3.3 Base Tie-in

3.3.1 Base Tie-in General

In order to account for structural movement of the substrate, stresses inherent in the handling and production of elastomeric sheets and thermal variations, the EPDM membrane should be mechanically attached at all locations where the membrane ends or passes through an angle change greater than 15%, such as roof edges, curbs, interior walls, around roof penetrations, etc.

If the securement is inadequate to resist these stresses, the membrane may tear or pull away from the termination and allow water to enter the building.

For situations where the installation of a base tie-in detail is required but not feasible, consult Firestone’s Technical Department for advice.

There are two methods of membrane securement at the base tie-in, either the installation of a QuickSeam Reinforced Perimeter Fastening Strip with batten strips or seam plates beneath the field membrane or the installation of batten strips directly over the field membrane.

For the following reasons, Firestone recommends the use of a QuickSeam Reinforced Perimeter Fastening Strip wherever possible:

- Reduced installation costs: the Q.S.R.P. Fastening Strip allows for an economical installation, eliminating the increased labour required when interrupting the field membrane.
- Fewer roof seams: the system is a non-penetrating method of roof membrane attachment. Field seams at perimeter walls and roof curbs can be eliminated.
- More adapted to inclement weather conditions: perimeter walls and roof curbs can be temporarily protected against moisture prior to splicing. The roof is watertight at upstands the first day.

The Firestone QuickSeam Reinforced Perimeter Fastening Strip needs to be installed with appropriate fasteners at maximum centres of 300 mm.

Firestone recommends the use of metal batten strips. Point attached fastening systems can be used as an alternative in combination with the QuickSeam Reinforced Perimeter fastening strip. When fixing directly over non-reinforced EPDM membrane, the use of a batten strip is always required. Point attached fastening systems can not be used in this situation.

Fasteners should be installed so that the fastener heads are flush to the batten or plate. When battens are cut, the cut end must be rounded to remove burrs and sharp edges.

Some types of insulation materials such as extruded and expanded polystyrene should not come into contact with the solvents of QuickPrime Plus. It is recommended to extend the vapour control layer 300 mm at the edge of the roof and cover the insulation prior to installation of the base tie-in detail, in order to protect the insulation materials.

Refer to the details at the end of this document or consult Firestone’s Technical Department for base tie-in details to adjoining roofing systems.
3.3.2 Base Tie-in With QuickSeam Reinforced Perimeter Fastening Strip

- **Applicability**
  The QuickSeam Reinforced Perimeter Fastening Strip is designed to be used in all systems to attach the field membrane at straight parapets, roof curbs and interior walls. It is the standard detail for perimeter base tie-ins. The strip should not be used as a mechanically attached perimeter picture frame or as the separating batten between the adhered perimeter and the central area in mechanically attached systems.

- **Installation Instructions**
  The QuickSeam Reinforced Perimeter Fastening Strip is unrolled along the wall upstand and is either attached to the flat roof substrate or against the wall. The selection for vertical or horizontal attachment is related to the ease of application (nature of the substrate, thickness of insulation). A vertical attachment into the upstand is recommended whenever possible. Note that in the following illustrations, the batten strip on top of the QuickSeam Reinforced Perimeter Fastening Strip can be replaced by plates.

  **Horizontal attachment of Perimeter Fastening Strip**
  Position the strip as close as possible in the angle change, making sure that it lays flat without any wrinkles. The tape with release paper is wound on the outside of the roll. The tape portion of the strip shall be placed so that the tape side is the farthest from the wall upstand. Allow a maximum gap of 10 mm between the strip and the wall.

  ![Fig. 3.3.1](image)

  Install the batten strip as illustrated, over the portion of the strip without tape. Avoid buckling and position the batten and fasteners approx. 30 mm from the edge of the strip. Do not cover any part of the release paper with the batten strip.
**Vertical attachment of Perimeter Fastening Strip**
Position the strip over the substrate along the entire length of the wall. Position the portion of the Q.S.R.P.F. Strip without tape 50 mm up against the wall, making sure the strip lays flat on the horizontal without any wrinkles.

![Fig. 3.3.2](image)

Install the batten strip as illustrated without causing buckling on the vertical within 30 mm of the angle break.

- **Special Considerations**
  The Q.S.R.P.F. Strips may not overlap and should be stopped a maximum of 150 mm from the corner at all inside corners. In the horizontal installation, batten strips will be installed as illustrated below.

![Fig. 3.3.3](image)
In the vertical installation, batten strips must also end a maximum of 150 mm from the corner, as illustrated.

Fig. 3.3.4

At outside corners, batten strips and Q.S.R.P.F. strips must be stopped a maximum of 150 mm from the corner, as illustrated.

Fig 3.3.5
3. Installation

Adjoining QuickSeam Reinforced Perimeter Fastening Strips need to butt-join at the end of the roll.

If a structural steel support in the angle break makes mechanical attachment impossible, the QuickSeam Reinforced Perimeter Fastening Strip may be positioned maximum 150 mm out from the angle. Refer to the details at the end of this document for additional information.

3.3.3 Base Tie-in With Batten Strips

- **Applicability**
  The base tie-in detail with batten strips is used as an alternative to the QuickSeam R.P.F. Strip. This detail is more suitable for curved parapets, curbs and interior walls; it is also systematically used around small skylights (less than 1.5 m x 1.5 m) and for picture frames around roof penetrations (HVAC, pipe penetrations, etc.).

- **Installation Instructions**
  Batten strips are either installed on the flat roof substrate or on the wall. The selection for vertical or horizontal attachment is related to the ease of application (nature of substrate, thickness of insulation). A vertical attachment into the upstand is recommended whenever possible.

*Horizontal installation*
Install the batten strip as close as possible to the angle change. The centre of the strip should be positioned within 30 mm of the angle change. The batten strip should be fastened at 300 mm centres with appropriate fasteners. More frequent fastening centres may be required to achieve a continuous compression and avoid buckling. The EPDM membrane must extend 20 mm beyond the edge of the batten strip. Adjoining batten strips must be overlapped with a single fastener anchoring both sections. When batten strips are cut, the cut ends must be rounded to remove all burrs and sharp edges. Batten strips should be started and finished as close as possible to the inside and outside corners. Position the last fastener maximum 10 mm from the end of the strip.

**Vertical installation**

The EPDM field membrane should be positioned against the upstand a minimum of 50 mm, extending 20 mm above the top edge of the vertically installed batten strip. For curved curbs, the membrane should be cut to the shape of the curve to avoid wrinkles in the field membrane.

Install the batten strip on the vertical within 30 mm of the angle change. No bridging of the membrane at the angle change is allowed. Batten strips should not be bent around corners. For concrete and masonry walls, pre-drilling will be required. The batten strip should be fastened at 300 mm centres with appropriate fasteners. A more frequent fastening pattern may be required to achieve a continuous compression and avoid buckling.

Use a vacuum machine to pick up all dust, when holes are pre-drilled, prior to starting wall flashing.