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Product and System Specifications DuPont™ Flashing Systems

Specifier Note: The purpose of this guide specification is to assist the specifier in correctly specifying flexible flashing products and execution. The specifier needs to edit the guide specifications to fit the needs of specific projects. Contact a DuPont™ Tyvek® Specialist to assist in appropriate product selections. Throughout the guide specification, there are Specifier Notes to assist in the editing of the file.

References have been made within the text of the specification to CSI MasterFormat 2004 Section numbers and titles. The specifier needs to coordinate these numbers and titles with sections included for the specific project. Brackets []; “AND/OR”; and “OR” have been used to indicate when a selection is required.

This guide is for commercial flashing applications in conjunction with weather barrier assemblies. These high-performance flashing membranes are designed to help stop the passage of bulk water and airflow movement and are vapor non-permeable. These commercial flashings offer protection for the building envelope by providing a water-resistant barrier around penetrations and rough openings.

These commercial flashings are specifically designed for above grade, vertical wall surface openings or penetrations where the wall assembly may consist of any of the following: exterior-grade or glass-faced gypsum sheathing, exterior plywood sheathing, oriented strand board (OSB) sheathing, stud walls with no sheathing, and masonry wall construction.

SECTION 07 65 00 FLEXIBLE FLASHING DuPont™ Flashing Systems

PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Self-adhering flexible flashing (DuPont™ FlexWrap™, DuPont™ FlexWrap™ NF, DuPont™ StraightFlash™, and DuPont™ StraightFlash™ VF.)
- B. Primers
- C. Fasteners (DuPont™ Tyvek® Wrap Caps)

1.2 REFERENCES

- A. ASTM International
 - 1. ASTM C920; Standard Specification for Elastomeric Joint Sealants
 - 2. ASTM C1193; Standard Guide for Use of Joint Sealants

3. ASTM E96; Test Method for Water Vapor Transmission of Materials
4. ASTM E331; Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference

1.3 SUBMITTALS

- A. Refer to Section [01 33 00 Submittal Procedures] [insert section number and title].
- B. Product Data: Submit manufacturer current technical literature for each type of product.
- C. Samples: Each type of product specified. [4 inches by 4 inches] [Insert size].
- D. Quality Assurance Submittals

(Specifier Note: DELETE Design Data, Test Report submittal requirements when proprietary specification is used and can be held. MAINTAIN Design Data, Test Report and submittal requirement when other products may be submitted as substitutions.)

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

1.4 QUALITY ASSURANCE

- A. Qualifications
 1. Installer shall have documented successful experience with installation of flexible flashing systems under similar conditions.
 2. Installation shall be in accordance with manufacturer's installation guidelines and recommendations.

(Specifier Note: Mock-ups are recommended for all projects using DuPont flexible flashings. Mock-up requirement will likely be included in the specification section for the wall cladding and/or windows. Include flashing as part of the required mock-up.)

1.5 DELIVERY, STORAGE AND HANDLING

- A. Refer to Section [01 60 00 Product Requirements] [insert section number and title].
- B. Deliver flexible flashing materials and components in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Store flexible flashing materials as recommended by manufacturer. Keep away from open flame or sources of ignition.

1.6 PROJECT CONDITIONS

- A. Refer to Section [01 60 00 Product Requirements] [insert section number and title].
- B. Do not apply flexible flashing on wet or damp surfaces.
- C. Apply to surfaces free of dirt, oils, lubricants and other debris.
- D. Install flexible flashing materials at temperatures above 40°F. At temperatures below 40°F, apply primer in accordance with flashing manufacturer recommendations, prior to installation of flashing.

PART 2 - PRODUCTS

(Specifier Note: Product Information is proprietary to DuPont™ Flashing Systems. If additional products are required for competitive procurement, contact DuPont Building Innovations for assistance.)

2.1 MANUFACTURER

- A. DuPont; 4417 Lancaster Pike, Chestnut Run Plaza 728, Wilmington, DE 19805; 1-800-44-TYVEK (8-9835); <http://www.construction.tyvek.com>

2.2 MATERIALS

(Specifier Note: DELETE products not required for project.)

A. Self-Adhering – Straight Flashing:

1. Basis of Design: Self-adhering straight flashing membrane tape is based on DuPont™ StraightFlash™
2. Description:
 - a. Face Material Composition: Textured polyethylene laminate barrier.
 - b. Face color: white
 - c. Adhesive composition: Butyl adhesive
 - d. Thickness: 30 mil
 - e. Release Liner: 1 piece siliconized paper
 - f. Dimension: [4 inches wide by 150 feet or 9 inches wide by 125 feet]

AND/OR

(Specifier Note: When specifying brick mold windows contact DuPont™ Tyvek® Specialist for additional instructions)

B. Self Adhering -- Dual-Sided Straight Flashing

1. Basis of Design: Dual-sided, self-adhering straight flashing membrane tape is based on DuPont™ StraightFlash™ VF
2. Description:
 - a. Face Material Composition: Spunbonded polyethylene
 - b. Face Color: white
 - c. Adhesive Composition: Dual-sided butyl adhesive
 - d. Thickness: 30 mil
 - e. Release liner: 2-piece siliconized paper
 - f. Dimension: 6 inches wide by 125 feet

AND/OR

C. Self-Adhering – Flexible Flashing

1. Basis of Design: Self-adhering flexible flashing membrane is based on DuPont™ FlexWrap™.
2. Description:
 - a. Face Material Composition: Conformable textured polyethylene laminate barrier.
 - b. Face color: White.
 - c. Adhesive composition: Butyl adhesive
 - d. Thickness: 70 mil

- e. Release liner: 2-part siliconized paper.
- f. Dimension: [7 inches wide by 75 feet or 9 inches wide by 75 feet]

D. Performance Characteristics:

- 1. Water intrusion: No leakage at 75 Pa, when tested in accordance with ASTM E331.
- 2. Water Vapor Permeability: < 1 perm, when tested in accordance with ASTM E96.

AND/OR

C. Self-Adhering – Flexible Flashing

- 1. Basis of Design: Self-adhering flexible flashing membrane is based on DuPont™ FlexWrap™ NF.
- 2. Description:
 - a. Face Material Composition: Conformable textured polyethylene laminate barrier.
 - b. Face color: White.
 - c. Adhesive composition: Butyl adhesive
 - d. Thickness: 64 mil
 - e. Release liner: 2-part siliconized paper.
 - f. Dimension: [7 inches wide by 75 feet or 9 inches wide by 75 feet]

D. Performance Characteristics:

- 1. Water intrusion: No leakage at 75 Pa, when tested in accordance with ASTM E331.
- 2. Water Vapor Permeability: < 1 perm, when tested in accordance with ASTM E96.

2.3 ACCESSORIES

A. Seam Tape: DuPont™ Tyvek® Tape as distributed by DuPont Building Innovations.

(Specifier Note: DELETE Description when proprietary specification for seam tape is used and can be held.)

- 1. Description: Pressure sensitive, polypropylene substrate with acrylic based adhesive.

B. Fasteners:

(Specifier Note: Fasteners are dependent upon substrate construction. More than one type of fastener may be required on a single project. REVIEW construction conditions and DELETE fasteners that are unnecessary.)

- 1. (Specifier Note: Steel Frame Construction) DuPont™ Tyvek® Wrap Cap Screws as distributed by DuPont Building Innovations: 1-5/8 inch rust resistant screw with 2-inch diameter plastic cap or manufacturer approved 1-1/4 or 2-inch metal gasketed washer.

AND/OR

- 2. (Specifier Note: Wood Frame Construction) DuPont™ Tyvek® Wrap Caps, as distributed by DuPont Building Innovations: #4 nails with large 1-inch plastic cap fasteners, or 1-inch plastic cap staples with leg length sufficient to achieve a minimum penetration of 5/8-inch into the wood stud.

AND/OR

- 3. (Specifier Note: Masonry Construction) Masonry tap-con fasteners with DuPont™ Tyvek® Wrap Caps as distributed by DuPont Building Innovations: 2-inch diameter plastic cap fastener.

C. Sealants

(Specifier Note: Sealants compatible with weather barrier assembly may be specified in this section or in Division 07 sealants section. DELETE paragraphs 2 and 3 when sealants are specified in Division 07.)

1. Refer to Section [07 92 00 Joint Sealants] [insert section number and title].

OR

2. Provide sealant that complies with ASTM C920, elastomeric polymer sealant to maintain watertight conditions.

(Specifier Note: Sealant products listed below have been tested for compatibility and intermittent contact with DuPont weather barrier materials. EDIT for specific project as appropriate when sealants are specified within this section.)

3. Products:

- a. DuPont™ Residential Sealant
- b. DuPont™ Commercial Sealant
- c. Sealants recommended by the weather barrier manufacturer.

D. Primer:

1. Provide flashing manufacturer recommended primer to assist in adhesion between substrate and flashing

(Specifier Note: Products listed below are only recommendations for inclusion when required and should be EDITED for specific project.)

2. Products:

- a. 3M High Strength 90
- b. Denso Butyl Spray

(Specifier Note: SIA product meets California VOC requirements.)

- c. SIA 655
- d. Permagrip 105
- e. ITW TACC Sta' Put SPH
- f. Primers recommended by the flashing manufacturer

PART 3 - EXECUTION

3.1 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.

(Specifier Note: Flashing manufacturer recommends weather barrier be installed before the installation of the windows. USE these opening preparation and flashing articles for flashing non-flanged windows when they will be installed after the installation of a weather barrier.)

3.2 OPENING PREPARATION (for use with non-flanged windows – all cladding types)

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

3.3 FLASHING (for use with non-flanged windows – all cladding types)

Project Name/Project Number/26-Aug-15

07 65 00

(Masonry Accessories) Flexible Flashing
DuPont™ Thru-Wall Flashing

(Specifier Note: DuPont recommends the use of the 7-inch wide DuPont™ FlexWrap™ with 2 by 4 framing and 9-inch wide DuPont™ FlexWrap™ with 2 by 6 framing.)

- A. Cut [7-inch] [9-inch] wide DuPont™ FlexWrap™ or DuPont™ FlexWrap™ NF a minimum of 12 inches longer than width of sill rough opening. Apply primer as required by manufacturer.
- 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. Mechanical fastening is not required for DuPont™ FlexWrap™ NF.
- 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 sill.
- E. Spray-apply primer to top 6 inches of jambs and exposed sheathing.
- F. Install DuPont™ FlexWrap™ or DuPont™ FlexWrap™ NF at opening head using same installation procedures used at sill. Overlap jamb flashing a minimum of 2 inches.
- G. Coordinate flexible 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 C1193.
- 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 C1193.

(Specifier Note: Manufacturer recommends weather barrier be installed before the installation of the windows. use these opening preparation and flashing articles for flashing flanged windows when they will be installed after the installation of a weather barrier.)

3.4 OPENING PREPARATION (for use with flanged windows installed after weather barrier)

- A. Cut weather barrier in an "I-cut" pattern. A modified I-cut is also acceptable.
 - 1. Cut weather barrier horizontally along the bottom and top of the window opening.
 - 2. From the top center of the window opening, cut weather barrier vertically down to the sill..
 - 3. Fold side and bottom weather barrier flaps into window opening and fasten.
- B. Cut a head flap at 45-degree angle in the weather barrier membrane at window head to expose 8 inches of sheathing. Temporarily secure weather barrier membrane flap away from sheathing with tape.

3.5 FLASHING (for use with flanged windows installed after weather barrier)

(Specifier Note: DuPont recommends the use of the 7-inch wide DuPont™ FlexWrap™ with 2 by 4 framing and 9-inch wide DuPont™ FlexWrap™ with 2 by 6 framing.)

- A. Cut [7-inch] [9-inch] wide DuPont™ FlexWrap™ or DuPont™ FlexWrap™ NF a minimum of 12 inches longer than width of sill rough opening.

- B. Cover horizontal sill by aligning DuPont™ FlexWrap™ or DuPont™ FlexWrap™ NF 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™ or DuPont™ FlexWrap™ NF at bottom corners onto face of wall. Firmly press in place. Mechanically fasten fanned edges. Mechanical fastening is not required for DuPont™ FlexWrap™ NF.
- D. On exterior, apply continuous bead of sealant to wall or backside of window mounting flange across jambs and head. Do not apply sealant across sill.
- E. Install window according to manufacturer's instructions.
- F. Apply 4-inch wide strips of DuPont™ StraightFlash™ at jambs overlapping entire mounting flange. Extend jamb flashing 1-inch above top of rough opening and below bottom edge of sill flashing.
- G. Apply 4-inch wide strip of DuPont™ StraightFlash™ as head flashing overlapping the mounting flange. Head flashing should extend beyond outside edges of both jamb flashings.
- H. Position weather barrier head flap across head flashing. Adhere using 4-inch wide DuPont™ StraightFlash™ over the 45-degree seams.
- I. Tape head flap in accordance with manufacturer recommendations
- J. 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.

(Specifier Note: When project conditions dictate that weather barrier will be installed after the windows and doors have been installed, USE the following Flashing Article.)

3.6 FLASHING (for use with flanged windows installed before weather barrier)

- A. Attach weather barrier membrane apron under sill. Extend apron a minimum of 10 inches beyond sides of rough opening, and below the rough opening to overlap the sill plate or the weather barrier below. Securely attach sides of apron to wall, leaving bottom free to overlap later weather barrier installation.
- B. Cut DuPont™ FlexWrap™ or DuPont™ FlexWrap™ NF a minimum of 12 inches longer than width of sill rough opening.
- C. Cover horizontal sill by aligning DuPont™ FlexWrap™ or DuPont™ FlexWrap™ NF edge with inside edge of sill. Adhere to rough opening across sill and up jambs a minimum of 6 inches.
- D. Fan DuPont™ FlexWrap™ or DuPont™ FlexWrap™ NF at bottom corners onto face of wall. Firmly press in place. Mechanically fasten fanned edges. Mechanical fastening is not required for DuPont™ FlexWrap™ NF.
- E. On exterior, apply continuous bead of sealant to wall or backside of window mounting flange across jambs and head. Do not apply sealant across sill.
- F. Coordinate with window installation.
- G. Complete flashing after installation of window/door
 - 1. Apply 4-inch wide strips of DuPont™ StraightFlash™ at jambs overlapping entire mounting flange. Extend jamb flashing 1-inch above top of rough opening and below bottom edge of sill flashing.
 - 2. Apply 4-inch wide strip of DuPont™ StraightFlash™ as head flashing overlapping the mounting flange. Head flashing should extend beyond outside edges of both jamb flashings.
 - 3. Position weather barrier head flap across head flashing. Adhere using 4-inch wide DuPont™ StraightFlash™ over the 45-degree seams.
 - 4. Tape head flap in accordance with manufacturer recommendations.

5. 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 FIELD QUALITY CONTROL

(Specifier Note: Field observation by a manufacturer designated representative is recommended for all projects using DuPont™ FlexWrap™. DuPont™ StraightFlash and DuPont™ StraightFlash™ VF)

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

3.8 PROTECTION

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

END OF SECTION

DISCLAIMER:

DuPont Building Innovations Guide Specifications have been written as an aid to the professionally qualified specifier and design professional. The use of this guideline specification requires the sole professional judgment and expertise of the qualified specifier and design professional to adapt the information to the specific needs for the building owner and the project, to coordinate with their construction document process, and to meet all the applicable building codes, regulations and laws. DUPONT EXPRESSLY DISCLAIMS ANY WARRANTY, EXPRESSED OR IMPLIED, INCLUDING THE WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE OF THIS PRODUCT FOR THE PROJECT.

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