

SECTION 07 25 00 - WEATHER BARRIERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Weather barrier/water resistant barrier over exterior of wall sheathing
2. Flashing preparation of window and door openings including opening and penetration areas of the building envelope.

1.2 SUBMITTALS

1. Product Data: Technical data and installation instructions of manufacturer.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Installer with successful experience in the installation of weather barrier/secondary weather resistant barriers.
- B. Pre-Installation Conference: Not less than two weeks before start of weather resistant barrier installation, meet at project site with barrier material manufacturer's representative.

1.4 PROJECT CONDITIONS

- A. Do not install flashing tape on wet or damp surfaces.
- B. Clean surfaces of dirt, oils, lubricants or other debris that may inhibit adhesion of the flashing tape to the substrate.
- C. Allow a minimum of 24 hours for drying after precipitation and before installing the flashing tape. For optimal performance, install flashing tape at temperatures above **40 degrees F** (**4 degrees C**).

PART 2 - PRODUCTS

2.1 MANUFACTURERS

1. Manufacturers: Subject to compliance with requirements, provide products by one of the following manufacturers or a substitution approved by Architect prior to Bid date:
 - a. Dow Chemical Company (The).
 - b. DuPont Building Innovations.
 - c. BBA Fiberweb, Inc.

2.2 MATERIALS

- A. Weather Barrier: ASTM E 1677, Type I air and water retarder; with flame-spread and smoke-developed indexes of less than 25 and 450, respectively, when tested according to ASTM E 84; UV stabilized; and acceptable to authorities having jurisdiction.

1. Basis of Design: DuPont Building Innovations; Tyvek CommercialWrap.
- B. Self Adhering Flashing Tape:
 1. Single-Sided Polyethylene Laminate Flashing Tape:
 - a. Basis of Design: DuPont Building Innovations; Dupont StraightFlash.
 - b. Size: 4 inches (102 mm) wide.
 - c. Face Material composition: Polyethylene laminate
 - d. Adhesive composition: Butyl adhesive containing fire retardant additive
 - e. Thickness: 30 mils
 - f. Release liner: 1 piece siliconized paper
 2. Dual-Sided Polyethylene Laminate Flashing Tape:
 - a. Basis of Design: DuPont Building Innovations; DuPont StraightFlash VF.
 - b. Size: 6 inches (152 mm) wide.
 - c. Face Material composition: Polyethylene laminate
 - d. Adhesive composition: Butyl adhesive containing fire retardant additive
 - e. Thickness: 30 mils
 - f. Release liner: 2 piece siliconized paper

2.3 ACCESSORIES

- A. Building-Wrap Tape: Pressure-sensitive plastic tape recommended by building-wrap manufacturer for sealing joints and penetrations in building wrap.
 1. Basis of Design: DuPont Building Innovations; Tyvek Tape.
- B. Fasteners:
 1. Basis of Design: DuPont Building Innovations; Tyvek Wrap Cap Screws.
 2. Material: 2 inch (51 mm) diameter plastic cap with 1-5/8 inch (41 mm) drill point self tapping screw, designed to withstand designed loads.
- C. Sealants: ASTM C 920, elastomeric polymer sealant, of type, grade, class, and use classifications required to seal joints and remain watertight, compatible with weather barrier, and approved and recommended by the flashing tape manufacturer
- D. Primer: Products as approved and recommended by the flashing tape manufacturer.

PART 3 - EXECUTION

3.1 SEQUENCING

- A. Install weather barrier after sheathing is installed and before windows and doors are installed.
- B. Install weather barrier flashing concurrent with window and door installation
- C. Installation of windows, doors and flashing before installation of weather barrier is not acceptable.

3.2 WEATHER BARRIER INSTALLATION

- A. Install weather barrier over exterior side of exterior wall sheathing.
 - 1. Horizontally unroll weather barrier starting at lowest level. Ensure barrier is plumb and level with foundation.
 - 2. Extend bottom edge over sill plate a minimum of **3 inches (76 mm)**. Apply continuous sealant bead to seal bottom edge to sheathing.
 - 3. Attach weather barrier to sheathing every **12 to 18 inches (305 to 457 mm)** at vertical studs.
 - 4. Shingle upper level barrier over lower layers and overlap 6 inches minimum.
 - 5. Overlap weather barrier at corners of building by a minimum of **12 inches (305 mm)**.
 - 6. Overlap weather barrier vertical seams by a minimum of **6 inches (152 mm)**.
 - 7. Extend weather barrier over window and door openings. Do not pre-cut.
- B. Prepare window and door rough openings as follows:
 - 1. Windows: Cut a modified “I” pattern in the weather barrier.
 - a. Horizontally cut weather barrier along bottom of header.
 - b. Vertically cut weather barrier down the center of window openings from the top of the window opening down to 2/3 of the way to the bottom of the window openings.
 - c. Diagonally cut weather barrier from the bottom of the vertical cut to the left and right corners of opening.
 - d. Fold side and bottom flaps into window opening and fasten every **6 inches (152 mm)**. Trim off excess.
 - 2. Doors: Cut a standard “I” pattern in the weather barrier.
 - a. Horizontally cut weather barrier along bottom of door header and along top of sill.
 - b. Vertically cut weather barrier down the center of door openings from the top of the door opening (header) down to the bottom of the door opening (sill).
 - c. Fold side flaps inside around door openings and fasten every **6 inches (152 mm)**. Trim off excess.
- C. Tape all horizontal and vertical seam of weather barrier with joint sealing tape.
- D. Seal all tears and cuts in weather barrier with joint sealing tape.

3.3 FLASHING TAPE INSTALLATION

- A. Make angular cuts upward from upper corners of the rough opening to create an upper head flap to expose sheathing to allow head flashing installation. Flip head flap up and temporarily secure.
- B. Sills:
 - 1. Cut flexible flashing tape at least **12 inches (305 mm)** longer than width of rough opening sill.
 - 2. Remove first piece of release paper, align edge of sill flashing with inside edge of sill, and adhere into rough opening across sill and up jambs **6 inches (152 mm)** minimum. Sill flashing should not wrap onto interior surface of framing.

3. Remove second release paper and fan flashing tape at bottom corners onto face of wall. Firmly press sill flashing to insure full adhesion.
4. Secure edges of bottom corners with fasteners

C. Jambs.

1. Remove release paper and install jamb flashings overlapping entire jamb mounting flange. Extend jamb flashings **6 inches (152 mm)** above top of rough opening to below bottom of sill flashing.
2. For brick mold, non-integral flanged, and non-flanged windows install dual sided flashing tape at jamb areas per the installation instructions.

D. Heads:

1. Standard window and door openings:
 - a. Remove release paper and install head flashing covering entire mounting flange and adhering to exposed sheathing or framing members. Extend head flashing beyond outside edges of both jamb flashings.
 - b. Flip head flap down over the head flashing
 - c. Secure flap above window with joint sealing tape
 - d. For brick mold, non-integral flanged, and non-flanged windows install dual sided flashing tape at head areas per the installation instructions.
2. Arch window or door openings
 - a. Cut flexible head flashing at least **12 inches (305 mm)** longer than the arc length of arched opening
 - b. Remove both release papers and install conforming around top of window, covering entire mounting flange. Overlap head flashing over jamb flashings at least **6 inches (152 mm)**.
 - c. To facilitate installation to round-top window or door heads, remove short lengths of release papers, begin installation, and repeat to work flashing into position and complete installation.
 - d. Secure outer edges of head flashing with fasteners.
 - e. Secure flap above window with joint sealing tape.

E. Seal rear of window or door frame to rough opening per requirements of Division 07 Section "Joint Sealants."

F. Other Openings and Penetrations: Install flashing components in a lapped manner to provide a weathertight barrier.

3.4 FIELD QUALITY CONTROL

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

END OF SECTION 07 25 00