revised June 10, 2025 (TB-2025-04)

Polyglass Cap Sheet Membranes	Attachment Method				Surfaces (Bottom/Top) *S=Sanded Surface* *SA=Self-Adhered* *TF=Thermofusible Film* *GR=Granules* *O=Other*	ARCA Warranty Certificate		
	Adhered (adhesive)	*Adhered (asphalt)*	*Self Adhered*	*Torch*		*5 Year*	*10 Year*	*15 Year*
Elastoflex S6 G				●	TF / GR	●	●	
Elastoflex S6 G HP				●	TF / GR	●	●	
Elastoflex VP G HP				●	TF / GR	●	●	
Elastoflex SA P			●		SA / GR	●	●	
Elastoflex SA P Polar			●		SA / GR	●	●	
Approved Adhesives:								

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124125

Soprema Membrane Flashing Cap Sheet	Attachment Method				Surfaces (Bottom/Top) *S=Sanded Surface* *SA=Self-Adhered* *TF=Thermofusible Film* *GR=Granules* *O=Other*	ARCA Warranty Certificate		
	Adhered (adhesive)	*Adhered (asphalt)*	*Self Adhered*	*Torch*		*5 Year*	*10 Year*	*15 Year*
ColPly Traffic Cap Flex	●				S / GR	●	●	
Sopralene Mammouth GR				●	TF / GR	●	●	
Sopralene Flam 180 GR				●	TF / GR	●	●	
Sopralene Flam 180 FR GR				●	TF / GR	●	●	
Sopralene Flam 250 GR				●	TF / GR	●	●	●
Sopralene Flam 250 FR GR				●	TF / GR	●	●	●
Sopraply Stick Traffic Cap			●		SA / GR	●	●	
Sopraply Traffic Cap				●	TF / GR	●	●	●
Sopraply Traffic Cap FR				●	TF / GR	●	●	●
Approved Adhesives:	Soprema Colply Traffic Cap Flex approved with Soprema ColPly EF Adhesive ONLY.							

[123] MB 7.4.2 Revised September 25, 2024 (TB-2024-03)
[124] MB 7.4.2 Revised October 13, 2021 (TB-2021-06)
[125] MB 7.4.2 Revised April 6, 2022 (TB-2022-02)

7.5. Accepted Membrane Flashing Coverboards

7.5.1. Asphalt Core Board (Minimum 3mm (1/8") thick)

7.5.1.1. IKO
7.5.1.1.1. Protectoboard
7.5.1.2. Hal Industries Inc.
7.5.1.2.1. Perma-board
7.5.1.3. SOPREMA
7.5.1.3.1. Sopraboard

7.5.2. Composite Coverboards with Factory Laminated SBS Membrane

7.5.2.1. IKO
7.5.2.1.1. Protectobase
7.5.2.1.2. Protectobase 180
7.5.2.2. SOPREMA
7.5.2.2.1. 12.7mm (1/2") thick XPressboard HD
7.5.2.2.2. 12.7mm (1/2") thick Soprabase 180 FR (treated Fibreboard)
7.5.2.2.3. 2-1 Soprasmart Board
7.5.2.2.4. 2-1 Soprasmart Board Sanded[126]
7.5.2.2.5. 2-1 Soprasmart ISO HD
7.5.2.2.6. 2-1 Soprasmart ISO HD Sanded[127]

7.6. Accepted Liquid Applied Membrane Flashings

7.6.1. Accepted Liquid Applied Membrane Flashings (5 and 10 Year WC)[128]

7.6.1.1. IKO
7.6.1.1.1. MS Detail (Modified silicone, one component)
7.6.1.1.2. Metatech (PMMA Acrylic Resin, two component)[129]
7.6.1.1.3. Polyester Mesh (reinforcement fabric)
7.6.1.2. SOPREMA
7.6.1.2.1. Alsan Flashing (Polyurethane/Bitumen Resin, one component)
7.6.1.2.2. Alsan RS 230 (PMMA Acrylic Resin, two component)
7.6.1.2.3. Alsan Polyester Fleece (Reinforcement fabric)
7.6.1.3. POLYGLASS
7.6.1.3.1. Polyflash 1-C[130]

7.6.2. Accepted Liquid Applied Membrane Flashings (15 Year WC)

7.6.2.1. SOPREMA
7.6.2.1.1. Alsan RS 230 (PMMA Acrylic Resin, two component)
7.6.2.2. IKO
7.6.2.2.1. Metatech (PMMA Acrylic Resin, two component)[131]

[126] MB 7.5.2.2 Revised December 10, 2019 (TB-2019-06)
[127] MB 7.5.2.2 Revised March 31, 2021 (TB-2021-03)
[128] MB 7.6.1 Revised June 16, 2022 (TB-2022-03)
[129] MB 7.6.1 Revised December 14, 2022 (TB-2022-07)
[130] MB 7.6.1.3.1 Added April 14, 2025 (TB-2025-02)
[131] MB 7.6.2.2 Added December 14, 2022 (TB-2022-07)