

PART 1 GENERAL**1.1 SECTION INCLUDES**

- A. Weather barrier membrane
- B. Seam Tape
- C. Flashing
- D. Fasteners

1.2 RELATED SECTIONS

- A. Section 01 6000 - Product Requirements.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01 3000.
- B. Substitutions: Requests for substitutions will be considered in accordance with provisions of Section 01 6000.
- C. Provide all weather resistant membranes from a single manufacturer.
- D. Product Data: Submit manufacturer current technical literature for each component.
- E. Samples: Weather Barrier Membrane, minimum 8-1/2 inches by 11 inch.
- F. Quality Assurance Submittals.
 - 1. Design Data, Test Reports: Provide manufacturer test reports indicating product compliance with indicated requirements.
 - 2. Manufacturer Instructions: Provide manufacturer's written installation instructions.
 - 3. Manufacturer's Field Service Reports: Provide site reports from authorized field service representative, indicating observation of weather barrier assembly installation.
- G. Closeout Submittals.
 - 1. Weather Barrier Warranty: Manufacturer's executed warranty form with authorized signatures and endorsements indicating date of Substantial Completion

1.4 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Installer shall have experience with installation of DuPont™ Tyvek® weather barrier assemblies under similar conditions.
 - 2. Installation shall be in accordance with weather barrier manufacturer's installation guidelines and recommendations.
 - 3. Source Limitations: Provide weather barrier and accessory materials produced by single manufacturer.
- B. Pre-installation Meeting:
 - 1. Review all related project requirements and submittals, status of substrate work and preparation, areas of potential conflict and interface, availability of weather barrier assembly materials and components, installer's training requirements, equipment, facilities and scaffolding, and coordinate methods, procedures and sequencing requirements for full and proper installation, integration and protection.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver weather barrier materials and components in manufacturer's original, unopened,

undamaged containers with identification labels intact.

- B. Store weather barrier materials as recommended by weather barrier manufacturer.

1.6 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.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: E.I. du Pont de Nemours and Company ; 4417 Lancaster Pike, Chestnut Run Plaza 721, Wilmington, DE 19805; 1.800.44TYVEK (8-9835); <http://construction.tyvek.com>

2.2 MATERIALS

- A. Basis of Design: High-performance, flash spun-bonded olefin, non-woven, non-perforated, secondary weather barrier is based upon DuPont™ Tyvek® CommercialWrap® D and related assembly components.
- B. Performance Characteristics:
 - 1. Air Penetration: Type 1 when tested in accordance with ASTM E 1677.
 - 2. Water Vapor Transmission: 30 perms, when tested in accordance with ASTM E 96, Method B.
 - 3. Water Penetration Resistance: 235 cm when tested in accordance with AATCC Test Method 127.
 - 4. Basis Weight: 2.4 oz/yd², when tested in accordance with TAPPI Test Method T-410.
 - 5. Air Infiltration Resistance: Air infiltration at >750 seconds, when tested in accordance with TAPPI Test Method T-460.
 - 6. Tensile Strength: 33/41 lbs/in., when tested in accordance with ASTM D 822 , Method A.
 - 7. Surface Burning Characteristics: Class A, when tested in accordance with ASTM E 84 . Flame Spread: 15, Smoke Developed: 25.

2.3 FABRICATION

- A. Fabricate assemblies of framed sections; to sizes and profiles required; with framing members fitted, reinforced and braced to suit design requirements.
- B. Fit and assemble in largest practical sections for delivery to Project Site, ready for installation.
- C. Fabricate items with joints tightly fitted and secured.
- D. Grind exposed welds smooth and flush with adjacent finish surface. Ease exposed edges to small uniform radius.
- E. Make exposed joints flush and hairline.
- F. Provide components required for anchorage. Fabricate anchorage and related components of same material and finish as framing members.

2.4 ACCESSORIES

- A. Seam Tape: 3" DuPont™ Tyvek® Tape as manufactured by DuPont.
- B. Fasteners:
 - 1. DuPont™ Tyvek® Wrap Caps: #4 nails with large 1-inch plastic cap fasteners or 1-inch minimum plastic cap staple with a 7/8" minimum staple length.
- C. Sealants:
 - 1. Provide sealants that comply with ASTM C 920, elastomeric polymer sealant to maintain watertight conditions.
- D. Adhesives:
 - 1. Provide adhesive recommended by weather barrier manufacturer.
 - 2. Products:
 - a. Adhesives recommend by the weather barrier manufacturer.
- E. Primers:
 - 1. Provide flashing manufacturer recommended primer to assist in adhesion between substrate and flashing.
- F. Flashing:
 - 1. DuPont™ FlexWrap™: Flexible membrane flashing materials for window openings and penetrations.
 - 2. DuPont™ StraightFlash™: Straight flashing membrane materials for flashing windows and doors and sealing penetrations such as masonry ties, etc.
 - 3. DuPont™ StraightFlash™ VF: Dual-sided flashing membrane materials for brick mold and non-flanged windows and doors.
 - 4. Preformed Inside and Outside Corners and End Dams as manufactured by DuPont: Preformed three-dimensional shapes to complete the flashing system used in conjunction with DuPont™ Thru-Wall Flashing.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Verify substrate and surface conditions are in accordance with weather barrier manufacturer recommended tolerances prior to installation of weather barrier and accessories.

3.2 INSTALLATION

- A. Install weather barrier over exterior face of exterior wall substrate in accordance with manufacturer recommendations.
- B. Install weather barrier prior to installation of windows and doors.
- C. Start weather barrier installation at a building corner, leaving 6-12 inches of weather barrier extended beyond corner to overlap.
- D. Install weather barrier in a horizontal manner starting at the lower portion of the wall surface with subsequent layers installed in a shingling manner to overlap lower layers. Maintain weather barrier plumb and level.
- E. Sill Plate Interface: Extend lower edge of weather barrier over sill plate interface 3-6 inches. Secure to foundation with elastomeric sealant as recommended by weather barrier manufacturer.
- F. Window and Door Openings: Extend weather barrier completely over openings.

- G. Overlap weather barrier:
 - 1. Exterior corners: minimum 12 inches.
 - 2. Seams: minimum 6 inches.
- H. Weather Barrier Attachment:
 - 1. Attach weather barrier to studs through exterior sheathing. Secure using weather barrier manufacturer recommend fasteners, space 6 -18 inches vertically on center along stud line, and 24 inch on center, maximum horizontally.

3.3 SEAMING

- A. Seal seams of weather barrier with seam tape at all vertical and horizontal overlapping seams .
- B. Seal any tears or cuts as recommended by weather barrier manufacturer.

3.4 ADJUSTING

- A. Adjust moving components for smooth operation without binding.
- B. Adjust locks to provide smooth and secure operation.

3.5 OPENING PREPARATION

- A. Flush cut weather barrier at edge of sheathing around full perimeter of opening.
- B. Cut a head flap at 45-degree angle in the weather barrier at window head to expose 8 inches of sheathing. Temporarily secure weather barrier flap away from sheathing with tape.

3.6 SEAMING

- A. Cut 9-inch wide DuPont™ FlexWrap™ a minimum of 12 inches longer than width of sill rough opening.
- B. Cover horizontal sill by aligning DuPont™ FlexWrap™ edge with inside edge of sill. 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.
- C. Fan DuPont™ FlexWrap™ at bottom corners onto face of wall. Firmly press in place. Mechanically fasten fanned edges.
- D. Apply 9-inch wide strips of DuPont™ StraightFlash™ at jambs. Align flashing with interior edge of jamb framing. Start StraightFlash™ at head of opening and lap sill flashing down to the sill.
- E. Spray-apply primer to top 6 inches of jambs and exposed sheathing.
- F. Install DuPont™ FlexWrap™ at opening head using same installation procedures used at sill. Overlap jamb flashing a minimum of 2 inches.
- G. Coordinate flashing with window installation.
- H. On exterior, install backer-rod in joint between window frame and flashed rough framing. Apply sealant at jambs and head, leaving sill unsealed. Apply sealants in accordance with sealant manufacturer's instructions and ASTM C 1193.
- I. Position weather barrier head flap across head flashing. Adhere using 4-inch wide DuPont™ StraightFlash™ over the 45-degree seams.
- J. Tape top of window in accordance with manufacturer recommendations.
- K. On interior, install backer rod in joint between frame of window and flashed rough framing. Apply sealant around entire window to create air seal. Apply sealant in accordance with sealant manufacturer's instructions and ASTM C 1193.

3.7 THRU-WALL FLASHING / WEATHER BARRIER INTERFACE AT WINDOW HEAD

- A. Cut flap in weather barrier at window head.
- B. Prime exposed sheathing.
- C. Install lintel as required. Verify end dams extend 4 inches minimum beyond opening.
- D. Install end dams bedded in sealant.
- E. Adhere 2 inches minimum thru-wall flashing to wall sheathing. Overlap lintel with thru-wall flashing and extend ¼ inch minimum beyond outside edge of lintel to form drip edge.
- F. Apply sealant along thru-wall flashing edges.
- G. Fold weather barrier flap back into place and tape bottom edge to thru-wall flashing.
- H. Tape diagonal cuts of weather barrier.
- I. Secure weather barrier flap with fasteners.

3.8 PROTECTION

- A. Protect installed weather barrier from damage.

END OF SECTION