

THERMOPLASTIC ROOFING

SECTION 8 - SHEET METAL FLASHINGS

8.1 GENERAL

- .1 When required, sheet metal cap flashings shall continuously cover thermoplastic membrane flashing installed at horizontal to vertical roof junctions. Sheet metal cap flashings shall be installed as soon as practical to protect the membrane flashing from damage.
- .2 Sheet metal flashings shall be corrosion resistant. The metal finish is not warranted by ARCA Warranty Ltd. Protect the metal finish from damage during shipping and handling.
- .3 The membrane manufacturer should be consulted for specific fabrication requirements when using thermoplastic coated sheet metal for roof flashings.

8.2 WEIGHTS AND THICKNESS

- .1 The weight and thickness limits shown in the following table shall be followed within the CSA tolerances designated for the metal type shown and does not include the metal finish. The minimum weight or thickness of the sheet metal flashing shown in the table must be increased to the next heavier dimension when the unfastened vertical length of the sheet metal exceeds 457 mm (18"), when measured from its main anchorage point.

| Metal | MINIMUM | | | MAXIMUM | | |
|-----------------|---------|-------------|-----------|---------|-------------|-----------|
| | Gauge | Inches | mm | Gauge | Inches | mm |
| Aluminum | 22 | 0.021 | 0.53 | 16 | 0.044 | 1.12 |
| Copper | 16 oz. | | | 20 oz. | | |
| Coated Steel | 26 | 0.020-0.022 | 0.50-0.56 | 22 | 0.030-0.034 | 0.76-0.87 |
| Stainless Steel | 28 | 0.014 | 0.36 | 22 | 0.027 | .69 |

8.3 FABRICATION

- .1 Exposed sheet metal edges shall be hemmed and shall not be left raw cut with the exception of field fabricated joints found at corners. The top edge of the base flashing need not be hemmed when covered by a cap flashing. Individual sheet metal flashing pieces shall not exceed 3000 mm (10 ft.) in length (Also see 8.5.2.4).
- .2 Except for drip edge flashings and scupper flanges, the end of the metal flashings shall be joined by S-locks or standing seams. S-locks shall be fabricated to permit an approximate 25 mm (1") insert, with a tolerance of ± 6 mm (1/4"), in addition to an allowance for the thermal movement of the sheet metal flashings.
- .3 Standing seams shall extend a minimum distance of 25 mm (1") above the flashing surface and shall incorporate a single lock fold.

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- .4 The horizontal seams at corners shall be joined with a double seam or a standing seam. Vertical corner seams may be lapped and mitered when not joined with a standing seam.
- .5 No soldering or caulking of joints is necessary except where a watertight joint is required at miscellaneous sheet metal flashing joints and where horizontal flanges attach to vertical flashings.

8.4 WALL FLASHINGS

8.4.1 Base Flashings

- .1 Sheet metal base flashing is not required to cover the vertical surface of the membrane flashing except where required by the building code.
- .2 When used, base flashings shall be mechanically fastened to solid backing at intervals not exceeding 1500 mm (5 ft.) centers, with approved fasteners placed approximately 175 mm (7") above the primary membrane.

8.4.2 Cap Flashings

- .1 The top of a wall shall be covered with wood blocking capable of providing sufficient holding force to anchor nail and screw fasten cap flashings. Where membrane flashing does not cover the blocking, a water proofing membrane shall cover the blocking and extend down on each side a minimum distance of 50 mm (2").
- .2 Cap flashings shall completely cover the wood blocking and incorporate a minimum 50 mm (2") wide vertical face, excluding the drip edge.
- .3 The vertical flashing face shall overlap the wall finish and incorporate a drip edge to shed water.
- .4 Cap flashings shall be concealed fastened at one end with galvanized roofing nails placed in both the horizontal and vertical faces of the S-lock end joint.
- .5 On vertical faces, the cap flashing shall be mechanically fastened to the blocking with wood screws placed at maximum 1500 mm (5 ft.) centres. Sheet metal hook strips, fastened to the wood blocking, may be substituted for the wood screws.

8.4.3 Counter Flashings

- .1 For smooth surface walls, membrane flashing terminations shall be covered with a reglet or kick-out style counter flashing detail.
- .2 Counter flashings shall not exceed 100 mm (4") in width, excluding the drip.
- .3 Where sheet metal base flashings are required, counter flashings shall overlap base flashings by a minimum distance of 50 mm (2").
- .4 Counter flashings shall be fabricated with a drip along their lower edge to shed water.

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- .5 For reglet style counter flashings, the wall reglet shall be straight, of uniform width ranging between 12.7 mm (1/2") and 19 mm (3/4") wide and not less than 19 mm (3/4") deep. The sheet metal counter flashing shall be mechanically fastened into the reglet at maximum 600 mm (2 ft.) centers and the exposed reglet opening continuously caulked.
- .6 Where use of a reglet is impractical, a kick-out style counter flashing may be used for smooth surfaced substrates. Kick-out style counter flashings shall be mechanically fastened to the wall at maximum 600 mm (2 ft.) centers. Fasteners shall be placed immediately below the kick-out. A continuous metal bar may be incorporated to ensure wall contact is maintained. The kick-out lip shall be continuously caulked with a compatible sealant tooled to shed water.

8.5 ROOF EDGE FLASHINGS

- .1 A metal flashing is required to finish, shed water and protect thermoplastic membrane terminations at roof edges.
- .2 The roof edge may be finished with a cant edge detail, a parapet flashing or a drip edge flashing detail.
- .3 Exposed fasteners are not permitted in the cant area or on the horizontal/top cap flashing surface

8.5.1 Cant Edge Flashing

- .1 Where cant edge flashing is required, it shall be joined by S-lock end joints and concealed fastened to the exterior face of the wood cant strip with galvanized roofing nails placed in end joint flanges.

8.5.2 Parapet Flashing

- .1 Where parapet cap flashing is required, the top of the parapet shall be covered with wood blocking capable of providing sufficient holding force to anchor nail and screw fasten flashing.
- .2 Parapet cap flashings shall be fabricated to completely cover the membrane flashing over the blocking and incorporate a minimum vertical face dimension of 50 mm (2"), excluding the drip edge. The exterior vertical flashing face shall overlap the completed wall finish.
- .3 Parapet flashings shall be concealed fastened at one end using galvanized roofing nails placed in both the horizontal and vertical faces of the S-lock end joint. Additionally, the exterior cap flashing face shall be mechanically fastened to the blocking with wood screws placed at intervals not exceeding 1500 mm (5 ft.) centers. Sheet metal hook strips, fastened to the blocking, may be substituted for the wood screws.
- .4 When the parapet width (girth) exceeds 400 mm (16"), the maximum length of cap flashing piece shall be 1500 mm (5 ft.).

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8.5.3 Drip Edge Flashing

- .1 Where parapet cap flashings are not required, the thermoplastic membrane may be terminated to a continuous thermoplastic coated drip edge sheet metal flashing attached at the exterior top surface of the parapet or to wood blocking fastened to the roof deck's perimeter edge.
- .2 Drip edge flashings shall be fabricated from thermoplastic coated sheet metal with horizontal flanges between 100 mm (4") and 125 mm (5") wide. The fascia flange shall not exceed 100 mm (4") in width on the vertical surface excluding the drip.
- .3 For non-nailable substrates, continuous wood blocking shall be fastened to the structure for the attachment of the drip edge flashing. Prior to fastening, the horizontal flange shall be set in a continuous bed of a compatible sealant, placed over the primary membrane. The horizontal flange shall be mechanically fastened to the blocking with fasteners staggered front to back at maximum 200 mm (8") centers. Drip edge flashings shall be joined with minimum 100 mm (4") wide end laps. The top surface of the horizontal flange shall be thermoplastic coated to ensure proper weld of the thermoplastic membrane flashing ply.

8.6 CONTROL JOINT FLASHINGS

- .1 Roof area dividers require a sheet metal cap flashing.
- .2 Roof expansion joints require a sheet metal cap flashing.

8.7 SCUPPER DRAINS

- .1 Sheet metal scupper drains shall be sized to extend beyond the exterior wall finish and to provide for minimum 100 mm (4") wide thermoplastic coated base and wall flanges.
- .2 Through wall type scuppers must be four (4) sided with the upper scupper opening surface covered with sheet metal.
- .3 Where control of drainage is required, the scupper assembly may include an external hopper and an attached down pipe.

8.8 MISCELLANEOUS SHEET METAL FLASHINGS

- .1 Miscellaneous sheet metal flashings such as roof jacks, gum boxes, ventilators, goosenecks and scupper penetrations shall be watertight, incorporate a continuous one piece thermoplastic coated deck flange, with no open corners, using a double seam or approved lock to secure the deck flange to the vertical flashing body.
- .2 Deck flanges shall not be fabricated less than 100 mm (4") nor more than 200 mm (8") in width. Round horizontal flange corners using a minimum 12.7 mm (1/2") radius.
- .3 Watertight sheet metal flashing joints shall be soldered or welded.
- .4 Watertight aluminum flashing joints must be welded.
- .5 When approved, specialty flashings may be substituted for fabricated sheet metal flashings.

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