

SECTION 076500
FLEXIBLE FLASHING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Flashing of rough openings at exterior doors and windows, with self-adhering flexible flashing materials.

1.02 RELATED REQUIREMENTS

- A. Section 033000 - Cast-in-Place Concrete: Concrete exterior door and window rough openings.
- B. Section 042200 - Concrete Unit Masonry: CMU exterior door and window rough openings.
- C. Section 061000 - Rough Carpentry: Wood bucks/blocking at exterior door and window rough openings.
- D. Section 076200 - Sheet Metal Flashing and Trim: Metal flashings installed in conjunction with exterior door and window rough openings.
- E. Section 079200 - Joint Sealants: Sealing of perimeter joints at exterior door and window rough openings, with elastomeric sealant materials.
- F. Section 081423 - Exterior Stile and Rail Wood Doors.
- G. Section 085200 - Wood Windows.

1.03 REFERENCE STANDARDS

- A. General:
 - 1. For requirements relating to reference standards, refer to:
 - a. Article 41 of City of Miami Capital Improvements Program Standard Contract Section 2 - General Terms and Conditions.
 - b. Section 014219 - Reference Standards.
- B. American Architectural Manufacturer's Association (AAMA):
 - 1. AAMA 711 -- Voluntary Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products; 2013.
- C. American Society for Testing and Materials (ASTM):
 - 1. ASTM C1193 -- Standard Guide for Use of Joint Sealants; 2016.
 - 2. ASTM D1970 -- Specification for Self-adhering Polymer Modified Bituminous Sheet Materials Used as Steep Roof Underlayment for Ice Dam Protection; 2009.
 - 3. ASTM D3309 -- Standard Specification for Polybutylene (PB) Plastic Hot- and Cold-Water Distribution Systems; 1996a (R2002).

4. ASTM D5034 -- Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test); 1995.
5. ASTM E96/E96M -- Test Method for Water Vapor Transmission of Materials; 2005.
6. ASTM E331 -- Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference; 2000 (R2009).

1.03 SUBMITTALS

A. General:

1. For submittal procedures, refer to Articles 42 through 45 of City of Miami Capital Improvements Program Standard Contract Section 2 - General Terms and Conditions.

B. Product Data: Submit manufacturer current technical literature for each type of product, including but not limited to:

1. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.
2. Manufacturer Instructions: Provide manufacturer's written installation instructions.

C. Shop Drawings: Indicate flexible flashings on shop drawings required for exterior doors and windows.

1. Coordinate with shop drawing requirements specified in other sections including:
 - a. Section 076200 - Sheet Metal Flashing and Trim.
 - b. Section 081423 - Exterior Stile and Rail Wood Doors.
 - e. Section 085200 - Wood Windows.
2. Include supplemental details as necessary to describe complete flexible flashing installations.

1.04 QUALITY ASSURANCE

A. Installer Qualifications:

1. Installer shall have documented successful experience with installation of flexible flashing systems under similar conditions.

1.05 DELIVERY, STORAGE AND HANDLING

- A. Deliver flexible flashing materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Store flexible flashing materials as recommended by manufacturer. Keep away from open flame or sources of ignition.

1.06 PROJECT CONDITIONS

- A. Do not apply flexible flashing on wet or damp surfaces.

- B. Apply to surfaces free of dirt, oils, lubricants and other debris.
- C. Install flexible flashing materials at temperatures above 40-degF.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. Basis of Design:
 - 1. DuPont: 4417 Lancaster Pike; Chestnut Run Plaza 728; Wilmington, DE 19805; Tel. 800-44 8-9835; <http://www.construction.tyvek.com>.
- B. Other Manufacturers: Subject to requirements specified in Article 49 of City of Miami Capital Improvements Program Standard Contract Section 2 - General Terms and Conditions, equivalent products by one of the following manufacturers may be used.
 - 1. Grace Construction Products: www.graceconstruction.com.
 - 2. W.R. Meadows, Inc.: www.wrmeadows.com.
 - 3. Polyguard Products, Inc.: www.polyguardproducts.com.

2.02 MATERIALS

- A. Flexible Flashing: Self-adhering butyl flashing designed for flashing of rough openings at exterior doors and windows, applications such as those indicated, and meeting the following criteria:
 - 1. Description:
 - a. Face Material Composition: Textured polyethylene laminate barrier.
 - b. Adhesive Composition: Butyl adhesive.
 - c. Thickness: 64 mil.
 - d. Release Liner: 2-part siliconized paper.
 - e. Width: 9 inches, unless otherwise indicated.
 - 2. Performance Requirements:
 - a. Shall meet or exceed requirements of AAMA 711, including but not limited to:
 - (1) Tensile Strength (ASTM D5034): 15.4 lbs, minimum.
 - (2) Water Penetration Resistance around Nail Penetrations (ASTM D1970): None.
 - (3) Peel Adhesion (ASTM D3330): 4.3 lbs/linear inch, min (plywood).
 - b. Water Intrusion: No leakage when tested in accordance with ASTM E331 and the following criteria:
 - (1) Differential Pressure: 6.24 psf (0.297 kN/m²), minimum.
 - (2) Test Exposure Duration: 2 hours, minimum.
 - c. Water Vapor Permeability: Less than 1 perm, when tested in accordance with

ASTM E96/E96M.

3. Products: DuPont™ FlexWrap™ NF, or equal by one of the other manufacturers.
- B. Seam Tape: Pressure sensitive, polypropylene substrate with acrylic based adhesive; compatible with flexible flashing and related materials.
 1. Product: DuPont™ Tyvek® Tape, or equal by one of the other manufacturers.
- C. Primer: Provide primer to assist in adhesion between substrate and flashing, in accordance with flashing manufacturer's recommendation.
- D. Elastomeric Joint Sealants: Refer to Section 079200 - Joint Sealants.
 1. Verify compatibility with flashing materials.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify substrate and surface conditions are in accordance with flexible flashing manufacturer recommended tolerances prior to installation.
- B. Review requirements for sequencing of installation of flexible flashing assembly with installation of windows, doors, louvers and wall penetrations to provide a weather-tight flashing assembly.

3.02 FLASHING

- A. General:
 1. Prepare surfaces and install flexible flashing materials in accordance with manufacturer's instructions, as required to protect concealed materials, prevent water intrusion, and provide a weathertight seal.
 2. Install flashing materials in accordance with manufacturer's installation guidelines and recommendations.
- B. Installation of Flexible Flashings:
 1. Cut flexible flashing a minimum of 12 inches longer than width of sill rough opening.
 - a. Apply primer as required by manufacturer.
 2. Cover horizontal sill by aligning flexible flashing edge with inside edge of sill.
 - a. Adhere to rough opening across sill and up jambs a minimum of 6 inches. Secure flashing tightly into corners by working in along the sill before adhering up the jambs.
 3. Fan flexible flashing at bottom corners onto face of wall.
 - a. Firmly press in place and secure in accordance with manufacturer's installation instructions.
 4. Apply flexible flashing at jambs.

- a. Align flashing with interior edge of jamb framing.
 - b. Start flexible flashing at head of opening and lap sill flashing down to sill.
5. Install flexible flashing at opening head using same installation procedures used at sill.
 - a. Overlap jamb flashing a minimum of 2 inches.
6. Coordinate flexible flashing with window/door installation.
7. On exterior, install backer-rod in joint between window/door frame and flashed rough framing.
 - a. Apply sealant at jambs and head, leaving sill unsealed.
 - b. Apply sealants in accordance with sealant manufacturer's instructions and ASTM C1193.
8. Tape top of window/door in accordance with manufacturer recommendations.
9. On interior, install backer rod in joint between frame of window/door and flashed rough framing.
 - a. Apply sealant around entire window/door to create air seal.
 - b. Apply sealant in accordance with sealant manufacturer's instructions and ASTM C1193.

3.03 FIELD QUALITY CONTROL

- A. Notify manufacturer's designated representative to obtain periodic observations of flexible flashing assembly installation.

3.04 PROTECTION

- A. Protect installed flexible flashing from damage during construction.

END OF SECTION