



SECTION 07650

FLEXIBLE THROUGH WALL MASONRY FLASHING

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Flexible through wall masonry flashing.
- B. Flexible jamb closure masonry flashing.
- C. Preformed masonry flashing shapes.

1.2 RELATED SECTIONS

- A. Section 04810 - Unit Masonry Assemblies: the installation of flexible flashings as part of the construction of masonry walls.
- B. Section 04820 - Unit Masonry Assemblies.
- C. Section 04850 - Stone Assemblies.
- D. Section 06100 - Rough Carpentry: Blocking and nailers.
- E. Section 07100 - Damp proofing and Waterproofing.
- F. Section 07311 - Asphalt Shingles.
- G. Section 07500 - Membrane Roofing.
- H. Section 07620 - Sheet Metal Flashings: Sheet metal flashings and counterflashing.
- I. Section 07900 - Joint Sealant.

1.3 REFERENCES

- A. ASTM D 146 - Standard Test Methods for Sampling and Testing Bitumen-Saturated Felts and Woven Fabrics for Roofing and Waterproofing
- B. ASTM D 412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers - Tension.
- C. ASTM D 471 - Standard Test Method for Rubber Property - Effect of Liquids
- D. ASTM D 624 - Standard Test Method for Tear Strength of Conventional Vulcanized Rubber and Thermoplastic Elastomers.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Verification Samples: For each membrane material and preformed three-dimensional shape product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product.
- D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacture of sheet membrane waterproofing system with not less than 10 years documented experience.
- B. Installer Qualifications: Products are to be applied by a single installer with a minimum of five years experience successfully installing all products specified in this section.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship is approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver prepackaged materials in manufacturer's original unopened packaging with labels intact. Packaging or containers shall fully identify brand, type, grade, class, and other qualifying information used to describe contents.
- B. Storage:
 - 1. Materials that are susceptible to retaining moisture or that may be damaged by moisture shall be stored in a dry location before application. Moisture-sensitive materials shall be stored in enclosed areas protected from moisture or elevated humidity.
 - 2. Store membrane rolls lying down.
 - 3. Stack materials on pallets or platforms that are raised off ground or substrate.
 - 4. Cover materials in a manner to provide air circulation and to prevent damage to surfaces.
 - 5. Store sealants, adhesives, and mastics at temperatures above 40 degrees F.
 - 6. Store flammable materials in a cool dry area away from sparks and open flames. Follow precautions outlined on container or supplied by material manufacturer/supplier.
 - 7. Materials determined by Architect, and/or manufacturer's field representative to be damaged shall be removed from site and replaced at no cost to Owner.
- C. Store and dispose of solvent-based materials, and materials used with solvent-based materials, in accordance with requirements of local authorities having jurisdiction.

1.7 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.
- B. Coordination: Interface flashing work with adjacent and adjoining work to ensure best possible weather resistance and durability of completed flashing.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- B. Application of the membrane shall not commence nor proceed during inclement weather. All surfaces to receive the membrane shall be free of water, dew, frost, snow and ice.
- C. Masonry flashing materials and components shall not be applied unless both air and surface temperatures are 32 degrees F and rising.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Hyload Inc.; 5020 Enterprise Pkwy., Seville, OH 44273. ASD. Toll Free: 800-457-4056. Phone: 330-769-3546. Fax: 330-769-4153. Web: www.hyload.com. Email: info@hyload.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 PRODUCTS, GENERAL

- A. Materials shall be products of a single manufacturer or items standard with manufacturer of sheet membrane waterproofing system. Provide primers and other secondary materials that are produced or are specifically recommended by manufacturer of membrane waterproofing system to ensure compatibility.

2.3 MASONRY FLASHING

- A. Flashing Membrane: Standard type, elastomeric and thermal plastic polymers combined with Dupont Elvaloy, reinforced with synthetic fibers and calendered into 40 mil thick sheets:
 - 1. Width: Flashing is available in the following widths. Provide to the widths required for the detail indicated on the Drawings.
 - a. 12 inches.
 - b. 18 inches.
 - c. 24 inches.
 - d. 36 inches.
 - 2. Colors: Provide flash color as follows:

- a. Black.
 - b. Gray.
 - c. Tan.
 - d. White.
3. Properties:
- a. Elongation: ASTM D 412; 175 percent.
 - b. Tensile Strength: ASTM D 412; 650 psi.
 - c. Tear Strength: ASTM D 624; 280 psi.
 - d. Low Temperature Flexibility: ASTM D 146; minus 25 degrees F Pass.
 - e. Water Absorption: ASTM D 471; Less than 0.1 percent.
 - f. Compatible with Urethane and Silicone sealant
 - g. UV Stable
- B. Self adhered Flashing Membrane with Drip Edge: Standard type, elastomeric and thermal plastic polymers combined with Dupont Elvaloy, reinforced with synthetic fibers and calendared into 40 mil thick sheets with rubberized adhesive, 1-1/2 inch sealant compatible drip edge and disposable silicone release sheet adhered to the bottom adhesive side.
- 1. Width: Flashing is available in the following widths. Provide to the widths required for the detail indicated on the Drawings.
 - a. 12 inches.
 - b. 18 inches.
 - c. 24 inches.
 - d. 36 inches..
 - 2. Colors: Provide flash color as follows:
 - a. Black.
 - b. Gray.
 - c. Tan.
 - d. White.
 - 3. Properties:
 - a. Elongation at Break: ASTM D 412; 225 percent minimum
 - b. Tensile Strength: ASTM D 412; 875 psi minimum
 - c. Tear Strength: ASTM D 624; 270 ppi.
 - d. Low Temperature Flexibility: ASTM D 146; minus 25 degrees F Pass.
 - e. Water Absorption: ASTM D 471; less than 0.1 percent.
 - f. Compatible with Urethane and Silicone sealant
 - g. UV Stable
- C. Self adhered Flashing Membrane With Out Drip Edge: Standard type, elastomeric and thermal plastic polymers combined with Dupont Elvaloy, reinforced with synthetic fibers and calendared into 40 mil thick sheets. A disposable silicone release sheet is adhered to the bottom adhesive side.
- 1. Width: Flashing is available in the following widths. Provide to the widths required for the detail indicated on the Drawings.
 - a. 12 inches.
 - b. 18 inches.
 - c. 24 inches.
 - d. 36 inches.
 - 2. Colors: Provide flash color as follows:
 - a. Black.
 - b. Gray.
 - c. Tan.
 - d. White.
 - 3. Properties:
 - a. Elongation at Break: ASTM D 412; 175 percent minimum
 - b. Tensile Strength: ASTM D 412; 650 psi minimum

- c. Tear Strength: ASTM D 624; 280 ppi.
 - d. Low Temperature Flexibility: ASTM D 146; minus 25 degrees F Pass..
 - e. Compatible with Urethane and Silicone sealant
 - f. UV Stable
- D. Hyload Preformed Shapes: Hyload HyTUF Flashing System's three dimensional pre-formed shapes Hyload HyTUF Preformed Shapes are manufactured of high performance black polymeric membrane by vacuum forming or injection molding. Cloaks are one-piece construction with no seams and are provided in several shapes. Provide shapes as needed to meet Project requirements including, but not limited to detail corners, level changes, stop ends, and other similar special applications.
- E. Hyload EZ- Flash System: EZ- Flash consists of combination of the Hyload HyTUF flexible termination bar, Hyload HyTUF flexible drip-edge, and Hyload HyTUF Flashing membrane. Heat welded into a monolithic flashing system.
- 1. Width: EZ-Flash System is available in the following widths. Provide to the widths required for the detail indicated on the Drawings.
 - a. 12 inches.
 - b. 18 inches.
 - c. 24 inches.
 - d. 36 inches.
 - 2. Width: Flashing is available in the following Lengths.
 - a. 25 feet.
 - b. 18 feet.

2.4 ACCESSORIES

- A. Primer: Hyload Hyprime Primer is an acrylic polymer and highly refined asphalt primer with exceptional UV resistance, flexibility, and adhesiveness. Contains no VOC's.
- B. Hyload Mastic neoprene-based mastic used to seal top edges of membranes, membrane to membrane and membrane to Cloak laps and penetrations.
- C. Sealant: Hyload Structural Sealant moisture cure, moisture insensitive, high performance polyether sealant.
- D. Membrane Adhesive: Hyload Membrane Adhesive moisture cure, moisture insensitive, high performance polyether adhesive.
- E. HyTUF Flexible Termination Bar: A Polymeric, reinforced membrane extrusion, incorporating Dupont's Elvaloy® KEE polymer extruded into a ¼" x 1" with chamfered edges to accept sealant or mastic. Available in 25' and 50' lengths
- F. HyTUF Flexible Drip Edge: A Polymeric, reinforced membrane extrusion, incorporating Dupont's Elvaloy® KEE polymer extruded into a 75mil x 3 ½" shape with one ½" length edge that terminates at a 45° angle. Available in 25' and 50' lengths

- G. HyTUF Slip- Trac Baffle: A Polymeric, reinforced membrane extrusion, incorporating Dupont's Elvaloy® KEE polymer extruded into a "W" shape to help to detail slip-trac joints in façade panels. Available in 25' and 50' lengths
- H. HyTUF 90° Angle: A Polymeric, reinforced membrane extrusion, incorporating Dupont's Elvaloy® KEE polymer extruded into a 90° Angle to help with creating customized details in the field. Available in 25' and 50' lengths

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
 - 1. Concrete substrate shall be cured not less than 7 days and be clean, dry, and frost free before application of waterproofing system.
 - 2. Concrete block or brick substrates shall have smooth trowel-cut mortar joints or shall be treated with a parge coat.
 - 3. Substrates shall be inspected and repaired as needed to provide a proper surface to receive flashing system.
 - 4. Verify items penetrating surfaces to receive flashing are securely installed.
 - 5. Identify incompatible substrates, if any.

3.2 PREPARATION

- A. Protect adjacent surfaces not designated to receive waterproofing.
- B. Clean surfaces thoroughly prior to installation.
- C. Liquid materials such as solvents and adhesives shall be stored and used away from open flames, sparks and excessive heat.
- D. Take necessary precautions when using volatile materials around air in-takes. Coordinate equipment to be turned off and on with Owner if necessary.
- E. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- F. Surface Preparation:
 - 1. Provide a smooth, clean substrate suitable for adhesion of membrane. Remove substances that could inhibit bonding of membrane and waterproofing system.
 - 2. Remove all sharp protrusions and mortar droppings from the substrate.
 - 3. Surfaces must be clean and dry.
- G. Surface Priming (only):
 - 1. Apply Hyload Hyprime Primer at minimum rate of 1 gallon per 400 square feet. Allow primer to dry completely.
 - 2. Application of primer shall be limited to what can be covered with membrane in a given workday. Primed areas not covered by membrane during workday shall be re-primed.
 - 3. Re-prime areas contaminated with dirt or dust.
 - 4. Mask adjacent areas to control application of primer. Remove spilled and misapplied primer.

3.3 FLASHING MEMBRANE APPLICATION

- A. General Requirements:
1. Proceed with application only after substrate preparation is complete.
 2. Apply in compliance with manufacturer's instructions, recommendations, standard details, and project specific details. Use only proprietary membrane components and materials, as supplied by membrane manufacturer.
 3. Use preformed Hyload Preformed Shapes at corners, level changes ends and other locations as indicated on the Drawings and/or recommended by Hyload Through-Wall Masonry Flashing details.
- B. Hyload Standard Flashing Membrane
1. Starting at a corner, Build into back-up wall.
 2. Attach with optional termination bar if required.
 3. Use in combination with Hyload Self Adhered flashing with minimum 4 inch laps or extend membrane completely through the outer wall and leave the membrane exposed 1/4 inch minimum to form a drip.
 4. Apply a bead of Hyload Flashing Mastic to all top termination edges.
- C. Hyload Self Adhered Flashing Membrane with Drip Membrane:
1. Starting at a corner, mount Cloak to substrate using Hyload Mastic or Hyload Flashing Adhesive. Cut Hyload S/A WD Membrane into workable sections of 8-10 feet. Remove the release sheet and adhere the membrane to the back-up wall.
 2. Lap the membrane onto the Cloak 4 inches. Use firm hand pressure and a steel roller to totally adhere membrane in place.
 3. Extend membrane completely through the outer wall and leave the membrane exposed 1/4 inch minimum to form a drip. Apply a bead of Hyload Flashing Mastic to all top termination edges.
- D. Hyload Self Adhered Flashing Membrane without Drip Membrane:
1. Starting at a corner, mount Cloak to substrate using Hyload Mastic or Hyload Flashing Adhesive. Cut Hyload S/A WD Membrane into workable sections of 8-10 feet. Remove the release sheet and adhere the membrane to the back-up wall.
 2. Lap the membrane onto the Cloak 4 inches. Use firm hand pressure and a steel roller to totally adhere membrane in place.
 3. Extend membrane through the veneer and lap onto the metal drip edge. Apply a bead of Hyload Mastic to all top termination edges and laps.
- E. Hyload Jamb Closure Membrane:
1. Prime the area that will receive the rubberized asphalt portion of the Jamb Closure Membrane. Remove release paper and adhere membrane to jamb.
 2. Install Hyload Structural Sealant to the jamb of the exterior wall and adhere the non-rubberized portion of the membrane.
 3. Structural Sealant should not be applied past the outside of the window frame.
 4. Excess membrane should be trimmed after the window has been caulked.
- F. Sealant: Use a flashing membrane manufacturer's approved compatible sealant at relief angles, soft joints, door and window perimeters, protrusions and other locations in the wall system together with Hyload Through-Wall Masonry Flashing to form a weather-tight seal.

3.4 FIELD QUALITY CONTROL

- A. Inspect flashing work during installation as follows:
- B. Verify flashings have been properly installed at all required locations to prevent water penetration.
- C. Verify weep holes have been provided to ensure proper drainage to exterior.
- D. Water test flashings at minimum of 3 locations designated by Architect to verify flashing has been properly installed and moisture drains through weep holes.

3.5 PROTECTION

- A. Protect installed products until completion of project.
- B. Repair or replace damaged products before Substantial Completion.

END OF SECTION