

# RubberGard<sup>™</sup> EPDM Application Guide

RubberGard EPDM RubberGard Platinum EPDM RubberGard EcoWhite™ EPDM RubberGard EPDM SA

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NOTE: The contents of this guide are considered accurate at time of posting. All information contained within should be validated for accuracy as it relates to specific project conditions or requirement. Specific codes, uplifts or other factors may result in changes to the information contained within this document. Validate all specific conditions with a Holcim Regional Technical Coordinator prior to its use.

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# General

This Guide includes instructions for the installation of Elevate's RubberGard EPDM Roofing Systems. References to the Design Guide, Technical Information Sheets (TIS), Detail Drawings and other sections of the Holcim Technical Database are necessary to ensure the completed roofing system is installed in accordance with Holcim requirements when projects require a Red Shield<sup>™</sup> Warranty.

#### Platinum Warranty Critical Information:

This guide notes specific application requirements when Platinum Warranties are requested. Please review this document, Design Guides, Specifications, and Details for further information. Please contact a Holcim Regional Technical Coordinator for additional information or questions.

#### RubberGard EPDM SA Warranty Critical Information:

This guide notes specific application requirements when RubberGard EPDM SA System Warranties are requested. Please review this document, Design Guides, Specifications, and Details for further information. Please contact a Holcim Regional Technical Coordinator for additional information or questions.

#### **EcoWhite Warranty Critical Information:**

This guide notes specific application requirements when EcoWhite System Warranties are requested. Please review this document, Design Guides, Specifications, and Details for further information. Please contact a Holcim Regional Technical Coordinator for additional information or questions.

# NOTE: IF A PROPOSED APPLICATION FALLS OUTSIDE OF THIS SPECIFICATION, CONTACT HOLCIM TECHNICAL SERVICES FOR ASSISTANCE.

# **Jobsite Considerations**

#### Safety

- Comply with all applicable regulatory safety and health regulations.
- Consult container labels, Safety Data Sheets (SDS) and Technical Information Sheets (TIS) for specific safety instructions for all products used on the project.
- Keep all adhesives, sealants, and cleaning materials away from ALL ignition sources (i.e., flames, fire, sparks, etc.). Do not smoke while using these materials.
- Care must be used when installing fasteners or other required roof related items to avoid possible conduits and other piping in or under the deck.
- Fumes from adhesive solvents may be drawn into the building during installation through rooftop intakes. Take suitable precautions when using such products on an occupied building.
- Do not use heat guns or open flames to dry adhesives and primers.

#### Cautions

- Store RubberGard EPDM membranes in the original undisturbed plastic wrap in a manner to protect it from becoming damaged. Insulation must be properly stored and protected from ignition sources, moisture, and damage. Consult container labels, Safety Data Sheets and Technical Information Sheets for specific safety, use and storage instructions for all products used on the project.
- Do not use oil-base or bituminous-base roof cement with any RubberGard EPDM products.
- Store Elevate Insulations properly protected from ignition sources, moisture, and damage.

#### **Cold Weather**

When the outside temperature is below 40 °F (4 °C), certain combinations of temperature and humidity may cause condensation on the surface of solvent-based adhesives and primers. If this condition occurs, discontinue the application. When the ambient air conditions no longer cause condensation on adhesive surfaces and the membrane is clean and dry then proceed with application of adhesive or primer.

- The consistency of sealants, adhesives and primers will begin to thicken as the temperature drops. To minimize this consequence:
  - Start work with sealants, adhesives and primers that have been stored between 60 °F to 80 °F (16 °C to 27 °C).
  - Complete test areas to determine if conditions will cause problems such as condensation with the application of the materials.
  - Stop the operation or change to another warm container when material becomes too thick to properly apply.
- When the outside temperature is below 40 °F (4 °C), installation of the Elevate EPDM System requires additional precautionary measures:
  - Ensure that the roof surface is dry. Even trace amounts of moisture may cause poor adhesion and lead to moisture entrapment within the roofing system.
  - Use of temporary roofs should be considered when roof applications must occur in cold or potentially wet weather to permit continued interior construction or roof-top work.
  - Refer to the product Technical Information Sheets for individual product temperature restrictions / limitations if applicable.
- If using Water-Based Bonding Adhesive (WBBA), ambient and substrate temperatures must be at least 40 °F (4 °C) and rising, during and 48 hours after application, for the material to be applied and perform as designed. Expect longer drying times during lower temperatures or higher humidity. Plan for material staging.

# **Roof Substrate Preparation**

It is the roofing contractor's responsibility for ensuring that the substrate is acceptable for the Elevate roof system. Elevate Platinum System warranties require either new construction or a complete removal of the existing systems down to the deck.

#### **Correct Substrate Defects**

- Defects that need to be corrected before work can commence should be brought to the attention of the General Contractor or Owner in writing and addressed by them.
- For re-roofing applications, remove existing roof system components as specified by the project designer. If components are discovered during installation that could be detrimental to the performance of the new roof system, they should be brought to the attention of the project designer for corrective action.
- Recovering an existing roof system is an alternative to removing existing roof components. However, if soundness and
  integrity of the existing roof system cannot be verified, good roofing practice requires a complete tear-off to the structural
  deck. Non-destructive testing, in conjunction with core cuts, must be completed to determine the condition of the existing
  roof system and decking.
- The building owner or project designer is responsible for assuring that all wet insulation and/or wet substrate materials are removed in a re-roofing application. The best diagnostic technique is taking and evaluating a series of roof cuts. There are three other techniques that are currently available to make this determination by indirect means. These are:
  - Nuclear moisture detection
  - Infrared thermography
  - Electric capacitance

These techniques provide measurement of factors that can be associated with the presence of moisture, which can then be verified with the use of roof core cuts to confirm the results of the non-destructive testing.

• In the absence of a design professional, the roofer should coordinate with the building owner to assure conditions are satisfactory to commence with the project as designed.

#### **Remove Moisture**

Ponded water, snow, frost and/or ice, present in more than trace amounts must be removed from the work surface(s) prior to installing the Elevate EPDM Roofing System.

#### **Prepare Surface**

Acceptable substrates to which the Elevate EPDM Roofing System is installed must be properly prepared prior to roof system installation. The surface must be relatively even, clean, dry, smooth, free of sharp edges, fins, lose or foreign materials, oil, grease, and other materials that may damage the roof system. Rough surfaces that could cause damage to the membrane must be overlaid with insulation or cover boards as determined by the design professional.

#### Fill Voids

All surface voids of the immediate membrane substrate greater than 1/4" (6.35 mm) wide must be filled with insulation.

Concrete Additives can have a negative impact on the adhesion of asphaltic membranes and insulation products. The concrete supplier/installer should verify that any additives in the mix will not render the deck unsuitable for roofing application. Holcim does not accept surface-applied curing compounds for

### warranted systems.

Holcim does not accept for warranty any concrete substrates that have been sealed with chemical sealers or silicon surface treatments.

# **Wood Nailer Locations and Installation**

Holcim Solutions and Products US, LLC. no longer requires the use of treated wood nailers. This is due to the new EPA requirements that have caused treated lumber to have more corrosive properties than the previous generation of wood treatments.

If architectural specifications require the use of treated wood nailers, the following Holcim requirements apply:

- Refer to the Elevate Design Guide for the appropriate Elevate fastener to be used for securing membrane into wood nailers.
- Nails penetrating treated wood nailers must be hot-dipped galvanized, meeting ASTM A653, Class G185 or as currently
  recommended by industry associations.
- Aluminum fasteners, flashings and accessory products must not make direct contact with treated wood nailers.
- Uncoated metal and painted metal flashing and accessories, except for 300-series stainless steel, must not make direct contact with treated wood nailers.
- When in doubt of the type of treatment of the wood nailer or its compatibility with a metal component, use EPDM membrane as a separator.

Because of recent EPA regulations regarding treated wood, new treatments for lumber may be highly corrosive to fasteners. Contact the fastener manufacturer for their recommendations on fasteners if attaching nailers that have been treated with corrosive materials.

Wood nailers must be installed as specified by the project designer or as noted in Elevate Details and the EPDM System Design Guide. Install wood nailers as follows:

#### Wood Nailer Grade

- When wood nailers are used, Holcim specifications require the use of wood that is kiln- dried (Southern Pine, Douglas Fir) structural grade #2 or better, unless otherwise noted.
- While being stored on the roof, properly elevate, and cover non-treated wood to protect from the weather and keep dry.
- Nailers must be properly anchored to provide secure attachment through the warranty term.
- Nailers are not covered by the Red Shield Warranty.

#### Size of Nailer

Nailers shall be a min. thickness of  $2" \times 4"$  (51 mm x 102 mm) nominal  $1'_{2}" \times 3'_{2}"$  (38 mm x 89 mm) and exceed the width of any metal flange attached to it by a min. of 1/2" (13 mm).

#### **Position of Nailer**

- Total wood nailer height must match the total thickness of insulation being used and should be installed with a 1/8" (3.2 mm) gap between each length and each change of direction.
- When nailers are stacked, end joints should be staggered a min. of 12" (305 mm) from the prior layer in straight runs.

#### Secure Wood Nailer

- Wood nailers must be firmly fastened to the deck or building.
- Mechanically fasten wood nailers to resist a min. force of 200 lb/f (890 N) in any direction.
- Refer to attachment requirements of the roofing system as specified by the project designer if greater than 200 lb/f (890 N).

#### **Taper Wood Nailer**

The wood nailer must be tapered (if applicable) so that it will always be flush at the point of contact with the insulation (refer to Elevate Details).

#### Poured-In-Place Decks

For new construction over poured-in-place decks or fill, and all recover projects, a waterproof separator membrane shall be placed between the non-treated lumber and the deck.

#### Installation of Wood Nailers by Others

- Make these specifications and details available when nailers are to be installed by others.
- Work that compromises the integrity of the roof system may jeopardize the roof warranty.

#### For Additional Information

Please consult the NRCA Special Report, "Use of Treated Wood in Roof Assemblies".

# **Air or Vapor Barrier Installation**

#### Install Vapor Retarder (when specified):

Install a vapor retarder as specified by the project designer or as required by Holcim Solutions and Products US, LLC.

#### Install Air Barrier (when specified):

Install an air barrier as specified by the project designer or as required by Holcim Solutions and Products US, LLC.

# **V-Force Vapor Barrier Installation**

Elevate V-Force Membrane is intended for use in applications where a vapor barrier is specified.

- 1. All substrates except metal decks must be primed with either Elevate SA Water Based, SA Solvent Based or SA-LVOC Primer.
- 2. Position V-Force Membrane with min. 3" (76 mm) side laps and 6" (152 mm) end laps.
- 3. Shingle side laps up the roof slope wherever possible and stagger end laps min. 12" (305 mm).
- 4. Peel back approximately 5' (1.5 m) of release liner from the end of the roll and adhere it to the substrate.
- 5. Keeping the V-Force flat and properly positioned, remove the remaining release liner on a 45° angle.
- 6. Roll the V-Force with a 75 lb (34 kg) roller to fully mate the product to the substrate.
- 7. Refer to the Elevate website (<u>www.HolcimElevate.com</u>) for details and additional product and installation information.

# **Base Sheet Installation**

This section is intended for applications where it has been determined that a base sheet is required for roof system installation. Refer to the design section of the Elevate database for suitable substrates, and the Technical Information Sheets for additional product and installation information.

#### General

- 1. Starting at the low point of the roof, align the base sheet, unroll, and allow the sheet to relax prior to attaching. After allowing the base sheet to relax, adhere or attach to the substrate with appropriate materials as indicated below.
- 2. Roofing base ply shall never touch roofing single ply, even at roof edges, laps, tapered edge strips, and cants. Cut out fishmouths/side laps, which are not completely sealed, and repair accordingly. Adhered base sheets which are not fully and continuously bonded shall be replaced.

#### Hot Asphalt Attachment

- 1. The base sheet may be attached using a solid mopping of Elevate SEBS mopping asphalt or ASTM D 312 Type III or IV hot steep asphalt.
- The substrate must be suitable for asphalt attachment (structural concrete, base sheet, coverboard, etc.). Refer to the Design section of this manual for suitable substrates and the Technical Information Sheets for additional information on specific base sheets.
- 3. The asphalt shall be at the manufacturer's stated EVT at point of installation.
- 4. Align subsequent rolls, shingling the laps, maintaining a min. 3" (51 mm) side lap and min. 6" (152 mm) end lap and repeat the application.
- 5. Holcim recommends that a half sheet be used as the first roll to ensure that the base sheet laps and the cap sheet laps are not aligned. Half sheets may be required, depending on the roof slope.
- 6. Refer to the Design section for slope limitations.
- 7. Do not install any base or ply sheets in solid mopping of asphalt directly to polyisocyanurate insulation. The base sheet must be mechanically attached, or spot attached using ASTM D312 Type III or IV asphalt or Elevate SEBS Mopping Asphalt. An overlayment of StructoDek HD Fiberboard, SECUROCK or DensDeck may be installed over the Elevate ISO 95+ GL / ISOGARD™GL polyisocyanurate insulation before the base sheet is installed.

#### 8. Solid Mopping

- 1. Starting at the low point of the roof, align the base sheet and unroll into a solid mopping of hot asphalt.
- 2. With a stiff push broom, immediately broom the base sheet ensuring full contact.

#### **Mechanical Attachment**

Starting at the low point of the roof, align the base sheet, unroll, and allow the sheet to relax prior to attaching. After allowing to relax, begin attachment at one end and work towards the other end, keeping the roll tight and wrinkle free. Align subsequent rolls, shingling the laps, maintaining a min. 3" (76 mm) side lap and min. (152 mm) end lap and repeat the application. Stagger all end laps.

#### Fasten Base Sheet Using Elevate Insulation Plates and Fasteners

- Using Elevate Insulation Plates and Fasteners, base sheets may be attached through insulation into the deck, or directly to
  poured in place concrete, wood, gypsum, cementitious wood fiber, lightweight concrete decks, or through a smooth surfaced
  built-up or modified bitumen roof system. Refer to the EPDM Design Guide for information on fasteners for specific deck
  types.
- 39" (1 m) Elevate compatible base sheets and cap sheets used as base sheets. The Base sheet must be mechanically attached 12" (305 mm) o.c. in the side laps and 18" (457 mm) o.c. in two staggered rows in the field of the sheet. Each row shall be 13" (330 mm) approximately in from the sides of the base sheet.

#### Fasten Base Sheet Using Cap Nails

- Using cap nails with 1" (25 mm) diameter steel heads, base sheets may be attached to plywood, wood plank, and oriented strand board decks.
- Mechanically attach with cap nails specified by the project designer at 9" (229 mm) o.c. in the side laps and 18" (457 mm) o.c. in two staggered rows in the field of the sheet. Each row shall be 12" (305 mm) approximately in from the sides of the base sheet.
- Cap nails cannot be used to attach insulation, attach a base sheet through an existing insulated roof, attach a base sheet over a gravel surfaced built-up roof, or through a smooth surfaced un-insulated built-up roof over 1/2" (13 mm) thick.
- Fasteners used to attach base sheet must be manufactured for the deck type and be Factory Mutual Approved. This attachment pattern applies to all Elevate compatible base sheets and cap sheets used as base sheets.

#### Fasten Base Sheet Using Specialty Fasteners

- Using nail-in type fasteners and plates, base sheets may be attached to gypsum, cementitious wood fiber or lightweight insulating concrete decks. The base sheet must be mechanically attached with fasteners as acceptable to the substrate.
- Nail-in fasteners cannot be used to:
  - Attach insulation
  - $\,\circ\,$  Attach a base sheet through an existing insulated roof
  - $\,\circ\,$  Attach a base sheet over a gravel surfaced built-up roof
  - $\,\circ\,$  Attach a base sheet through a smooth surfaced built-up roof

#### Base Sheet Laps

- Hot steep asphalt applied Base sheets must be lapped a min. of 3" (50.8 mm) in the side laps.
- Mechanically attached torch applied, or automatic heat welded base sheets must be lapped a min. of 3" (76 mm) in side laps.
- End laps must be min. 6" (152 mm).
- In all cases, an offset of 12" (305 mm) min. must be maintained between the side and end laps of the base sheet and the cap sheet.

# **Insulation Installation**

Elevate Platinum EPDM Roofing System warranties require a new approved substrate board. Ballast systems are not permitted when the membrane is installed directly over any mechanically attached insulation or over a hard surface such as HailGard / ISOGARD HG, ISOGARD HD, DensDeck, SECUROCK, OSB or concrete. Ballast systems are not approved for use when Elevate Platinum System warranties are desired.

#### **Install Insulation**

- Install only as much insulation as can be covered with roofing membrane and completed before the end of the day's work or before the onset of inclement weather.
- Form continuous insulation joints over deck flange. Do not cantilever insulation edges over deck ribs. Min. bearing surface: 1" (25 mm).

#### **Multiple Layers of Insulation**

When installing multiple layers of insulation, all joints between layers shall be staggered 6" (152 mm) min.

#### Fit Insulation.

- Neatly fit insulation to all penetrations, projections, and nailers. Insulation should be loosely fitted, with no gaps greater than 1/4" (6 mm) filled with acceptable insulation. The membrane shall not be left unsupported over a space greater than 1/4" (6 mm).
- On metal decks, the edge of the board parallel with the roof deck flutes should be completely supported by the flange.
- Tapered insulation with acceptable facers for bonding must be installed around roof drains to provide proper slope for drainage as shown in Elevate Details.

#### **Insulation Attachment - Mechanical**

- Insulation must be attached using Elevate Insulation Plates and Fasteners. HailGard fasteners may be used to attach HailGard / ISOGARD HG insulation without the use of insulation plates.
- If installing on a metal deck (where allowed by specification), the edge of the board parallel with the roof deck should be completely supported and fasteners must penetrate the top flange of the deck.
- When installing fasteners, care should be taken to avoid penetration of conduits and other piping below or encased in the deck.
- For insulation attachment please refer to the Technical Information Sheets that reference the specific insulation being used. Use appropriate attachment patterns and fastening rates of that specific insulation and desired warranty term. Elevate Platinum Warranties requires increased fastening.
- For specific deck penetration requirements refer to the Technical Information Sheet that references the specific fastener being used.
- When installing a multi-layer insulation assembly, the fastening pattern is determined by the type and thickness of the top layer of insulation and the performance criteria of the system. MAS systems with an adhered perimeter shall require the perimeter insulation to use fastening pattern used in an adhered system as determined by the top layer of insulation.
- Multiple layers of insulation may be installed using a common fastener.
- Ensure that the fasteners are fully seated, but not overdriven. Use a properly adjusted clutch or depth sensing type of drill. Do not use a standard single speed drill. If a fastener must be removed after installation, do not reinstall fastener into same hole.
- Fastener pull tests should be conducted on existing decks or decks with conditions that are not "like new". Pull values below Holcim requirements may require increased fastening, alternate system requirements or refusal of warranty coverage.

#### **Platinum Warranty Critical Information:**

**Fastened Insulation:** Insulation must be fastened at a rate of no less than 16 Elevate Fasteners and Insulation Plates per 4' x 8' (1.2 m x 2.4 m) board. Refer to the Technical Information Sheet for the specific insulation for attachment patterns. The Elevate Fastener must be appropriate for the deck or substrate.

#### Insulation Attachment – Asphalt Attachment

- The substrate may require priming or a base sheet prior to installing the insulation. Refer to the Design Guide for specific information.
- The insulatio shall be no larger than 4' x 4' (1.2 m x 1.2 m) panels.
- Insulation may be attached using a solid mopping of Elevate SEBS Asphalt (as required by warranty terms) or ASTM D 312 Type III or Type IV asphalt. Resista™ / ISOGARD CG and ISOGARD HD may not be asphalt attached.
- The asphalt shall be at the manufacturer's stated EVT less ~ 25 °F (-4 °C) at the point of installation. Install enough asphalt to achieve complete adhesion, approximately 25-30 lb per 100 ft<sup>2</sup> (1.2-1.4 k/m<sup>2</sup>), depending on substrate.
- It is necessary to "walk" boards in to ensure complete adhesion to the substrate.
- Additional layers of insulation should be installed in the same fashion.

#### Insulation Attachment – Adhesive Attachment

- Insulation may be attached using I.S.O. Twin Pack™, I.S.O. Stick™, I.S.O. SPRAY™ R or Twin Jet.
- Apply the adhesive in strict accordance with the instructions provided with the product and the Technical Information Sheets that are a part of this Technical Database.
- It may be necessary to prime the substrate prior to installing the insulation adhesive with a prescribed primer.

- If installing on a metal deck (where allowed by specification), the edge of the board parallel with the roof deck flutes must be completely supported.
- The insulation or coverboard shall be no larger than 4' x 4' (1.2 m x 1.2 m).
- It is necessary to weight each board, using full pails of bonding adhesive or other available source of weight that will not damage the insulation board, at each corner, to ensure complete adhesion to the foam and substrate. Refer to the specific product Technical Information Sheet for min. wait times.

# **Membrane Installation**

This section contains information for RubberGard membranes systems. Read all the information to ensure that it is the correct system and application. For RubberGard Platinum systems refer to Platinum Application Section of this guide.

#### QuickSeam<sup>™</sup> RPF Strip

- Membrane installations may require the use of a QuickSeam Reinforced Perimeter Fastening Strip (QSRPFS) resulting in coordination with the layout and installation of membrane system. This process should be addressed early in the roofing process.
- The additional securement details for the membrane (base tie-in) will occur at all locations where the membrane goes through a slope change greater than 1" (25 mm) in 12" (305 mm) (i.e., roof edges, curbs, interior walls, etc.) and other areas as details indicate. See additional information in Section XII.A.
- RubberGard LSFR PT (Pre-Taped) and RubberGard Max PT Panels
  - RubberGard and RubberGard Max PT Panels method of installation requires that the rolls be staged correctly for unrolling for the laps to shed water correctly.

#### QuickSeam RMA Strip

- Membrane installations may require the use of a QuickSeam Reinforced Mechanically Attached System (QSRMAS) resulting in coordination with the layout and installation of membrane system. This process should be addressed early in the roofing process.
- The additional securement details for the membrane (base tie-in) will occur at all locations where the membrane goes through a slope change greater than 1" (25 mm) in 12" (305 mm) (i.e., roof edges, curbs, interior walls, etc.) And other areas as details indicate.
- RubberGard LSFR PT (Pre-Taped) and RubberGard Max PT Panels
  - RubberGard and RubberGard Max PT Panels method of installation requires that the rolls be staged correctly for unrolling for the laps to shed water correctly.
- Install the QuickSeam R.M.A. Strip Mechanically Attach the QuickSeam R.M.A. strips to the substrate with an approved fastener and a "V" plate or Batten Bar per Holcim specifications. Do not remove release paper until Single-Ply QuickPrime<sup>™</sup> Primer is applied and membrane is ready for installation. Should a batten bar be used, it is required to caulk the fastener heads with AP Sealant and round the corners prior to installation.
- 2. Position the EPDM Sheets

Place membrane panel, without stretching, over the installed QSRMA Strip and allow to relax for a minimum of 30 minutes before splicing or attaching. During cold weather application, it is recommended that the smallest panels be used to minimize folds. (Larger panels have factory folds which may take longer to relax during cold weather). The RubberGard R.M.A. System must be installed so that the seams shed the flow of water.

3. Apply Single-Ply QuickPrime Primer

Apply Single-Ply QuickPrime Primer using the QuickScrubber to the back of the EPDM membrane over the width of the QuickSeam R.M.A. strip. Ensure that the primer has been applied to a sufficient width and with sufficient quantity.



4. Remove the Paper Backing

Allow the Single-Ply QuickPrime Primer to flash off completely. Use the touch-push test to test for dryness. Remove both release papers from the QuickSeam R.M.A. strip and roll the field membrane onto the strip. Use a Stiff Push Broom to ensure an initial bond between the RMA Strip and the field membrane



5. Roll the QuickSeam R.M.A. Strip

Using a stiff broom Roll the strips using Elevate's QuickRoller™ across its entire length above both tapes. NOTE: Do not use metal rollers or power rollers over QSRMA Strip.



#### Adhered Membrane

- 1. Position Membrane
  - The RubberGard EPDM Adhered Systems shall be installed so that the seams shed or run parallel to the flow of water.
  - Place membrane panel, unroll without stretching, over the acceptable substrate leaving sufficient membrane for tie-ins, roof edges and seaming. Allow membrane to relax for a minimum of 30 minutes before adhering or splicing. During cold weather application, it is recommended that the smallest panels be used to minimize folds (larger panels have factory folds which may take longer to relax during cold weather).
  - Placement of additional rolls of membrane shall provide for sufficient overlaps for seaming of membranes. Refer to standard lap splice details.
- 2. Fold Membrane Back

After making sure the sheet is placed in its final position allowing for the minimum lap width per Holcim specifications, fold it back evenly onto itself without wrinkles to expose the mating surface of the sheet.

- 3. Remove Dusting Agent and Dirt
  - Sweep the mating surfaces with a stiff broom to remove any dusting agent or dirt that may have accumulated
- 4. Apply the Bonding Adhesive (SFBA Excluded, see below)
  - Apply bonding adhesive with either a 9" (229 mm) wide solvent-resistant paint roller, power roller or a commercial-grade adhesive sprayer. Adhesive must be applied in a uniform thickness to both surfaces at the same time. If adhesive is sprayapplied, it must be back-rolled with a paint roller to assure proper contact and uniform coverage. Refer to Elevate Technical Information Sheets and container labels for specific application instructions and information on spray equipment.
  - Apply bonding adhesive at specified coverage rate refer to the container label and Technical Information Sheet for specific application requirements and coverage rates.
    - Keep Bonding Adhesive off the membrane Seam Area.
    - Care must be taken not to apply bonding adhesive over an area that is to be later spliced to another sheet or flashing. All bonding adhesives must be completely removed from the seam area.
  - Allow the bonding adhesive to flash-off. Touch the adhesive surface in several places with a clean, dry finger to be certain
    that the adhesive does not stick or string. As you are touching the adhesive, push forward on the adhesive at an angle to
    ensure that the adhesive is ready throughout its thickness. If either motion exposes wet or stringy adhesive when the
    finger is lifted, the adhesive is not ready for mating. Flash-off time will vary depending on ambient conditions of
    temperature and humidity.

#### 5. Mate the Membrane to the Substrate

- Starting at the fold, roll the previously coated portion of the membrane into the coated substrate slowly and evenly to prevent wrinkles.
- Broom the membrane to assure proper contact, compress the bonded half of the membrane to the substrate with a stiff push broom.
- 6. Repeat Procedures as necessary until all EPDM is adhered
  - Complete the membrane installation fold the un-adhered half of the membrane back onto itself and repeat the procedure.
- 7. Fabricate the Lap Splice
  - Splice the outside edge of the top sheet as specified in this guide, appropriate details and using the appropriate Elevate
    products. Refer to Lap Splice Details.
  - Apply patches at all 3-way sheet intersections and at all factory laps that intersect another sheet. Refer to Lap Splice detail series. Apply Seam Edge Treatment as required.

#### Adhered System - EPDM Solvent-Free Bonding Adhesive (SFBA)

#### Platinum Warranty Critical Information:

#### EPDM Solvent-Free Bonding Adhesive (SBBA): Not an approved adhesive for Platinum Warranties

#### 1. Horizontal Application

- a. Position non-reinforced EPDM in place over substrate (not to exceed 1":12" slope) to receive adhered EPDM membrane.
- b. Allow EPDM membrane to relax for 30 minutes (minimum).
- c. Fold EPDM membrane back to expose the substrate to receive EPDM Solvent-Free Bonding Adhesive.
- d. Surfaces to receive EPDM Solvent-Free Bonding Adhesive shall be clean, smooth, dry, and free of sharp edges, loose and foreign materials, oil, grease, and other contaminates. Sweep the mating surface of the membrane with a stiff broom to remove excess dusting agent, if present, and remove other contaminates from the mating surfaces.
- e. Apply EPDM Solvent-Free Bonding Adhesive to the mating substrate (not the EPDM membrane) uniformly. EPDM Solvent-Free Bonding Adhesive may be dispensed on substrate as follows:
  - 1. "Dip & Roll," using a medium nap paint roller to uniformly apply adhesive to substrate.
  - 2. Drop Spreader with rollers
    - a) Ambient conditions will dictate the dispensing speed.
    - b) Backroll the adhesive to ensure uniform coverage.

3. Spray application

Graco 60:1 Xtreme pump with NXT air motor, Heavy Duty Cart & Hopper Kit for gravity feed, 50' x 3/8" 4500 PSI high pressure hose, G-40 air assisted airless applicator with G40 519 tip. 1000 PSI pressure yields 9" wide adhesive fan when spray tip is 18" from the substrate. Changing the spray tip to substrate distance will change the fan width. Follow spraying with back-rolling immediately to uniformly apply adhesive on substrate.

**NOTE 1:** Take care to keep EPDM Solvent-free Bonding Adhesive from lap splice areas. **NOTE 2:** Do not mix.

- 4. Mate/roll the EPDM membrane immediately after dispensing the adhesive into the freshly applied SFBA. If a skin coat on the adhesive develops, reapplication will be needed.
- 5. Broom the membrane in place, followed by rolling with a heavy roller (carpet roller; lawn roller; etc.) immediately after mating the EPDM into the adhesive to insure proper adhesion.

#### 2. Vertical Application

- 1. Apply EPDM Solvent-Free Bonding Adhesive to EPDM membrane and vertical substrate to receive EPDM membrane uniformly.
- 2. Allow a brief open period to allow EPDM Solvent Free Bonding Adhesive to develop tack. This open period will vary, depending on ambient conditions. Warm, humid days will require brief open time. Cool, dry, days will require longer open time. Touch the adhesive surface with a clean, dry finger to determine whether tack has developed. Some trial and error will be required.
- 3. After brief open time for tack development, mate the EPDM membrane to the vertical substrate.
- 4. Roll the freshly mated vertically applied EPDM membrane using a 2" wide seam roller to insure proper mating pressure.

#### Mechanically Attached Systems (B.I.T.S. With RubberGard and RubberGard Max using Batten Strips)

#### **<u>Platinum Warranty Critical Information:</u>**

Mechanically Attached Membrane Systems using EPDM <u>do not</u> qualify for 25 Year or Platinum Warranties.

Holcim specifies installing mechanically attached membranes over steel decks; the field attachment should be installed perpendicular to the deck panels. If a project is Factory Mutual insured or specified, per FM 1-29 for Global Loss Prevention Data Sheets, attachment shall run perpendicular.

- 1. Place Membrane and Allow to Relax
  - Place membrane panel and unroll without stretching, over the acceptable substrate leaving sufficient membrane for tieins, roof edges and seaming. Allow to relax for a minimum of 30 minutes before attaching or splicing.
  - Position subsequent membrane sheets in the same manner, overlapping the ends of adjoining sheets a minimum of 3" (76 mm) and side laps a minimum of 6" (152 mm).
  - Perimeter and Field Panel widths are determined by using the Wind Design attachment Guide section of the Elevate website (<u>www.HolcimElevate.com</u>).
- 2. Layout Batten Strips

Install batten strips continuously within the 6" (152 mm) side lap area. Center the batten strip 3" (76 mm) in from the edge of the lower panel. Refer to Elevate Lap Splice Details for specifics.

- 3. Secure Batten Strips
  - a. Place the Elevate fastener starting 1" (25 mm) in from the end of the Batten Strip, then every 12" (305 mm) o.c. maximum (unless a more frequent fastener spacing is required per wind/application design guide) using the prepunched holes in the battens. Round the end of each batten and remove all burrs created by cutting, when required. Where field drilling of battens is necessary, use a 1/4" (6.35 mm) diameter drill bit.
  - b. Start fastening the batten strip from one end only. Install 2" (51 mm) diameter EPDM pads beneath the battens at batten terminations as shown in Elevate Details. Refer to EPDM system specific details.
  - c. Install fasteners so that it is properly engaged in the deck so the head flush with the batten strip surface (Use caution not to overdrive the fastener as this will cause the batten strip to buckle between the fasteners).
  - d. Use a common fastener to anchor overlapping Batten Strips using a common hole.
  - e. Do not lap corners and T-joints. Do not overlap the Batten Strips at corners or T-joints. Keep battens from the edge of intersecting splices as shown in Elevate Details.
- 4. Fabricate the Lap Splice

Splice the outside edge of the top sheet as specified in appropriate details and guides using appropriate Elevate products. Refer to Lap Splice Details.

#### Platinum Warranty Critical Information:

Mechanically Attached Membrane Systems using EPDM <u>do not</u> qualify for 25 Year or Platinum Warranties.

#### 1. Place Membrane and Allow to Relax

- a. Place the membrane panels without stretching, over the acceptable substrate, and allow membrane to relax for a minimum of 30 minutes prior to attachment.
- b. Position subsequent membrane sheets in the same manner, overlapping the ends of adjoining sheets a minimum of 3" (76 mm) and side laps a minimum of 6" (152 mm).
- c. Perimeter and Field Panel attachment is determined by using the Wind Design attachment Guide section of the Elevate website (www.HolcimElevate.com).
- 2. Layout V-Plates

Install V-Plate every 12" (305 mm) o.c. min. or as required by the specification within side lap area. Center of the V-Plate 3" (76 mm) in from the edge of the lower panel. Refer to Elevate Details for specifics.

3. Secure V-Plates

Install each fastener so that it is properly engaged in the deck and the head is seated in the V-Plate. Use caution not to overdrive the fastener.

4. Fabricate the Lap Splice

Splice the outside edge of the top sheet as specified in appropriate details and guides using the appropriate Elevate products. Refer to Lap Splice Details.

**NOTE:** For code specific information please review the Code Approval Guide on the Elevate website www.HolcimElevate.com.

#### Mechanically Attached System (MAS Using Batten Strips)

#### Platinum Warranty Critical Information:

- Mechanically Attached Membrane Systems using EPDM <u>do not</u> qualify for 25 Year or Platinum Warranties.
- 1. Place Membrane and Allow to Relax
- Place the membrane, without stretching, over the acceptable substrate, and allow it to relax for a minimum of 30 minutes prior to attachment. Position subsequent membrane sheets in the same manner, overlapping a minimum of 4" (102 mm).
- 3. Fabricate the Lap Splice
- 4. Splice the outside edge of the top sheet as specified in SECTION 2.09 using the appropriate Elevate products. Refer to Lap Splice Details.
- 5. Layout Elevate Batten Strips
  - a. Place the batten strips over the membrane in the designated pattern as outlined in the Wind Design Guide in the Elevate website.
  - b. Place the fastener starting 1" (25 mm) in from the end of the Batten Strip, then every 12" (305 mm) (unless a smaller fastener spacing is required) using the pre-punched holes in the battens.
  - c. Start fastening the Batten Strip from one end only. Do not start from both ends as this will buckle the batten.
- 6. Install Fasteners

Install each fastener so that it is properly engaged in the deck and the bottom of the head is flush with the batten strip surface. Use caution not to overdrive the fastener as this will cause the batten strip to buckle between the fasteners.

- 7. Lap Field Runs of Elevate Batten Strips
  - a. Use a common fastener to anchor overlapping Batten Strips using a common hole.
  - b. When batten strips must be field cut, round the cut end. Assure that all burrs created by cutting are removed. Where field drilling of metal battens is necessary, use a 1/4" (6.35 mm) diameter drill bit. Refer to Detail LS-3
  - c. Do not lap corners and T-joints: do not overlap the Batten Strips at corners or T-joints. Keep battens from the edge of intersecting splices as shown in Elevate details. Install 2" (51 mm) diameter EPDM pads beneath the battens at batten termination's and where two battens are joined to form a corner as shown in Elevate Details.
  - d. Install QuickSeam Batten Cover Strips: All batten strips must be covered prior to the end of the workday. Should inclement weather strike before the batten cover strip is installed, ensure that the batten bar and the membrane surface beneath the bar is dry.

e. As an option in unpredictable climates, a 3/8" (10 mm) bead of Lap Sealant may be installed beneath the batten bar at the fastener to reduce moisture migration into the roof system in the event of inclement weather before the batten cover is installed. After applying the appropriate Elevate Primer to the membrane, apply the QuickSeam Batten Cover per Elevate Detail Lap Splice-3.

**NOTE:** For code specific information please review the Code Approval Guide on the Elevate website www.HolcimElevate.com.

#### Ballasted System

1	Platinum Warranty Critical Information:
:	Ballasted Membrane Systems using EPDM <u>do not</u> qualify for 25 Year or Platinum Warranties.

- Place Membrane and Allow to Relax
   Place membrane panel, without stretching, over the acceptable substrate and allow membrane to relax for a
   minimum of 30 minutes before splicing or attaching. The RubberGard EPDM Ballasted System must be installed
   so that the splices shed the flow of water.
- Move Membrane to its Final Position Move the membrane panel to its final position allowing for a minimum 4" (102 mm) field seam onto adjacent panels and sufficient membrane for proper membrane terminations.
- 3. Fabricate the Lap Splice

Splice the outside edge of the top sheet as specified in details and guides using the appropriate Elevate products. Refer to Lap Splice Details.

- 4. Ballast installation
  - Elevate Ballast Paver System
    - a. Install all Elevate Ballast Paver System Accessories, Paver Clips, AP Sealant, Metal Termination Bars and Protection Mat, as required in proper sequence for Paver system performance.
    - b. Place Ballast Paver System in accordance with Elevate Ballast Paver Installation Guide for the appropriate system requirement as determined by the design professional.
  - Stone Ballast
    - a. Spread Ballast: The ballast shall be spread over the completed Elevate System at the rate specified by the project designer but never less than 10 lb (4.5 kg)/sq. ft. using ASTM #4 stone. Refer to the system Design Guide of the Elevate website for Ballast type and size requirements. Ballast must be spread over the membrane using soft rubber-tired ballast buggies. Spread ballast around penetrations by hand. Take care not to puncture/damage EPDM when distributing the ballast.
    - b. Protect Membrane and Insulation at Ballast Loading Areas: At staging areas where ballast is loaded, protect the membrane and underlying insulation using insulation and/or plywood over an additional layer of Elevate protective membrane. Remove and replace all materials damaged from ballasting operation.
    - c. Distribute Ballast Around Walkway Pads. Any ballast displaced by a walkway should be distributed around the pad to maintain the specified average ballast rate.
    - d. Do not place a walkway and pads within 10<sup>7</sup> (3.0 m) of a roof edge. If needed around mechanical equipment, use appropriate ballast pavers.

### Membrane Attachment at Perimeters for MAS Systems

#### Platinum Warranty Critical Information:

Mechanically Attached Membrane Systems using EPDM <u>do not</u> qualify for 25 Year or Platinum Warranties.

Perimeters may be adhered or mechanically attached. When mechanically attaching a perimeter, the batten layout must be as specified in the Elevate Wind Design Guide as a minimum, or as required by the designer or local building codes. Should an adhered perimeter be chosen, the area of the adhered perimeter is the same as if the perimeter were mechanically attached.

#### **Adhered Perimeter**

- 1. Follow Adhered Membrane instructions, for this method as required for perimeter plus the following added steps.
- 2. Terminate the Membrane at the Perimeter: After the perimeter sheets are adhered to the substrate, they must be terminated along the roof edge using an appropriate Elevate roof edge detail or base tie-in detail which is included as part of this specification.

- 3. Install Perimeter Isolation Batten Strip: Install Elevate Batten Strips continuously along the inside edge of the adhered perimeter sheet.
- Fabricate the Lap Splice Splice the outside edge of the top sheet as specified per applicable details and guides using the appropriate Elevate products. Refer to Lap Splice Details.

#### Mechanically Attached Perimeter - Batten Strips or V-Plates

As an alternative to the adhered membrane perimeter, Elevate's Reinforced Mechanically Attached, and Mechanically Anchored Systems may be installed using Elevate batten strips or V-Plates as shown in Elevate's Wind Design Guide, Application Guides, and appropriate details.

#### QuickSeam R.M.A. Strip (QSRMA Strip)

Secure the QSRMA Strip, center the fastening system (Elevate Batten Strips, 2" Seam Plates or V Plates) on the QSRMA Strip, a maximum of 4" (102 mm) from the end of the QSRMA Strip and fasten a maximum of 12" (305 mm) O.C. (unless more frequent fastener spacing is required). If using battens, place the first fastener 1" (25 mm) in from the end of the batten strip, using the pre-punched holes in the battens.

- 1. QSRMA Strip Intersections
  - a. Do not intersect QSRMA Strips at "T" intersections or corner intersections. Do not overlap QSRMA Strips. A fastener and batten strip or plate must be placed starting and ending a maximum of 4" (102 mm) from the end of each QSRMA Strip.
  - b. Start fastening batten strips from one end only.
     NOTE: When fastening batten strips, start at one end and work towards the other. Fastening the two ends of the batten strip at the same time may cause buckling between fasteners.
  - c. Install fastener.
  - d. When using batten strips, Elevate AP Sealant must be applied over the fastener heads per Elevate details. Do not remove the release paper from the tape until all cleaning and priming has been completed and the membrane is in place. Use caution not to overdrive the fasteners as this will cause the batten strip to buckle between the fasteners or may cause the QSRMA Strip to wrinkle.
- 2. Membrane Installation (QSRMA Strip)
  - a. Place membrane panel, without stretching, over the installed QSRMA Strip and allow to relax for a minimum of 30 minutes before splicing or attaching.
  - b. Do not allow field seams to be installed over the QSRMA Strip.
  - c. After making sure the sheet is placed in its final position allowing for the minimum lap width per Elevate specifications, fold it back evenly onto itself without wrinkles to expose the underside mating surface of the sheet.
  - d. Mark the membrane areas that will be primed to receive the tape portion of the QSRMA.
  - e. Apply the appropriate Elevate Primer to the center of the QSRMA Strip, over the plates and fasteners, and the membrane where it will mate with the QuickSeam Tape on the QSRMA Strip using the Elevate QuickScrubber<sup>™</sup> Plus. Allow the primer to dry.
  - f. After the surfaces have dried properly, as determined by using the touch-push test, remove the release paper from the QSRMA Strip, roll the membrane into place, and broom the membrane over the QSRMA with a stiff push broom.
  - g. Roll the membrane over the QSRMA Strip
    - 1. A 1-1/2" 2" (38 mm 51 mm) wide silicone roller or across the tape and then along its length covering the width in several passes; or
    - 2. Starting in the center of the strip, roll the QS RMA Strip with the Elevate QuickRoller in a back-and-forth motion along the length of the QSRMA Strip, not to exceed 3' (0.9 m) maximum at a time.
    - 3. Do not use metal rollers or power rollers over the QSRMA Strip.

### **Membrane Seaming**

When using RubberGard Max membrane, Elevate Seam Edge<sup>™</sup> Treatment must be applied to all splice or detail edges where reinforcing scrim is exposed. Refer to Detail LS-9 using seaming using SA-1065 adhesive and Lap Sealant.

#### **Seaming Procedures**

# Platinum Warranty Critical Information:

Seaming Requirement for Platinum Warranties include one of the following:

- 3" QuickSeam Splice Tape and 5" QuickSeam Flashing centered over completed seam
- 6" QuickSeam centered over completed seam
- QuickSeam Joint Covers are required at all exposed T-Joints and at angle changes 1:12 or greater

Elevate RubberGard LSFR PT (Pre-Taped) and RubberGard MAX PT need to be positioned with the rolls in the correct location and orientation to unroll and have the tape located for the seaming of the laps.

PT rolls are marked with the tape location and direction of unroll. Panels need only to be marked to guide the application of QuickPrime Products to one sheet for side laps. Roll end laps require standard application of QuickPrime and QuickSeam Tapes.

- 1. Position and Fold Back the Lap Edge
  - a. Position the membrane at the seam area by overlapping membrane 1" (25 mm) past the QuickSeam Tape edge. Once the membrane is in place, mark the bottom membrane 1/2" (13 mm) to 3/4" (19 mm) from the edge of the top membrane every 4' (1.2 m) to 6' (1.8 m) using the marking crayon provided with the QuickSeam Tape.
  - b. Tack the membrane back with Single-Ply QuickPrime Primer as necessary to hold back the membrane at the splicing area.
- 2. Apply Single-Ply QuickPrime Primer to Seam Area
  - a. Remove excess amounts of dusting agent on the membrane and at factory splices using a stiff push broom. In the case of adhered systems make sure there is no contamination of bonding adhesive in the tape area.
  - b. Stir appropriate Elevate Primer thoroughly before and frequently during use. Dip the QuickScrubber or QuickScrubber Plus into the bucket of primer, keeping the pad flat.
  - c. Apply the appropriate Elevate Primer uniformly at least 1" (25 mm) wider than QuickSeam Tape application area, using long back and forth type strokes with pressure along the length of the splicing area until surfaces become dark gray in color. Do not over-work the primer.
  - d. PT panels only require the primer to be applied to the non-taped, bottom sheet, panel mating surface for the side seams. End seams require two-sided application of the primer.
  - e. Non-taped panels will need to have the appropriate Elevate Primer applied to both sheet surfaces alternating between sheets while working down the seam area.
- 3. Change the QuickScrubber Plus Pad
  - a. PT panel side laps are one side application and will result in 400' (121.9 m) of usage.
  - b. Other panels and PT ends are two-sided application and will result in 200' (61.0 m) of seam.
  - c. When the pad will no longer holds the proper amount of the primer, whichever is less.
  - d. Additional scrubbing is required at all factory seams and at areas that may have become contaminated or have excess amounts of dusting agent in the creases. Allow the primer to dry, check using the Touch-Push test.
- 4. Apply the QuickSeam Splice Tape
  - a. After allowing the appropriate Elevate Primer to dry properly, using the Touch-Push Test to verify.
  - b. PT products require end laps be done, for side laps skip to 5.
  - c. On other panels, apply the QuickSeam Splice Tape to the bottom membrane, aligning the edge of the release paper with the markings. Refer to Lap Splice detail appropriate for system being installed.
  - d. Immediately roll the splice tape with a 1-1/2" to 2" (39 mm to 51 mm) wide silicone hand roller or a clean QuickScrubber or QuickScrubber Plus pad and handle.
- 5. Position the membranes, check the Splice Tape Alignment
  - a. Position the top membrane on the bottom membrane with the tape's release backing still in place.
  - b. PT panels: Confirm the tape will be in full contact with Single-Ply QuickPrime Primer treated membrane on side laps. End laps should follow instruction 2 given below.
  - c. Other panels: trim the top panel as necessary to assure that 1/8" to 1/2" (3 mm to 13 mm) of the QuickSeam Seam Tape will be exposed on the finished seam. Confirm the tape will be in full contact with Single-Ply QuickPrime Primer primed membrane.
- 6. Remove Release Liner from the Seam Tape
  - a. Allow the top membrane to fall freely onto the bottom membrane prior to removal of the release backing.
  - b. Start to peel the release backing off the QuickSeam Splice Tape by pulling against the weight of the panel at a 45° angle to the tape and parallel with the roof surface.
  - c. Broom the entire length of the seam at a 45° angle as the release paper is being removed.
  - d. The QuickRoller may not be used to set the seams on any system that has mechanical attachments in the seam area such as battens or plates. It may only be used with fully adhered, ballasted, QuickSeam RMA and QuickSeam RPF assemblies.
- 7. Roll the Freshly Mated Seam
  - a. Roll the seam using the Elevate QuickRoller and 2'-3' strokes, working from one side of the seam to the other along the seam length, or a 1-1/2" to 2" (39 mm 51 mm) wide silicone hand roller, first across the width of the seam and then along the entire length and width of the seam.
  - b. Special Considerations (Factory laps, End Laps, T-joints, transition patches, and others).
  - c. End Laps of tape When the seam is greater in length than the tape, the adjoining QuickSeam Splice Tape must be overlapped a minimum of 1" (25 mm) and detailed per LS Details.

- d. Trim QuickSeam Splice Tape at T-joints Trim QuickSeam Splice Tape so that the edge of QuickSeam Splice Tape and the edges of the membrane are flush beneath the T-joint area. Per LS Details.
- e. T-joints Install Elevate QuickSeam Flashing or QuickSeam Joint Cover over the T-joint area per LS Detail.
- f. Use of 6" or 7" QuickSeam Splice Tape with Cured EPDM as Flashing If cured EPDM is used as flashing, apply a 9" (229 mm) long section of QuickSeam Splice Tape and cover with primed Membrane or a 9" (229 mm) section of QuickSeam Joint Cover over the intersection of the flashing and field seams per LS Details.
- g. When using RubberGard Max membrane, Elevate Seam Edge Treatment shall be applied to all splice edges where reinforcing scrim is exposed. Refer to detail LS-9.

#### Flashing Splices Using SA-1065 Adhesive (Repairs Only)

Where splice adhesive is allowed by Elevate Details, use the following procedure for completing the seams.

- Clean the flashing and roof membrane area to be seamed using clean natural fiber cloths with Elevate Splice Wash SW-100 or Single-Ply LVOC Splice Wash to remove all dusting agent, dirt, and other contaminants that will affect the finished seam and allow drying. Additional cleaning may be required to ensure that the membrane is completely cleaned. Additional cleaning at factory seams is required to remove accumulations of dusting agent. Natural fiber cloths must be discarded as they become dirty and replaced with clean ones to assure proper cleaning. Proper cleaning has been achieved when the membrane surface is uniformly black in color and no streaking is evident. FormFlash™ does not require cleaning unless it has been contaminated.
- 2. As an option, an appropriate Elevate Primer may be used in lieu of the cleaning procedure described above. Refer to the QuickSeam Splice Tape Section of this specification and Elevate's Technical Information Sheet for proper application techniques of Single-Ply QuickPrime Primer.
- 3. Thoroughly stir Elevate's Splice Adhesive before and during use. Apply the Splice Adhesive using a Elevate Splice Adhesive Brush or a 3" to 4" (76 mm to 101 mm) wide 1/2" (13 mm) thick, solvent-resistant paint brush in a smooth, even coat with long brush strokes, such that brush marks bleed out, yielding a smooth, glossy adhesive surface. Apply Splice Adhesive to both mating surfaces at about the same time.
- 4. Do not use circular motions for applying Splice Adhesive. Do not use paint rollers, spray equipment or mechanical equipment for the application of splice adhesive. Do not use long handles on splice adhesive brushes to apply splice adhesive.
- 5. Test the splice adhesive for readiness by using the Touch-Push Test. Touch the adhesive surface in the thickest area with a clean dry finger to be certain that the adhesive does not stick or string. As you are touching the adhesive, push forward on the adhesive at an angle to ensure that the adhesive is ready throughout its thickness. If either motion exposes wet or stringy adhesive when the finger is lifted, the adhesive is not ready for mating. Flash-off time will vary depending on ambient conditions.
- 6. After the splice adhesive has dried properly, mate the flashing to the mating area.
- 7. To complete the splice between the flashing and roof membrane, cut the flashing membrane down to each corner of the curb. Work the flashing membrane into the angle change as tightly as possible, and then allow the remainder of the flashing membrane to fall into place.
- 8. Roll the splice with a  $1-\frac{1}{2}$ " to 2" (38 mm x 51 mm) silicone roller in both directions along the splice edge.

### Seam Edge Treatment

Seam Edge Treatment (SET) is required when using splice adhesive as shown on Elevate details and at cut edges of RubberGard MAX membrane. See Detail LS-9.

- Platinum Warranty Critical Information:
- Refer to the appropriate Platinum details for specific Seam Edge Treatment requirements and locations.

#### Apply Splice Adhesive to Seam Edge

- 1. Using a Splice Adhesive brush, apply SA-1065 Splice Adhesive a minimum of 1" (25 mm) on either side of the seam edge.
- 2. Allow the Splice Adhesive to dry.
- 3. If the seam edge has become contaminated, it will be necessary to clean the edge with Elevate Splice Wash prior to applying the adhesive.

#### Apply the Lap Sealant to Seam Edge

- Apply a continuous bead of Lap Sealant, 3/8" x 1/4" (10 mm x 6 mm) 20-22 lineal feet (6 m 6.7 m) per 10 oz. (295 cc) tube centered over the seam edge using a standard caulking nozzle.
- 2. Using the Holcim supplied Lap Sealant tool, feather the Lap Sealant immediately, taking care to leave a mound of sealant directly over the seam edge (refer to Lap Splice Details). Alternately, Lap Sealant may be applied using the plastic nozzle applicator supplied by Holcim, assuring the applicator is centered at the seam edge.

### **QuickSeam Batten Cover Installation for MAS Systems**

- 1. Clean and Prime Batten Strip Area
  - a. Using Elevate QuickScrubber or QuickScrubber Plus, apply appropriate Elevate Primer to the membrane and batten area so that the prime extends 1/2" to 1" (13 mm to 25 mm) beyond the area to be covered with the Batten Cover Strip.
  - b. Additional cleaning at factory splices and areas of excessive dusting agent is required.
  - c. Allow the primer to flash-off.
- Place QuickSeam Batten Cover Roll
   Place the roll of QuickSeam Batten Cover on the roof a few feet ahead of the application starting point, positioned so that it
   unrolls from the top of the roll (release paper will be on top).
- Install QuickSeam Batten Cover Starting a minimum of 4" (102 mm) prior to the start of the EPDM protection pad under the end of the batten strip, center the QuickSeam Batten Cover and apply to the cleaned and primed surface.
- 4. Advance the Roll
  - Advance the roll along the batten strip, peeling away the release liner as the QuickSeam.
- 5. Cut the QuickSeam Batten Cover
  - Cut the QuickSeam Batten Cover and release liner to extend 4" (102 mm) beyond the end of the EPDM protection pad.
- 6. Apply Pressure and Roll the Splice Apply hand pressure along the entire length of the QuickSeam Batten Cover to completely mate the two surfaces. Using a 1-½" to 2" (38 mm to 51 mm) wide silicone hand roller, roll the entire batten cover with positive pressure towards the outside edge and then along the entire length of the batten cover.
- 7. Install QuickSeam Flashing at End Laps
  - a. Apply the appropriate Elevate Primer to the overlap of the QuickSeam Batten Cover as necessary and allow to flash-off.
  - b. Install a 12" (305 mm) long section of QuickSeam Flashing over the end lap. Roll the QuickSeam Flashing with a 1-1/2" to 2" (38 mm to 51 mm) wide silicone hand roller.
  - c. Apply Splice Adhesive to edges of the QuickSeam Flashing and apply Lap Sealant.
  - d. Intersections of QuickSeam Batten Covers must be completely covered at the intersecting T-Joints with a 12" (305 mm) long section of QuickSeam Flashing.

### Additional Membrane Securement and Base Tie-In Flashing

Secure the membrane at all locations where the membrane goes through an angle change greater than 1" (25 mm) in 12" (305 mm) (i.e., roof edges, curbs, interior walls, etc.).

#### Installation of QuickSeam Reinforced Perimeter Fastening Strip (QSRPF)

- 1. Attach the QSRPF Strip to the penetration, parapet wall or deck using Elevate 2" (51 mm) Seam Plates or Elevate Batten Strips fastened a maximum of 12" (305 mm) o.c. Roll the membrane into place and then fold back, exposing the underside of the membrane and the QSRPF Strip. When using batten strips, apply Elevate All Purpose Sealant over each fastener head, assuring that the fastener head is completely covered.
- 2. Apply the appropriate Elevate Primer to the membrane where it will mate with the QuickSeam Splice Tape and allowing to dry. Apply Elevate Bonding Adhesive to the back half of the QSRPF, to the membrane that is to be bonded to the penetration or wall, and to the penetration or wall itself.
- 3. After the liner has dried properly as determined by using the Touch-Push Test, remove the release paper from the QuickSeam Reinforced Perimeter Fastening Strip and roll the membrane into place, assuring a tight fit into the transition between the horizontal and vertical surfaces. Continue to roll the membrane up the wall and broom in place with a stiff push broom. Roll the membrane over the QuickSeam Tape portion with a 1-1/2" to 2" (38 mm to 51 mm) wide silicone roller or QuickRoller across the tape and then along its length.
- 4. Complete vertical lap seams as described in the lap splice section of this specification. Install a T-Joint Cover over any vertical lap splices that go through an angle change (Refer to Elevate Details)

#### Installation of Elevate Batten Strip

- 1. Install the RubberGard Membrane per Elevate Details and attach to the vertical substrate using Elevate Batten Strips a maximum of 12" (305 mm) o.c. (Polymer Battens may only be used over wood or metal substrates). Apply Elevate All Purpose Sealant over each fastener head, assuring that the fastener head is completely covered.
- 2. Cut a piece of flashing from RubberGard Membrane or QuickSeam Curb Flashing large enough to completely cover the substrate of the wall or curb and extend onto the roof membrane a minimum of 3" (76 mm). Complete the splice between flashing and the main roof membrane using QuickSeam Splice Tape before adhering flashing to the vertical surface. Provide lap seams in accordance with Elevate Details.
- 3. Apply bonding adhesive at about the same time to both the flashing and the surface to which it is being bonded to allow the same flash-off time. Apply bonding adhesive evenly to avoid puddles.
- 4. After the bonding adhesive has dried properly as determined by the Touch-Push Test, roll the flashing into the adhesive evenly and carefully to minimize wrinkles. Broom the flashing to the substrate with a stiff push broom to assure proper contact.

# Flashing - Penetrations

#### <u>Platinum Warranty Critical Information:</u>

- Flash penetrations using QuickSeam FormFlash when the use of Pre-Molded EPDM Pipe Flashings is not possible.
- Additional flashing treatments are required for pipe flashings and roof drains. See the applicable Elevate Platinum Details for flashing requirements.

#### General

- 1. Remove all loose existing flashing (i.e., metal, bituminous materials, mastic, etc.).
- 2. Flash all penetrations passing through the membrane.
- 3. The flashing seal must be made directly to the penetration.

### Pipes, Round Supports, Structural Steel Tubing, Etc.

- 1. Flash penetrations with Elevate EPDM Pre-Molded QuickSeam Pipe Flashing, Conduit Flashings or Quick Seam Penetration Pockets wherever possible. Do not cut or patch EPDM Pre-Molded Pipe Flashings except where noted on instructions.
- 2. Flash penetrations using the field wrap process when the use of Pre-Molded EPDM Pipe Flashings or Penetration Pockets is not possible.
- 3. Refer to Elevate's Technical Information Sheets for minimum and maximum pipe diameters that can be successfully flashed with Pre-Molded EPDM Pipe Flashings.
- 4. Structural Steel Tubing: Use a field-fabricated pipe flashing detail when the corner radius is greater than 1/4" (6 mm) and the longest side of the tube does not exceed 4" (102 mm). When the tube exceeds 4" (102 mm), use a standard curb detail including base-tie in and suitable termination.

### **Roof Drains**

- 1. The following applies for installation of cast iron drains only. For all other drain types contact Holcim Technical Services.
- 2. Remove existing clamping ring. Remove any broken clamping hardware and replace.
- 3. Remove all existing flashing (including lead flashing), roofing materials and cement from the existing drain in preparation for membrane and Water Block Seal.
- 4. Provide a clean even finish on the mating surfaces between the clamping ring and the drain bowl.
- 5. Install insulation, flat and tapered, with suitable bonding surfaces around the drain to provide a smooth transition from the roof surface to the drain. Slope into drain cannot be greater than 4 in 12 for standard membrane and 1 in 12 for reinforced membrane.

- 6. Position the membrane and cut a hole for the roof drain allowing a 1/2" (12.7 mm) to 3/4" (19.1 mm) of membrane inside the clamping ring. Make round holes in the membrane to align with clamping bolts (a paper punch may be used). Do not cut the membrane back to the bolt holes.
- 7. Install Elevate Water Block Seal in a continuous bead on the clamping ring seat flange below the membrane. Use a minimum of one half of a 10 oz (295 cc) tube for a 10" (254 mm) drain.
- 8. Install the roof drain clamping ring and all clamping bolts. Tighten the clamping bolts to achieve constant compression of water block seal.

#### **Insert Drains**

Elevate 3" & 4" (76 mm and 102 mm) Insert Drains are intended for installation when existing drains are deteriorated and not suitable for reuse. For other conditions outside of these, contact Holcim Technical Services.

- 1. Remove existing clamping ring. Remove any broken clamping hardware and debris.
- 2. Install wood blocking as required to support, level and square drain with new insulation sump.
- 3. Install Elevate Insert drain, securing to a solid substrate in accordance with instructions, in preparation to receive the roof membrane.
- 4. Install insulation, flat and tapered, with suitable bonding surfaces around the drain to provide a smooth transition from the roof surface to the drain. Slope into drain cannot be greater than 4 in 12 for standard membrane and 1 in 12 for reinforced membrane.
- 5. Position the membrane and cut a hole for the roof drain allowing a 1/2" (13 mm) to 3/4" (19 mm) of membrane inside the clamping ring. Make round holes in the membrane to align with clamping bolts (a paper punch may be used). Do not cut the membrane back to the bolt holes.
- 6. Install Elevate Water Block Seal in a continuous bead on the clamping ring seat flange below the membrane. Use a minimum of one half of a 10 oz. (295 cc) tube for a 10" (254 mm) strainer basket/clamping ring.
- 7. Install Elevate roof membrane as prescribed and secure with strainer basket and bolt assembly.

#### **Pipe Clusters and Unusually Shaped Penetrations**

#### **Platinum Warranty Critical Information:**

 The following types of penetrations require the installation of a Elevate QuickSeam Penetration Pocket

and storm hood:

- Rigid pipes with an outside diameter less than 1"
- Flexible pipes or conduits
- Clusters of pipes
- Unusual shapes, e.g., structural beams, channels, or angles
- A minimum clearance of 1" (25.4 mm) between penetrations, pipes, conduits, etc., and on all sides of the penetration pocket, is required to assure adequate space for the application of Elevate Pourable Sealer around each penetration.
- Should the penetration pocket exceed 5" (127 mm), it must be flashed with a shop fabricated penetration pocket, in accordance with Elevate Platinum Details.
- Install storm hoods over each penetration pocket to protect the Pourable Sealer.
- 1. Install Elevate molded Penetration Pockets per instructions. Allow a minimum clearance of 1" (25 mm) between the penetration(s) and all sides of the Penetration Pocket.
- 2. Flash detail with shop made penetration pockets using FormFlash to allow a minimum clearance of 1" (25 mm) between the penetration(s) and all sides.
- 3. Secure penetration pockets and flash per Elevate Details.
- 4. Fill penetration pockets with Elevate Pourable Sealer or FillGard M and mound to shed water. Pourable Sealer must be a minimum of 2" (51 mm) deep and 1" (25 mm) thick around the penetrations.

#### Hot Pipes

Protect the RubberGard EPDM components from direct contact with steam or heat sources when the in-service temperature is more than 180  $^{\circ}$ F (60  $^{\circ}$ C). In all such cases flash to an intermediate "cool" sleeve with hood. See penetration details.

#### **Flexible Penetrations**

Provide a weather-tight gooseneck set in Water Block Seal and secured to the deck. Flash in accordance with Elevate Details.

#### **Scuppers**

- 1. Provide and install a new welded watertight sleeve.
- 2. Set welded watertight scupper in Water Block Seal and secure scupper to the structure.
- 3. Flash in accordance with Elevate Details.

#### **Expansion Joints**

- 1. Install where specified by the project designer. Install expansion joints in accordance with Elevate details.
- 2. Ensure joints are sized to accommodate all anticipated movements and make logical transitions to other joint materials at roof perimeter.

#### Flashing - Walls, Parapets, Mechanical Equipment Curbs, Etc.

#### **Platinum Warranty Critical Information:**

- Flashing heights of 8" or greater required.
- Platinum warranties require the use of a minimum 5/8" (15.9 mm) exterior grade or pressure treated plywood as an acceptable substrate over surfaces listed in item 2 below.
- 1. Using the largest pieces of QuickSeam Curb Flashing, QuickSeam Self-Adhered Flashing, or RubberGard EPDM membrane practical, flash all walls, parapets, curbs, etc., to the height as specified by the project designer.
- 2. Evaluate Substrate

The following substrates require an overlay of 1/2" (13 mm) Dens-Deck Prime®, 1/2" (13 mm) Dens-Deck® or 5/8" (16 mm) exterior grade or Wolmanized® plywood mechanically fastened in accordance with project designer's requirements. Ensure joints are sized to accommodate all anticipated movements and make logical transitions to other joint materials at roof perimeter.

- a. DensGlass Gold™
- b. Interior Gypsum Board
- c. Stucco
- d. Cobblestone
- e. Textured Masonry
- f. Corrugated Metal Panels
- g. Other Uneven Substrates

**NOTE:** All loose existing flashing must be removed.

- 3. Install Additional Membrane Securement at Curbs, Penetrations, Walls, etc.
- 4. Provide Termination
  - a. Provide termination directly to the vertical substrate as shown in Elevate Details.
  - b. Provide Intermediate Attachment
    - Intermediate attachment of membrane is required at 36" (914 mm) intervals in accordance with Elevate Details unless: • The wall surface is smooth, without noticeable high spots or depressions (i.e., plywood, poured or pre-cast concrete,
      - or hollow core block or masonry walls where joints are flush with masonry surface), AND
    - The termination is either a Termination Bar or membrane has been installed underneath a coping or fascia on the outer parapet edge, over the top to the outside edge and turned down to lap any nailer substrate parting line.

# Edge Metal

### Elevate Fascia and Coping

- Platinum Warranty Critical Information:
- Platinum warranties require the use of Factory Formed Edge Metal.
- An additional layer of QuickSeam FormFlash must be installed over the QuickSeam Flashing. The QuickSeam FormFlash must be installed in a manner so as to completely cover the metal flange and extend beyond the QuickSeam Flashing onto the Elevate Platinum Membrane.
- If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, an additional piece of QuickSeam Flashing must be applied over the metal lap to the top of the gravel stop, after the final application of QuickSeam FormFlash is applied. Seam Edge Treatment must be applied at the intersections of the two flashing sections. Refer to Detail PRE-3.
- 1. Ensure membrane roof system extends enough to terminate per Elevate details at roof edge condition.
- 2. Install prefabricated Elevate perimeter metal edge treatment per instructions and details.

# Gravel Stops or Roof Edge Metals

- 1. Flash Gravel Stops or shop made Roof Edge Metals using Elevate QuickSeam Flashing
  - a. Clean the Membrane and Metal Edge.
    - b. Remove excess amounts of dusting agent by brooming. Apply the appropriate Elevate Primer to the metal edging and membrane as described in Holcim Specifications. Allow the Single-Ply QuickPrime Primer to flash-off.
- 2. Apply QuickSeam Flashing
  - a. Place the roll of QuickSeam Flashing on the roof a few feet prior to the application starting point, positioned so that it unrolls from the top of the roll (release liner will be on top). Remove 2' to 3' (0.6 m to 0.9 m) of release liner and apply to the metal flange and RubberGard Membrane. Lap adjacent rolls of QuickSeam Flashing a minimum of 1" (25 mm). Refer to Roof Edge Details.
  - b. Roll the QuickSeam Flashing
     With a 1-1/2" to 2" (38 mm to 51 mm) wide silicone hand roller, roll the QuickSeam Flashing to assure proper adhesion.
     Additional attention must be given to factory seam intersections and to any change in plane.
- 3. Special Considerations (End Laps, T-joints, etc.)
  - a. Apply 6" (152 mm) length of QuickSeam Flashing, a QuickSeam Joint Cover or 6" x 6" (152 mm x 152 mm) FormFlash to the inside edge of the QuickSeam Flashing at all overlaps. Refer to Roof Edge Details.
  - b. Apply 6" (152 mm) length of QuickSeam Flashing, a QuickSeam Joint Cover or 6" x 6" (152 mm x 152 mm) FormFlash at all intersections between the QuickSeam Flashing and field-fabricated seams. Refer to Roof Edge Details.
  - c. If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, an additional piece of QuickSeam Flashing must be applied over the metal lap to the top of the gravel stop, after the initial application of QuickSeam Flashing. Seam Edge Treatment shall be applied at the intersections of the two flashing sections.

# Optimal QuickSeam Flashing Application

- 1. The optimal use of 5" QuickSeam Flashing is where a 3" (76 mm) edge metal flange is being used. This will provide the minimum 2" (51 mm) seam to the RubberGard Membrane, with the remaining 3" (76 mm) of the material completely covering the metal flange.
- 2. If a flange wider than 3" (76 mm) is used, the joints of the sheet metal edge must be flashed using QuickSeam Flashing and Single-Ply QuickPrime Primer, after the primary flashing is complete. In addition, it is recommended that 3" (76 mm) QuickSeam Splice Tape be placed in the sheet metal laps to help seal the metal edge. Refer to Roof Edge Details.

### **Special Considerations for Copper Edging**

Copper may be weathered or coated with an anti-tarnish lacquer which makes adhesion difficult. Therefore, cleaning techniques must be used to prepare the copper surface to receive the QuickSeam Flashing. Holcim requires that the copper be scrubbed with acetone or lacquer thinner, using clean cotton cloths. Cleaning before installation is recommended however cleaning can take place after metal is attached if care is taken not to allow the solvents to come into contact with the membrane. After the cleaner dries, apply the appropriate Elevate Primer and QuickSeam Flashing per Holcim Specifications.

# **Membrane Repairs**

In the event that a warranted EPDM system sustains more than six punctures in any 100 ft2 (9.29 m2) area, the entire area must be overlaid with new membrane.

### Repair Cuts/Punctures in the Membrane or Wrinkles Within 18" (458 mm) of a Seam

- 1. A wrinkle running toward a seam or within 18" (457 mm) of a seam must be repaired.
- 2. The wrinkle must be cut out so that the membrane lays flat and patched with a piece of EPDM membrane having no factory seams that extends a minimum of 3" (76 mm) beyond the boundaries of the cut in all directions. If the wrinkle occurs through QuickSeam Flashing or FormFlash, like material must be used for repair. QuickSeam Flashing or FormFlash may not extend onto the roof surface more than 6" (152 mm). QUICKSEAM FLASHING OR FORMFLASH CANNOT BE USED TO REPAIR CURED MEMBRANE. If repairing of the same wrinkle must continue, then EPDM membrane must be used. Install the EPDM repair membrane first, and round all corners of the repair piece.
- Repair a cut or puncture in the EPDM membrane with EPDM membrane. The repair must extend a minimum of 3" (76 mm) beyond the boundary of the affected area in all directions. Round all corners of the repair piece (Example a pinhole will require a minimum 6" x 6" (152 mm x 152 mm) EPDM patch).

#### **Clean the Membrane**

- 1. When repairing membrane which has been in service, it is necessary to remove accumulated dirt. Proper membrane preparation is made by scrubbing the membrane with a scrub brush and warm soapy water, rinsing with clear water, and drying with clean cotton cloths. Clean the area using clean cotton cloths with the appropriate Elevate splice wash. Additional cleaning using the appropriate Elevate Splice Wash is often necessary.
- 2. As an alternative, Elevate VOC-Free Membrane PreWash can be used to clean existing membrane. Spray VOC-Free Membrane PreWash on the membrane and allow to sit for ten minutes. Remove PreWash with power washer and allow membrane to dry before any repair activity. Additional applications of PreWash may be required. Refer to Technical Information Sheet for VOC-Free Membrane PreWash for more detailed instructions.

### **Install Repair Material**

Repairs must be made with SA-1065 Splice Adhesive. Refer to the Flashing Seam Details found on the Elevate website for application requirements of Splice Adhesive.

### **Temporary Closure**

Temporary closures or tie-ins which assure that moisture does not damage any completed section of the new roofing system are the responsibility of the licensed Elevate applicator. This is not warranted in any Red Shield Warranty. Completion of flashings, terminations and temporary closures is required to provide a watertight condition.

# AcryliTop<sup>™</sup> PC-100 Coating

#### General

- 1. AcryliTop PC-100 may be applied to RubberGard membrane and flashings to offer a reflective surface, reduce surface temperature, and protect the membrane from the damaging effects of UV. In addition, AcryliTop PC-100 can be applied to existing RubberGard EPDM roofs under warranty, helping to extend roof service life. Should the coating of an existing roof be considered, the roof system should first be inspected by a licensed Elevate applicator to ensure that the system itself is not in need of repair prior to applying AcryliTop PC-100.
- 2. Refer to the Technical Information Sheets and Safety Data Sheets for AcryliTop PC-100 and VOC-Free Membrane PreWash for additional information on application, storage, and safety.

#### **Clean Membrane Surface**

- 1. Before applying AcryliTop PC-100, clean the roof of debris, as needed, with a broom or leaf air blower. Remove any leaves or large pieces of debris, such as stones, branches, etc.
- 2. Apply VOC-Free Membrane PreWash according to the instructions on the Technical Information Sheet, adjusting application rate as needed depending on the level of soiling present on the new or aged RubberGard EPDM roof system.

**NOTE:** It is extremely important to allow the roof to dry thoroughly before applying AcryliTop PC-100 Roof Coating. Do not allow any VOC-Free Membrane PreWash to remain on the roof surface and always exercise caution when applying cleaners.

# Apply AcryliTop PC-100

- 1. Mix AcryliTop PC-100 with a mechanical mixer before application to ensure uniform color and consistency. Mix until AcryliTop PC-100 is homogenous before application. Thinning is not recommended under normal conditions.
- 2. After the membrane has dried thoroughly, apply Elevate AcryliTop PC-100 Roof Coating at a rate of 1.25 Gal /100 ft<sup>2</sup> (4.7 L per 9.3 m<sup>2</sup>) to achieve a minimum of 10 mils Dry Film Thickness (DFT).
- 3. A base coat application of AcryliTop PC-100 is not necessary. If additional coating is desired, a Base Coat application of AcryliTop PC-100 may be applied at a rate of 1.0 Gal /100 ft<sup>2</sup> (3.8 L per 9.3 m<sup>2</sup>) prior to applying AcryliTop PC-100 as instructed above. To ensure full coverage, Holcim recommends using different colors for the base and top coats.
- 4. Do not exceed 1.25 Gal per 100 ft<sup>2</sup> (4.7 L per  $9.3 \text{ m}^2$ ) per coat.
- 5. For roller application, use a 3/8" (9.5 mm) nap roller.

**NOTE:** Roller application may produce a textured surface appearance.

- 6. For sprayer application, use an airless sprayer with 2,000 3,000 psi (13.8 MPa 20.7 MPa) at the gun tip, 1.0 3.0 gal / min (3.8 L 11.4 L / min) flow rate, and tip sizes ranging from 0.025 0.040 in (0.64 1 mm). Larger spray units will allow for longer hoses on larger jobs. Contact Holcim Technical Services if further assistance is required in determining the optimal equipment for project specific requirements.
- 7. Approximate dry time is 4-6 hours at 75 °F (24 °C) and 50% RH per coat. Allow each coat of AcryliTop PC-100 Roof Coating to dry thoroughly between applications, or before walking on applied coating. Low temperatures or high humidity conditions will extend dry time.

**NOTE:** Do not apply AcryliTop PC-100 Roof Coating when precipitation or heavy dew is expected within 4 hours (6–8 hours in high humidity conditions).

# **Roof Walkways**

- 1. Lay Out Elevate QuickSeam Walkway Pads
  - a. Install walkway pads in locations as specified by the project designer and in accordance with the System Design Guide Section of the Elevate website. Layout Elevate RubberGard Walkway Pads so that the flat surface is over the completed RubberGard Membrane, spacing each pad a minimum of 1" (25 mm) and a maximum of 3" (76 mm) from each other to allow for drainage.
  - b. If Elevate QuickSeam Walkway Pads must be installed over field-fabricated seams or within 6" (152 mm) of a seam edge, install QuickSeam Flashing over the seam edge. The QuickSeam Flashing must extend beyond the walkway pad a minimum of 6" (152 mm) on either side.
- 2. Attach Elevate QuickSeam Walkway Pads to The Membrane
  - a. Prepare the Membrane
    - Clean the membrane using the appropriate Elevate Primer where the QuickSeam Splice Tape portion will contact the membrane.
  - b. Place Walkpad
  - Remove the release liner from the QuickSeam Splice Tape. Turn the walkpad over and place it on the primed membrane. c. Apply Pressure

Walk on the pad to press in place assuring proper adhesion.

# **Equipment Supports**

Install Elevate pipe and equipment supports systems were specified. Follow manufactures installation instructions.

# **Sheet Metal Work**

- 1. For specific installation instructions for Elevate Sheet Metal, refer to the System Design Guide and Technical Information Section of the Elevate website and Manual.
- 2. For sheet metal work not supplied by Holcim, refer to fabrication and installation requirements specified by the project designer, as well as industry standards.

# **RubberGard EcoWhite Membrane Installation**

#### General

- 1. This section contains information for Elevate EcoWhite EPDM membrane systems. Read all the information to ensure that it is the correct system and application. All warranted Elevate EcoWhite EPDM systems must be fully adhered.
- 2. Additional securement details for the membrane (base tie-in) will occur at all locations where the membrane goes through an angle change greater than 1" (25.4 mm) in 12" (304.8 mm) (i.e., roof edges, curbs, interior walls, etc.) and other areas as details indicate. See BASE TIE-IN section and additional information in roofing details section.
- 3. EcoWhite EPDM membrane installations may require the use of a TPO QuickSeam Reinforced Perimeter Fastening Strip, requiring coordination with the many substrates at perimeters and layout and installation of the membrane system in a logical sequence. These steps should be addressed early in the roofing process.

#### Adhered Membrane

#### Membrane Placement

- 1. Install the Elevate EcoWhite EPDM Adhered System so that the seams shed or run parallel to the flow of water wherever possible.
- 2. Position membrane panel, starting at the low side of the roof and unroll without stretching, over the acceptable substrate, leaving sufficient membrane for tie-ins, roof edges and seaming. Allow the panel to relax for a minimum of 30 minutes (longer in cold weather) before attaching or splicing.
- 3. Placement of additional rolls of membrane shall provide for sufficient overlaps for membrane seaming. See MEMBRANE SEAMING section later in this guide.

#### Fold the Membrane Back

After making sure the sheet is placed in its final position allowing for the minimum lap width per Holcim specifications, fold it back evenly onto itself without wrinkles to expose the underside bonding surfaces of the sheet and substrate.



#### **Remove Dusting Agent and Debris**

Sweep the mating surfaces with a stiff broom to remove any dusting agent or dirt that may have accumulated.

#### Apply the appropriate Bonding Adhesive

- 1. Apply bonding adhesive with either a 9" (228 mm) wide solvent-resistant paint roller, power roller or a commercial-grade adhesive sprayer.
- 2. Adhesive must be applied in a relatively uniform thickness to both surfaces at approximately the same time.
- 3. If adhesive is spray-applied, it must be back-rolled with a paint roller to assure proper contact and uniform coverage.
- 4. Refer to Elevate Technical Information Sheets and container labels for specific application instructions and information on spray equipment and coverage rates.



#### Test Bonding Adhesive for Readiness (Touch-Push Test)

Allow the bonding adhesive to flash-off. Touch the adhesive surface in several places with a clean, dry finger to be certain that the adhesive does not stick or string. As you are touching the adhesive, push forward on the adhesive at an angle to ensure that the adhesive is ready throughout its thickness.

If motion exposes wet or stringy adhesive when the finger is lifted, the adhesive is not ready for mating. Flash-off time will vary depending on ambient conditions of temperature, wind, and humidity.



### Bond the Membrane to the Substrate

- 1. Starting at the fold, roll the previously coated portion of the membrane into the coated substrate slowly and evenly to prevent wrinkles.
- 2. Broom the membrane. To assure proper contact, compress the bonded half of the membrane to the substrate with a stiff push broom



#### **Repeat Procedure**

To complete the membrane installation, fold the un-adhered half of the membrane back onto itself and repeat the procedure.

#### Splice the Laps

- 1. Splice the outside edge of the top sheet as specified in the section on MEMBRANE SEAMING using an acceptable Elevate Primer and EcoWhite QuickSeam Splice Tape.
- 2. T Joint Patches: Apply EcoWhite "T" Joint Covers at all 3-way sheet intersections.



### **Membrane Seaming**

#### **Seaming Procedures**

- 1. Position and Fold Back the Lap Edge
  - a. Position the membrane at the seam area by overlapping the membrane 4" (101.6 mm) for the 3" (76 mm) EcoWhite EPDM QuickSeam Tape. Once the membrane is in place, mark the bottom membrane 1/2" (12.7 mm) to 3/4" (19 mm) from the edge of the top membrane every 4' (1.2 m) to 6' (1.8 m).
  - b. Fold the membrane back to expose the bottom membrane at the splice area. Weight the folded membrane as necessary to hold back the membrane at the splicing area.



#### 2. Apply Elevate Single-Ply QuickPrime Primer to Seam Area

- a. Remove excess amounts of dusting agent on the membrane and at factory splices using a stiff push broom. Make sure there is no contamination of bonding adhesive in the tape area.
- b. Stir Single-Ply QuickPrime Primer thoroughly before and frequently during use. Dip the QuickScrubber or QuickScrubber Plus into the bucket of Single-Ply QuickPrime Primer, keeping the pad flat.
- c. Apply the Single-Ply QuickPrime Primer uniformly; at least 1" (25.4 mm) wider than EcoWhite QuickSeam Tape application area, using long back and forth type strokes with pressure along the length of the splicing area until surfaces become dark gray in color. Do not over-work the Single-Ply QuickPrime Primer. Apply Single-Ply QuickPrime Primer to both mating surfaces, alternating between sheets while working down the seam area.
- d. Change the QuickScrubber Plus pad Every 200 linear feet or when the pad will no longer hold the proper amount of Single-Ply QuickPrime Primer, whichever is less.
- e. Additional scrubbing is required at all factory seams and at areas that may have become contaminated or have excess amounts of dusting agent in the creases. Allow QuickPrime to dry, check using the Touch-Push test.



- 3. Apply the EcoWhite EPDM QuickSeam Splice Tape
  - a. After allowing the Single-Ply QuickPrime Primer to dry properly using the Touch-Push Test.
  - b. Apply the EcoWhite EPDM QuickSeam Splice Tape. Taper to the bottom membrane, aligning the edge of the release paper with the markings.
  - c. Immediately roll the splice tape with a 3" to 4" (76 mm to 102 mm) wide silicone hand roller, a short nap 3" (76 mm) paint roller, or a clean QuickScrubber or QuickScrubber Plus pad and handle.



- 4. Position the membranes, check the Splice Tape Alignment
  - a. Place the top membrane to rest on bottom membrane with the tape's release backing still in place.
  - b. Trim the top panel as necessary to assure that 1/8" to 1/2" (3.1 mm to 12.7 mm) of the EcoWhite QuickSeam Seam Tape will be exposed on the finished seam. Confirm the tape will be in full contact with Single-Ply QuickPrime Primer treated membrane.



- 5. Remove Release Backing
  - a. Allow the top membrane to fall freely onto the bottom membrane prior to removal of the release backing.
  - b. Start to peel the release backing off the EcoWhite QuickSeam Splice Tape by pulling against the weight of the panel at approximately a 45° angle to the tape and parallel with the roof surface.
  - c. Broom the entire length of the seam at a 45° angle as the release paper is being removed.



#### 6. Roll the Seam

Roll the seam as appropriate, using the Elevate QuickRoller and 2'-3' strokes working from one side of the seam to the other along the seam length, or a  $1\frac{1}{2}$ " to 2" (38 mm - 51 mm) wide silicone hand roller, first across the width of the seam and then along the entire length and width of the seam.



- 7. Special Considerations (Factory laps, End Laps, "T" Joints, transition patches, and others.)
  - a. End Laps of tape When the seam is greater in length than the tape, the adjoining QuickSeam Splice Tape must be overlapped a minimum of 1" (25.4 mm) and detailed per LS Details.
  - b. Trim QuickSeam Splice Tape at "T" Joints Trim QuickSeam Splice Tape so that the edge of QuickSeam Splice Tape and the edge of the membrane are flush beneath the "T" Joint area. Per LS Details.
  - c. "T" Joints Apply a section of Elevate EcoWhite QuickSeam Flashing or EcoWhite QuickSeam Joint Cover over the "T" joint area per LS Detail.

### Flashing Splices Using EcoWhite Splice Adhesive (Repairs Only)

Where splice adhesive is allowed by Elevate Details, use the following procedure for completing the seams.

- 1. Clean the flashing and roof membrane area to be seamed using clean natural fiber cloths with Elevate Splice Wash to remove all dusting agent, dirt, and other contaminants that will affect the finished seam and allow drying. Additional cleaning may be required to ensure that the membrane is completely cleaned. Cleaning at factory seams is required to remove accumulations of dusting agent. Natural fiber cloths must be discarded as they become dirty and replaced with clean ones to assure proper cleaning. Proper cleaning has been achieved when the membrane surface is white in color and no streaking is evident.
- 2. As an option, Single-Ply QuickPrime Primer may be used in lieu of the cleaning procedure described above. Refer to the EcoWhite QuickSeam Splice Tape Section of this specification and Elevate's Technical Information Sheet for proper application techniques of Single-Ply QuickPrime Primer.
- 3. Thoroughly stir Elevate's EcoWhite Splice Adhesive before and during use. Apply the Splice Adhesive using a Elevate Splice Adhesive Brush or a 3" to 4" (76 mm to 101.6 mm) wide 1/2" (12.7 mm) thick, solvent-resistant paint brush in a smooth, even coat with long brush strokes, such that brush marks bleed out, yielding a smooth, glossy adhesive surface. Apply Splice Adhesive to both mating surfaces at about the same time.

**NOTE:** Do not use circular motions for applying EcoWhite Splice Adhesive. Do not use paint rollers, spray equipment or mechanical equipment for the application of splice adhesive. Do not use long handles on splice adhesive brushes to apply splice adhesive.

- 4. Test the splice adhesive for readiness by using the Touch-Push Test. Touch the adhesive surface in the thickest area with a clean dry finger to be certain that the adhesive does not stick or string. As you are touching the adhesive, push forward on the adhesive at an angle to ensure that the adhesive is ready throughout its thickness. If either motion exposes wet or stringy adhesive when the finger is lifted, the adhesive is not ready for mating. Flash-off time will vary depending on ambient conditions.
- 5. After the splice adhesive has dried properly, mate the flashing to the curb.
- 6. To complete the splice between the flashing and roof membrane, cut the flashing membrane down to each corner of the curb. Work the flashing membrane into the angle change as tightly as possible, and then allow the remainder of the flashing membrane to fall into place.
- 7. Roll the splice with a  $1\frac{1}{2}$ " to 2" (38 mm x 51 mm) silicone roller in both directions along the splice edge. Broom the membrane over the curb to assure proper mating of the bonding adhesive.

#### **Flashing - Penetrations**

#### General

- 1. Remove all loose existing flashing (i.e., metal, bituminous materials, mastic, etc.).
- 2. Flash all penetrations passing through the membrane.
- 3. The flashing seal must be made directly to the penetration.

#### Pipes, Round Supports, Structural Steel Tubing, Etc.

- 1. Flash penetrations with Elevate EcoWhite QuickSeam Pipe Flashing. Do not cut or patch EcoWhite QuickSeam Pipe Flashings to assist in their installation except where noted on instructions.
- 2. Flash penetrations using EcoWhite FormFlash when the use of EcoWhite Pipe Flashings is not possible.
- 3. Refer to Elevate's Technical Information Sheets for minimum and maximum pipe diameters that can be successfully flashed with Pre-Molded EPDM Pipe Flashings.
- 4. Structural Steel Tubing: Use a field-fabricated pipe flashing detail when the corner radius is greater than 1/4" (6.35 mm) and the longest side of the tube does not exceed 4" (101.6 mm). When the tube exceeds 4" (101.6 mm), use a standard curb detail including base-tie in and suitable termination.

#### **Pipe Clusters and Unusual Shaped Penetrations**

- 1. Install Elevate molded Penetration Pockets per instructions. Allow a minimum clearance of 1" (25.4 mm) between the penetration(s) and all sides of the Penetration Pocket.
- 2. Flash detail with shop made penetration pockets to allow a minimum clearance of 1" (25.4 mm) between the penetration(s) and all sides.
- 3. Secure penetration pockets and flash per Elevate Details.
- 4. Fill penetration pockets with Elevate Pourable Sealer and mound to shed water. Pourable Sealer must be a minimum of 2" (51 mm) deep and 1" (25.4 mm) thick around the penetrations.

#### Hot Pipes

Protect the EcoWhite EPDM components from direct contact with steam or heat sources when the in-service temperature is in excess of 180  $^{\circ}$ F (60  $^{\circ}$ C). In all such cases flash to an intermediate "cool" sleeve with hood. See penetration details.

#### Edge Metal

#### Elevate Fascia and Coping

- 1. Ensure membrane roof system extends enough to terminate per Elevate details at roof edge condition.
- 2. Install prefabricated Elevate perimeter metal edge treatment per instructions and details

### Gravel Stops or Roof Edge Metals

Flash Gravel Stops or shop made Roof Edge Metals using EcoWhite QuickSeam Flashing.

- Clean the Membrane and Metal Edge Remove excess amounts of dusting agent by brooming. Apply Single-Ply QuickPrime Primer to the metal edging and membrane as described in Holcim Specifications. Allow the Single-Ply QuickPrime Primer to flash-off.
- 2. Apply EcoWhite QuickSeam Flashing Place the roll of EcoWhite QuickSeam Flashing on the roof a few feet ahead of the application starting point, positioned so that it unrolls from the top of the roll (release paper will be on top). Remove approximately 2' to 3' (.6 m to .9 m) of release paper and apply to the metal flange and EcoWhite RubberGard Membrane. Lap adjacent rolls of EcoWhite QuickSeam Flashing a minimum of 1" (25.4 mm). Refer to Roof Edge Details.
- 3. Roll the EcoWhite QuickSeam Flashing With a 11/2" to 2" (38 mm to 51 mm) wide silicone hand roller, roll the EcoWhite QuickSeam Flashing to assure proper adhesion. Additional attention must be given to factory seam intersections and to any change in plane.
- 4. Special Considerations (End Laps, "T" Joints, etc.)
  - Apply 6" (152.4 mm) length of EcoWhite QuickSeam Flashing, a EcoWhite QuickSeam Joint Cover or EcoWhite 6" x 6" (152.4 mm x 152.4 mm) Flashing to the inside edge of the EcoWhite QuickSeam Flashing at all overlaps. Refer to Roof Edge Details.
  - If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, an additional piece of EcoWhite QuickSeam Flashing must be applied over the metal lap to the top of the gravel stop, after the initial application of EcoWhite QuickSeam Flashing. Seam Edge Treatment shall be applied at the intersections of the two flashing sections.

### **Optimal Application**

- 1. The optimal use of EcoWhite QuickSeam Flashing is where a 3" (76 mm) edge metal flange is being used. This will provide the minimum 3" (51 mm) seam to the EcoWhite Membrane, with the remaining 3" (76 mm) of the material completely covering the metal flange.
- 2. If a flange wider than 3" (76 mm) is used, the joints of the sheet metal edge must be flashed using EcoWhite QuickSeam Flashing and Single-Ply QuickPrime Primer, after the primary flashing is complete. In addition, it is recommended that 3" (76 mm) QuickSeam Splice Tape be placed in the sheet metal laps to help seal the metal edge. Refer to Elevate Roof Edge Details.

### **Membrane Repair**

#### Repair Cuts/Punctures in the Membrane or Wrinkles within 18" (458 mm) of a Seam

- 1. A wrinkle running toward a seam or within 18" (458 mm) of a seam must be repaired. The wrinkle must be cut out so that the membrane lays flat and patched with a piece of EcoWhite EPDM membrane having no factory seams that extends a minimum of 3" (76 mm) beyond the boundaries of the cut in all directions. If the wrinkle occurs through EcoWhite QuickSeam Flashing, like material must be used for repair. EcoWhite QuickSeam Flashing may not extend onto the roof surface more than 6" (152 mm). If repairing of the same wrinkle must continue, then EcoWhite EPDM membrane must be used. Install the EcoWhite EPDM repair membrane first, and round all corners of the repair piece.
- 2. Repair a cut or puncture in the EcoWhite EPDM membrane with EPDM membrane. The repair must extend a minimum of 3" (76 mm) beyond the boundary of the affected area in all directions. Round all corners of the repair piece (Example: a pinhole will require a minimum 6" x 6" (152 mm x 152 mm) EPDM patch).

#### **Clean the Membrane**

- 1. When repairing membrane which has been in service, it is necessary to remove accumulated dirt. Proper membrane preparation is made by scrubbing the membrane with a scrub brush and warm soapy water, rinsing with clear water, and drying with clean cotton cloths. Clean the area using clean cotton cloths with Elevate Splice Wash. Additional cleaning using Elevate Splice Wash is often necessary.
- 2. As an alternative, Elevate VOC-Free Membrane PreWash can be used to clean existing membrane. Spray VOC-Free Membrane PreWash on the membrane and allow to stand for approximately an average of ten minutes. Remove PreWash with power washer and allow membrane to dry before any repair activity. Additional applications of PreWash may be required. Refer to Technical Information Sheet for VOC-Free Membrane PreWash for more detailed instructions.

#### Install Repair Membrane

Repairs must be made with EcoWhite Splice Adhesive. Refer to the Flashing Seam Details of this Database for application requirements of Splice Adhesive.

# **RubberGard EPDM SA Membrane Installation**

#### General

This section outlines instructions for the installation of Elevate's RubberGard EPDM SA membrane with Secure Bond<sup>™</sup> Technology. Reference to the EPDM Design and Application Guides, Technical Information Sheets, Detail Drawings, and other Elevate technical specifications as needed to ensure the finished roofing system complies with Holcim requirements and is eligible to receive a Red Shield Warranty.

**NOTE:** If a proposed application falls outside this specification, contact Holcim Technical Services for assistance.

#### Preparation

- Approved substrates must be clean, dry, and free of foreign material such as grease and any debris which could inhibit adhesion. This may require cleaning with a broom or blower. An acceptable Elevate Primer (QuickPrime™ Plus, QuickPrime Plus LVOC, Single-Ply QuickPrime Primer or Single-Ply LVOC Primer) is required for vertical application, seaming, and detail work.
- RubberGard EPDM SA membrane may be installed on roofs up to 250' (76.2 m) in height. For building heights exceeding 250' (76.2 m), contact Holcim Technical Services.
   NOTE: This does not mean these systems are approved by the Factory Mutual Research Corporation. Contact Holcim or consult the Factory Mutual Approval Guide for approved assemblies.
- Insulation must be secured per current Holcim technical specifications to provide a proper substrate for membrane application.
- Install RubberGard EPDM membrane only when membrane, substrate, and ambient temperatures are minimum 20 °F (-7 °C) and rising.

Early on the day of installation, unroll each roll of RubberGard EPDM in an out-of-the-way area and allow the membrane to relax. Unroll RubberGard EPDM with the release liner facing down so the top side of the membrane is exposed to direct sunlight. Allow the membrane to relax as long as possible before moving it into final position, **but a minimum of 30 minutes is required. NOTE:** Longer in overcast conditions or when substrate or ambient temperature is below 40 °F (4 °C).

- Carefully position the membrane over the pre-marked substrate to achieve the desired alignment and overlaps.
- Position adjoining sheets in a manner that all side and end laps provide a minimum 3" (76 mm) overlap.
- An acceptable Elevate Primer (QuickPrime Plus, QuickPrime Plus LVOC, Single-Ply QuickPrime Primer or Single-Ply LVOC Primer) shall be applied to all lap areas. See below for proper primer application.
- Apply Lap Sealant along the seam edge. See below for proper sealant application.
- Position adjoining sheets in a manner that the seams shed water or run parallel to the flow of water.

#### Membrane Adhesion

#### Membrane Positioning and Seam Primer Application

- 1. It is important that the seam overlap areas are clean and that no moisture is present.
- 2. Position adjoining sheets allowing for a minimum 3" (76 mm) side and end lap overlap.
- 3. Mark the bottom membrane 1" (25 mm) outside the 3" edge of the top membrane with a lumber crayon or similar instrument to note the minimum primer coverage area.
- 4. Fold the top membrane back along the seam to allow for primer application without disturbing the original position of the membrane.
- 5. Stir the approved Elevate primer thoroughly before using. Do not thin. A minimum of two minutes of vigorous hand mixing is required.

- 6. Apply the primer along the crayon mark to coat the entire bottom seam area, using the Elevate QuickScrubber or QuickScrubber Plus Pad and Handle. Do not use brushes or rollers to apply Elevate primers. Use back and forth strokes with heavy pressure along the length of the seam area until the membrane surface becomes uniform in color, with no streaks, puddles, or blushing.
- 7. Allow the primer to flash-off/set up appropriately. Refer to Elevate Technical Information Sheet for relative flash-off/set up times.
- 8. Allow the membrane to fall back into position along the seam, verify proper primer coverage, and complete membrane application as described below. As an alternative to folding back the membrane, the mating area may be primed prior to the RubberGard EPDM sheet being moved into final position for immediate attachment.

#### Field Membrane Application

1. Carefully fold back the leading edge of the RubberGard EPDM SA membrane at one end to expose the release liner.

Do not fold the length of the roll in half to remove the release liner.

- 2. Starting from the center split of the exposed release liner, remove the liner on both sides of the split at a 45° angle toward the membrane edge. Be sure to pull enough of the release liner to extend out beyond the membrane edge.
- 3. Expose minimum 6' (1.83 m) of the Secure Bond Adhesive at the end of the sheet and back-roll it onto the substrate. (The removed release liner should extend out at an angle beyond both edges of the membrane.) Do not remove the 4" (102 mm) strip of release liner along the selvage edge at this time. (See III.A.8 above for option to pre-prime the mating area.)
- 4. Keeping the membrane flat and secured and the seam overlap aligned, continue removing the release liner at a 45° angle along the entire length of the sheet. Pulling the release liner at an alternate angle may allow the sheet to move or may trap air. The two halves of the release liner are to be removed simultaneously by two people. Keep the release liner as close to the roof surface as possible during removal. Removal of the split release liner should be completed by two persons minimum.
- 5. To initiate adhesion, use a stiff bristled broom and apply downward pressure to broom in the installed membrane across the width of the sheet working from the center toward the edge. Repeat the process for the other half of the sheet.
- 6. Next, remove the 4" (102 mm) strip of release liner from the selvage edge that overlaps the lower sheet. Peel the liner at a 45° angle to the seam edge and parallel to the roof surface.
- 7. Use a 1½" to 2" (38 mm to 51 mm) wide silicone roller or a Elevate QuickRoller™ to roll the entire seam, first at a right angle toward the outer seam edge and then along the length of the seam, making sure there is sufficient contact between the two membrane layers.
- 8. Strip in all end laps using 6" QuickSeam Batten Cover or 18" QuickSeam SA Flashing (cut to size) and seal with Lap Sealant according to RubberGard EPDM SA Lap Splice details available on the Elevate website.
- 9. Roll across the width of the installed membrane with a weighted roller (5 lb/LI) to ensure full contact with the substrate.

**NOTE:** Do not roll membrane in place with a weighted roller if installed over ISOGARD HD or RESISTA™ / ISOGARD CG boards.

10. Install Joint Covers as necessary, then apply Lap Sealant along appropriate locations according to Holcim specifications (see below).

#### Roof Edge Membrane Application

- 1. Align the relaxed RubberGard EPDM SA membrane into position along the roof edge. Consult Holcim specifications and details for minimum roof edge overlap.
- 2. Carefully fold back the leading edge of the membrane minimum 12' (3.7 m) from the one end to expose the release liner.
  - Do not fold the length of the roll in half to remove the release liner.
- 3. Starting with the outside edge (roof edge portion) of the release liner, carefully peel the liner from the sheet, pulling it underneath the membrane, toward the field of the roof at a 45° angle to expose the Secure Bond adhesive. Take care to not disturb the original positioning of the membrane.

- 4. Next, pull the remaining section of the liner (inside portion) underneath the membrane and toward the field of the roof at a 45° angle. Maintain a minimum 12" (305 mm) separation between the two sections of liner. Pull the 4" (102 mm) strip of release liner with the adjacent section of liner.
- 5. Expose a minimum 12' (3.7 m) of the adhesive backing on the leading (folded back) edge of the sheet, then backroll the leading edge onto the substrate into its final position. (All three sections of the removed release liner should extend beyond the field side of the membrane edge at a 45° angle.)
- 6. Keeping the RubberGard EPDM SA membrane flat, secured and in proper alignment, remove the three sections of the release liner simultaneously at a 45° angle, keeping parallel to the roof surface, along the entire length of the sheet. Pulling the release liner at an alternate angle may allow the sheet to move or may trap air. The roof edge side of the release liner should be pulled just in front of the field edge side, maintaining a minimum 12" (305 mm) separation between the three sections. The three sections of release liner are to be removed simultaneously by three people. Keep the release liner as close to the roof surface as possible during removal. Removal of the liner should be completed by two persons minimum.
- 7. To initiate adhesion, use a stiff bristled broom and apply downward pressure to broom in the installed membrane across the width of the sheet working from the center toward the edge. Repeat the process for the other half of the sheet.
- 8. Roll across the width of the installed membrane sheet with a weighted roller (5 lb/LI) to ensure full contact with the substrate.

**NOTE:** Do not roll membrane in place with a weighted roller if installed over ISOGARD HD or RESISTA / ISOGARD CG boards.

9. Install subsequent membrane panels and complete seams using the process outlined above for application of primer and field membrane.

# Install Patches at T-Joint Overlaps and Substrate Transitions

- 1. Wherever three or more layers of RubberGard EPDM SA overlap, install a QuickSeam Joint Cover or minimum 5" (127 mm) section of QuickSeam Flashing, set in an acceptable Elevate primer.
- 2. Also install Joint Covers at all steps or changes in plane in the RubberGard EPDM SA membrane seam (onto crickets or tapers, at wall and curb transitions, etc.).
- 3. It is important that areas to receive flashing are clean and that no moisture is present.
- 4. Mix the approved Elevate primer thoroughly before and during use. DO NOT THIN.
- 5. Apply primer to surface of the RubberGard EPDM SA membrane using the Elevate QuickScrubber Pad and Handle. Do not use brushes or rollers to apply primers to Elevate membranes. Use back and forth strokes with heavy pressure in an area larger than the flashing membrane, until membrane surfaces become uniform in color, with no streaks, puddles, or blushing.
- 6. Allow the primer to flash-off/set up appropriately.
- 7. Once the primer is ready, remove the release paper from the Joint Cover or Flashing material, being careful not to contaminate the tape portion of the flashing.
- 8. Position the flashing over the center of the T-joint area and mate to the primed RubberGard EPDM SA.
- 9. Roll the flashing with a 11/2" to 2" (38 mm to 51 mm) wide silicone roller, from the center outwards, working the flashing into seam step-offs or irregularities.
- 10. Apply Lap Sealant to all flashing edges per specification.

# Base Tie-In, Wall, and Curb Flashing

Holcim offers numerous options for base tie-in and flashing on EPDM roofing systems. Consult the Elevate EPDM Application Guide and standard details for additional information.

**NOTE:** An acceptable Elevate Primer (QuickPrime Plus, QuickPrime Plus LVOC, Single-Ply QuickPrime Primer or Single-Ply LVOC Primer) is required for vertical application of RubberGard EPDM SA.

### Base Tie-In and Vertical Flashing using Elevate QuickSeam Reinforced Perimeter Fastening Strip (RPF)

- 1. Before adhering RubberGard EPDM SA to vertical surface, unroll and position QuickSeam RPF strip with the release paper facing up and the tape portion oriented away from the wall or curb.
- Anchor the side of the QuickSeam RPF without tape to the roof deck or to the wall 12" (305 mm) o.c. using Elevate 2" (51 mm) Metal Seam Plates or Elevate batten strip and approved Elevate fasteners, per current base tie-in details. Refer to current published specifications for product selection and attachment requirements.

- 3. Position membrane with adequate seam overlap, allowing enough membrane to extend up the vertical surface and mark the horizontal and vertical overlaps.
- 4. Fold the membrane back onto itself to expose the wall or curb and QuickSeam RPF and apply primer to the vertical substrate, the rear half of the RPF, and to seam overlaps as noted in the primer application section above. Do not prime the tape splice between RubberGard EPDM SA membrane and the QuickSeam RPF.
- 5. Proceed with installation of RubberGard EPDM SA membrane as described in the field membrane application section of this specification. Remove the release liner from the QuickSeam RPF before mating the membrane to the tape side of the RPF.
- 6. Tuck the membrane carefully into the angle change then continue to roll the membrane up the wall and broom into place with a stiff push broom. Roll the vertical flashing to ensure permanent adhesion.
- 7. Roll the membrane over the QuickSeam RPF with a 1½" to 2" (38 mm to 51 mm) wide silicone roller or Elevate QuickRoller, first along the backside of the RPF near the angle change, then over the tape at a right angle toward the outer tape edge, then along the length of the tape.

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