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SECTION 07 65 26

FLEXIBLE FLASHING

NOTE TO SPECIFIER This specification is based on products of Pecora Corporation, manufacturers of joint sealants, traffic coatings, water repellants and air barriers, located at:
165 Wambold Road
Harleysville, PA 19438
Toll Free: 800-523-6688
Tel: 215-723-6051
Fax: 215-721-0286
Email: techservices@pecora.com
Web: http://www.pecora.com

This guide specification is based on use of Pecora “XL-Wrap TWF” outside of any of Pecora’s air barrier systems. When incorporated into a Pecora air barrier, specifiy the flashing in the appropriate 07 27 26 Fluid-Applied Membrane Air Barrier guide specification.

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Self-adhering flexible membrane flashing and accessories.

NOTE TO SPECIFIER References to related sections are optional; if retaining, edit to suit project.

1.02 RELATED REQUIREMENTS

A. Section 06 10 00 – Rough Carpentry: Substrate.

B. Section 06 16 36 – Wood Panel Product Sheathing: Substrate.

C. Section **[08 51 00 Metal] [08 52 00 Wood] [08 53 00 Plastic] [08 54 00 Composite]** Windows: Installation of windows.

D. Section 07 92 00 – Joint Sealants: Liquid-applied joint sealants.

NOTE TO SPECIFIER Reference standard citations are optional; if retaining, include only those standards cited in edited section.

1.03 REFERENCES

A. ASTM A 240/A 240M – Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and General Applications

B. ASTM A 480/A 480M – Standard Specification for Flat-Rolled Stainless and Heat Resisting Steel Plate, Sheet, and Strip

C. ASTM A 666 – Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Plate, Sheet, Strip, and Flat Bar

D. ASTM B 209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate

E. ASTM B 370 – Standard Specification for Copper Sheet and Strip for Building Construction

F. ASTM C 920 – Standard Specification for Elastomeric Joint Sealants

G. ASTM C 1193 - Standard Guide for the Use of Joint Sealants

H. ASTM D 412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers–Tension

I. ASTM D 4541 – Standard Test Method for Pull-Off Strength of Coatings Using Portable Adhesion Testers

J. ASTM D 4833 – Standard Test Method for Index Puncture Resistance of Geomembranes and Related Products

K. ASTM E 96/E 96M – Standard Test Methods for Water Vapor Transmission of Materials

1.04 SEQUENCING

A. Coordinate the work with installation of windows and progress of exterior wall veneer installation.

1.05 SUBMITTALS

A.

B. Product Data: For flashing and accessories, manufacturer's data sheets, including:
1. Physical properties.
2. Thickness and widths of flashing to be used,
3. Storage and handling requirements and recommendations.
4. Substrate preparation instructions and recommendations
5. Installation instructions.

C. Samples: For flashing, three samples, 12-inch (30 cm) in length.

D. Qualification Data: For installer.

E. Warranties: Sample of manufacturer's warranty.

1.06 QUALITY ASSURANCE

NOTE TO SPECIFIER Pecora does not approve or certify applicators but will issue a letter recognizing applicators who have demonstrated, over a three-year period, the ability to apply Pecora products, and/or those who have participated in a project-specific installation review with a Pecora technical representative.

A. Installer Qualifications: Single installer with three years documented experience installing products of the same type, qualified by manufacturer.

B. Source Limitations: Obtain flashings and primer from the same manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials and products in unopened factory labeled packages.

B. Store and handle in strict compliance with manufacturer's instructions and recommendations.

C. Prevent damage or contamination to materials by construction activities.

1.08 FIELD CONDITIONS

A. Install joint sealants at ambient temperatures at or above 40 degrees F (4 degrees C).

1.09 WARRANTY

A. Submit under the provisions of Section 01 78 00 Closeout Submittals.

B. Manufacturer’s Warranty: Provide manufacturer’s standard 10-year material warranty commencing at date of Substantial Completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Design is based on products by Pecora Corporation; 165 Wambold Road, Harleysville, PA 19438; Toll Free Tel: 800-523-6688; Tel: 215-723-6051; Fax: 215-721-0286; Email: techservices@pecora.com; Web: http://www.pecora.com.

NOTE TO SPECIFIER Include paragraph below if a nonproprietary specification is required.

B. Other Acceptable Manufacturers:
1. [**Insert Manufacturer**].
2. [**Insert Manufacturer**].

NOTE TO SPECIFIER Delete one of the following paragraphs; coordinate with requirements of Division 01 section on product options and substitutions.

C. Requests for substitutions will be considered under the provisions of Section 01 60 00 – Product Requirements.

D. Substitutions: Not permitted.

2.02 SELF-ADHERING FLEXIBLE MEMBRANE FLASHINGS

A. Description: Composite rolled membrane, 45 mils (0.045-inch) (1.1 mm) thick, consisting of aluminum foil facer, cross-laminated polyethylene liner, and butyl adhesive with release sheet.
1. Roll Width: One or a combination of widths as shown on manufacturer’s published details or as necessary to suit project conditions.

NOTE TO SPECIFIER For a nonproprietary specification, retain paragraph below together with “Other Acceptable Manufacturers” or “Requests for substitutions” paragraphs above; otherwise, delete.

B. Physical Properties:
   1. Tensile Strength: 400 psi, per ASTM D 412.
   2. Ultimate Elongation: Not less than 225 percent, per ASTM D 412.
   3. Pull-Off Adhesion Strength: Not less than 17 psi, per ASTM D 4541.
   4. Vapor Permeability: Not greater than 0.05 perm (0.00087 ng/sec. x sq. m x Pa) per ASTM E 96, Water Method (Procedure B).
   5. Puncture Resistance: 624 lbs. per inch.
   6. Installation Temperature, Ambient: 10 to 120 deg. F (minus 12 to 49 deg. C).
   7. Service Temperature: Minus 45 to 300 deg. F (minus 43 to 149 deg. C).

C. Product: Pecora Corporation, XL-Wrap TWF.
   1. Form: 50-foot (15.24 m) roll.
   2. Width: **[4-inch] [6-inch] [9-inch] [12-inch] [18-inch] [As indicated] [As scheduled]**
   3. Facer Color: Silver aluminum.

2.03 ACCESSORIES

A. General: Provide accessories recommended by flexible flashing manufacturer that are compatible with self-adhering flashing and other materials and that are required for complete installation.

B. Primer: As recommended by manufacturer to suit project conditions.
   1. Product: Pecora XL-WraPrime Membrane Primer.

NOTE TO SPECIFIER Retain one of the two paragraphs below. Types in first paragraph below are approved for contact with Pecora XL-Wrap TWF and most common construction materials. If retaining second paragraph, coordinate with types below.

C. Joint Sealants: Single-component, non-sag sealant complying with ASTM C 920. One or a combination of the following to suit project conditions:
   1. Silicone Sealant: Designed for adhesion to low-energy air, vapor, and weather barrier surfaces; Pecora AVB Silicone Sealant.
   2. Silyl-terminated Polyurethane Sealant: Pecora Dynatrol I-XL Hybrid.
   3. Silyl-terminated Polyurethane Flashing: Pecora XL-Flash.

D. Joint Sealants: Types JS-**[_____]** as specified in Section 07 92 00 Joint Sealants.

NOTE TO SPECIFIER Drip edge is not supplied by Pecora.

E. Drip Edge: Smooth metal flashing with hemmed drip edge turned down 30 degrees; provide inside corners, outside corners, or both to suit project conditions.
   1. Metal: Fabricate from **[ASTM A 240/A 240M] [ASTM A 666] [ASTM A 480/A 480M] [ASTM B 370] [Type 304 stainless Steel] [Type 316 stainless Steel] [No. 110 alloy copper] [No. 110 alloy lead-coated copper] [_____]**.
   2. Thickness: **[26 gage] [___ gage] [20-ounce] 16-ounce] [12-ounce] [_____]**.
   3. Width: As necessary to overlap flexible flashing by at least 2 inches (50 mm).

NOTE TO SPECIFIER Termination bar is not supplied by Pecora.

F. Termination Bar: Flat **[metal] [plastic]** bar **[of trapezoidal profile] [with sealant lip]**; nominal 1-by 1/8-inch profile by 8-ft minimum length with predrilled holes on 8-inch centers.
   1. Material: Fabricate from **[ASTM B 221/B 221M, alloy and temper as supplied] [polyvinyl chloride] [_____]**.
   2. Fasteners: To suit substrate.

G. Cants: Rubber strip or formed mortar or sealant bead; 1/2-inch (13 mm) in size. Provide compatible adhesive for rubber strips.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that substrates have been prepared properly.

B. Do not begin installation until unacceptable conditions have been corrected.

3.02 PREPARATION

A. Prior to installation, clean substrates of lose or friable materials and adhered contaminants. Where removal of foreign materials is not possible, prepare substrates by one or more of solvent wipe, abrasive cleaning, priming, or substrate replacement.

B. Remove sharp edges and protrusions from substrates, if any.

C. Verify substrates are clean, dry, and smooth immediately before installation.

3.03 INSTALLATION – GENERAL

A. Coordinate installation sequence of adjacent work and flexible flashing. Maintain installation sequence for project or defined portions thereof.

B. Install flexible membrane flashings fully adhered and sealed watertight. Integrate flashings with the building's exterior windows, doors, skylights, louvers, and other infill; air, vapor, or weather barrier, **[including roofing and waterproofing membranes,]** in accordance with manufacturer's instructions.

C. Flashing Length: Cut rolls to single continuous lengths wherever feasible. Where multiple lengths are unavoidable, increase lengths to permit shingle lapping.

D. Begin flashing installation at base or lowest point of wall and work upward. Shingle lap successive courses.
1. Through Wall Flashing: Secure top edge with termination bar and joint sealant.
2. **[Rough Opening] [Transition] [and] [_____]** Flashing: Shingle lap and seal flashings with each other; air, vapor, or weather barriers; roofing or waterproofing membranes; sill pans and back and end dams; window flanges; drip edges, angles, or lintels; and other components to which they adhere to promote gravity drainage to weeps.
3. Cants: Provide cants to support flashings where they transition between vertical and horizontal surfaces.
4. Laps: 2-inch (50 mm) minimum.
5. Seal exposed adhered edges with continuous bead of joint sealant.

E. Exposed Membrane Edge Terminations: Apply continuous beads of joint sealant along all exposed edges. Apply sealant beads at rate to achieve at least 16 mil (0.016-inch) (0.4 mm) wet film thickness over membrane edges. Spread and tool sealant to cover 1-inch (25 mm) minimum over the edge of the membrane and 1-inch (25 mm) minimum over the adjacent material leaving no exposed membrane edges.

NOTE TO SPECIFIER Retain first option for compliance with *International Building Code* Chapter 14 or Brick Industry Association drip edge recommendation for projecting flange requirement. Retain second option when exposed edge of flashing is objectionable. Pecora recognizes the first option as best practice.

F. Masonry or Stone: Terminate flashing [**lapped over drip edges**] [**cut short of face of mortar joint**].

NOTE TO SPECIFIER Rough opening flashing strip lengths below are from ASTM E 2112, Table 7 "Flashing Lengths and Cut Formulas."

G. Rough Opening Flashing: Determine minimum flashing strip lengths using the following formulas:
   1. Sill Flashing: Rough opening width, plus 2 times roll width.
   2. Jamb Flashing: Rough opening height, plus 2 times roll width, minus 1-inch (25 mm).
   3. Header Flashing: Rough opening width, plus 2 times roll width, plus 2-inch (50 mm).

H. Cut flashing strips from rolls. Press flashing strips into position by hand. When positioned, adhere strips to substrates using hand rollers; apply even pressure; install free of creases, bubbles and "fishmouths."

I. Protect installed flashing until its concealment.

3.04 INSTALLATION – ROUGH OPENINGS

A. Seal gaps in sill corners and framing with liquid flashing flush.

B. Cut and apply "bowtie" reinforcement pieces at sill corners.

C. At each side of openings provide continuous pre-cut membrane lengths.

D. Apply pre-cut strip to rough sill, covering minimum 2 inches (50 mm) of sheathing adjacent to opening. Wrap minimum 4 inches (100 mm) up rough jambs.

E. Apply pre-cut strips to rough jambs; shingle lap minimum 2 inches (50 mm) onto sill flashing.

F. Apply pre-cut strip to rough header; shingle lap minimum 2 inches (50 mm) onto jamb flashings.

G. Apply joint sealant to edges of installed flashings.

3.05 INSTALLATION – TRANSITIONS BETWEEN DISIMILAR MATERIALS

A. Select flashing width to achieve at least 2-inch (50 mm) overlap onto substrates on each side of transition.

B. Cut manageable lengths and place lengthwise with centerline over juncture of materials. At corners make 45-degree cuts and fold to conform to substrates

C. Remove release liner and press into place, conforming to contour of the substrate. Using hand rollers, apply even pressure to fully adhere flashing to substrates, free of creases, bubbles and "fishmouths."

D. Apply joint sealant to all flashing membrane edges.

END OF SECTION