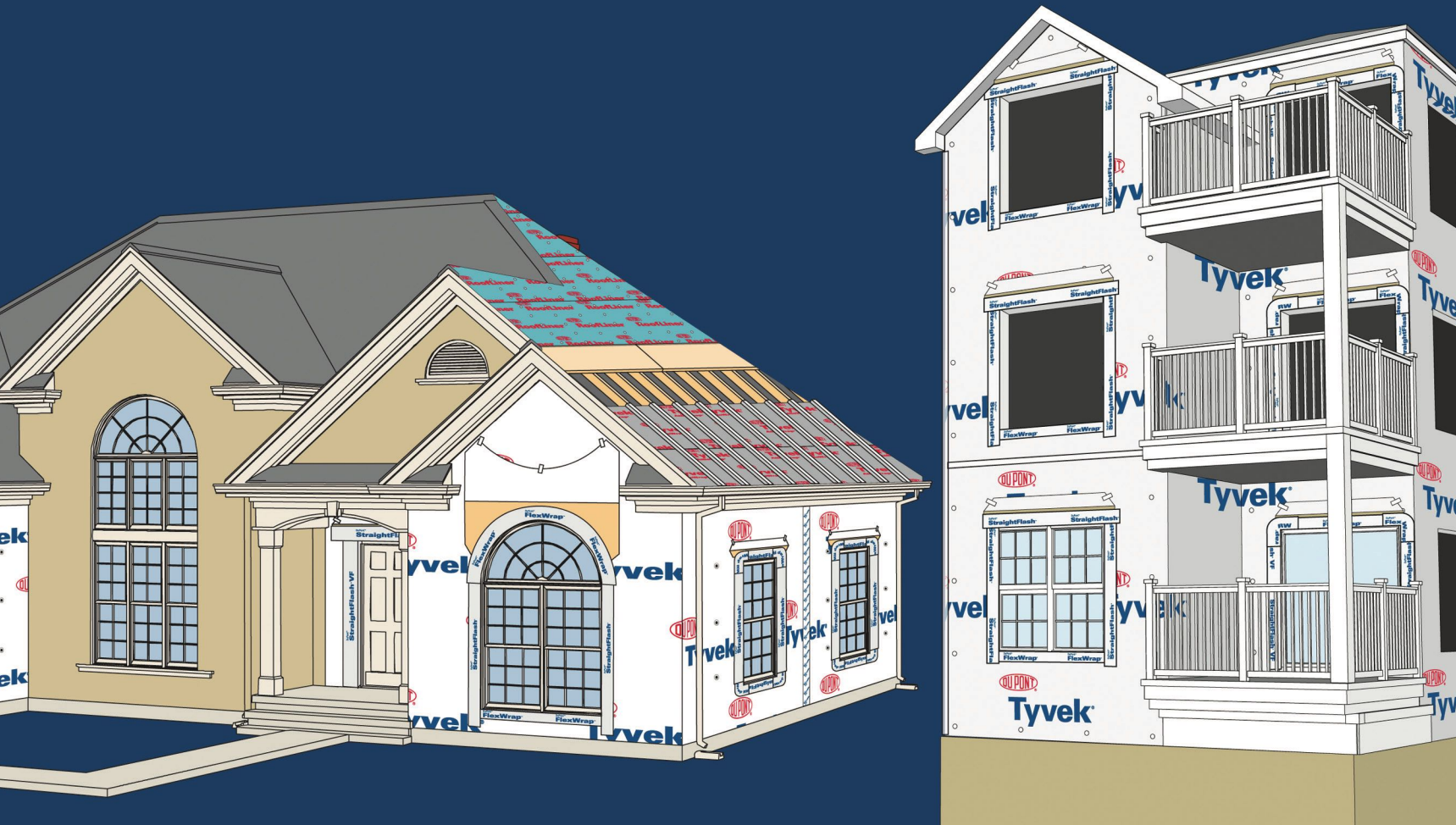


Installation Instructions for Integral
Flanged Door AFTER Water-Resistive
Barrier (WRB) is Installed



DuPont™ Flashing Systems Installation Guidelines

INSTALLATION INSTRUCTIONS FOR INTEGRAL
FLANGED DOOR AFTER WATER-RESISTIVE BARRIER
(WRB) IS INSTALLED



Tyvek®

FOR BUILDINGS LESS THAN 5 STORIES

REVISION 10/11

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Applicable Products

Flashing Products

PRODUCT	DIMENSIONS	AREA
DuPont™ FlexWrap™ NF*	6 in x 75 ft 9 in x 75 ft	37.50 sq ft 56.20 sq ft
DuPont™ FlexWrap™*	9 in x 75 ft 9 in x 250 ft	56.2 sq ft 187.5 sq ft
DuPont™ StraightFlash™	4 in x 150 ft 9 in x 125 ft	50 sq ft 93.75 sq ft
DuPont™ StraightFlash™ VF	6 in x 125 ft	62.5 sq ft
DuPont™ Flashing Tape	4 in x 100 ft 6 in x 100 ft 9 in x 100 ft	33.33 sq ft 50.2 sq ft 75 sq ft
DuPont™ FlexWrap™ RW for Single Stud Application	9 in x 6 in	0.38 sq ft
DuPont™ FlexWrap™ RW for Double Stud Application	9 in x 6 in	0.38 sq ft

*** These installation instructions are applicable to both DuPont™ FlexWrap™ and FlexWrap™ NF which can be used interchangeably throughout the installation guide. DuPont™ FlexWrap™ must be secured with recommended fasteners as shown on page 4.**

Necessary Materials

- DuPont™ Flashing
- DuPont™ Tyvek® Tape
- DuPont™ Residential Sealant, DuPont™ Commercial Sealant or recommended sealant

Optional Materials

- DuPont™ Tyvek® Wrap Caps or other recommended fasteners
- Brushes for surface preparation
- Backer rod
- J -roller
- Recommended primers
- “L” shaped back dam is a 3/4” corner guard (used on interior gypsum)

DuPont™ Flashing Systems Installation Guidelines

Recommended Primers*

MANUFACTURER	PRODUCT NAME
3M	Hi-Strength 90
Denso	Butyl Primer (spray or can)

* Apply per manufacturers' guidelines. For non-DuPont products, DuPont assumes no liability in use of recommended products; installers need to evaluate suitability of recommended products in their end-use applications.

DuPont Recommended Low Expansion Foam

MANUFACTURER	PRODUCT NAME
DuPont	DuPont™ Window & Door Foam

DuPont Recommended Fasteners*

MANUFACTURER	PRODUCT NAME
DuPont	DuPont™ Tyvek® Wrap Cap nails
DuPont	DuPont™ Tyvek® Wrap Cap screws
DuPont	DuPont™ Tyvek® Wrap Cap staples (for Stinger™ or Crossfire® cap stapler)**
DuPont™ Tyvek® Wrap Cap with alternate screws	
1.0 inch minimum crown staples**	

* Apply per manufacturers' guidelines. For non DuPont products, DuPont assumes no liability for use of recommended products; installers need to evaluate suitability of recommended products in their end-use applications.

** Except when installing DuPont™ Tyvek® WRBs over foam and other non-nail-base sheathings.

Warranty

Please see DuPont Weatherization Products Limited Warranty for buildings less than 5 stories at www.Weatherization.Tyvek.com.

General Instructions

For buildings less than 5 stories

For performance requirements exceeding ASTM E1677, 65 mph equivalent structural load and 15 mph equivalent wind-driven rain water infiltration for buildings less than 5 stories, or for installations that specify a window/door design rating of DP45 or greater, it is recommended to install a high pressure skirt to help prevent water intrusion at the sill or threshold and follow the *DuPont™ Flashing Systems Commercial Installation Guidelines*.

DuPont™ Flashing Systems products should be installed on clean, dry surfaces that are free of frost. Wipe surfaces to remove moisture, dirt, grease and other debris that could interfere with adhesion.

When cutting the Weather Resistant Barrier (WRB) to prepare the opening, remove an additional 1" strip of the WRB head flap to allow more room for the tape adhesive to seal the head flashing.

Apply pressure along entire surface of flashing for a good bond using a J-roller or firm hand pressure.

Remove all wrinkles and bubbles that may allow for water intrusion by smoothing surface and repositioning as necessary.

When flashing the sill area for windows and doors, DuPont recommends the use of 6" wide DuPont™ Flexwrap™ NF for 2"x 4" framing and 9" wide DuPont™ Flexwrap™ NF for 2" x 6" framing. As an option, if a rigid back dam is desired, cut the corner back dam the length of the sill and nail into place on the interior edge of the sill prior to installation of DuPont™ Flexwrap™ NF. Then install DuPont™ Flexwrap™ NF over sill and corner guard back dam. If using 6" DuPont™ FlexWrap™ NF with optional rigid back dam, seal ends of corner guard with DuPont™ Residential Sealant, DuPont™ Commercial Sealant or recommended sealant.

Door and window rough sill framing must be level or slightly sloped to the exterior to ensure proper drainage to the exterior. This best practice ensures continuous support with positive slope to the exterior.

DuPont™ Residential Sealant and DuPont™ Commercial Sealant should be tooled flat to allow the natural curing process to create a concave joint.

DuPont™ Flashing Systems Installation Guidelines

Please contact your local DuPont™ Tyvek® Specialist for additional information and installation support.

DO NOT STRETCH DuPont™ FlexWrap™ NF when installing along the length of sills or jambs. DuPont™ FlexWrap™ NF is only intended to be extended when covering corners or curved sections.

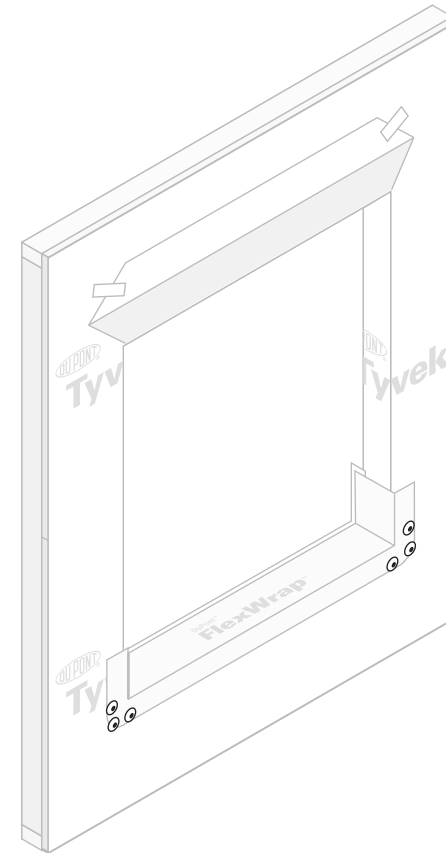
These installation instructions are applicable to both DuPont™ FlexWrap™ NF and FlexWrap™ which can be used interchangeably throughout the installation guide. However, DuPont™ FlexWrap™ must be secured with recommended fasteners as shown in the illustration at right.

DuPont Flashing Systems products perform best when installed at temperatures above 25°F (-4°C).

DuPont™ Flashing Systems products should not be installed over cap fasteners.

Priming is generally not required for adhering DuPont™ Flashing Systems products to most common building materials. However, adverse weather conditions or cold temperatures may require use of a primer to promote adhesion. Additionally, concrete, masonry, and glass mat gypsum sheathing require the use of approved primers. For primer recommendations, see page 3.

For additional guidelines please call 1-800-44-Tyvek (800-448-9835), visit our website at www.Weatherization.Tyvek.com, or consult your local DuPont™ Tyvek® Specialist.



Integral Flanged Door AFTER Water-Resistive Barrier (WRB) is Installed

This installation guideline is intended for doors installed above grade and/or with wood floor construction.

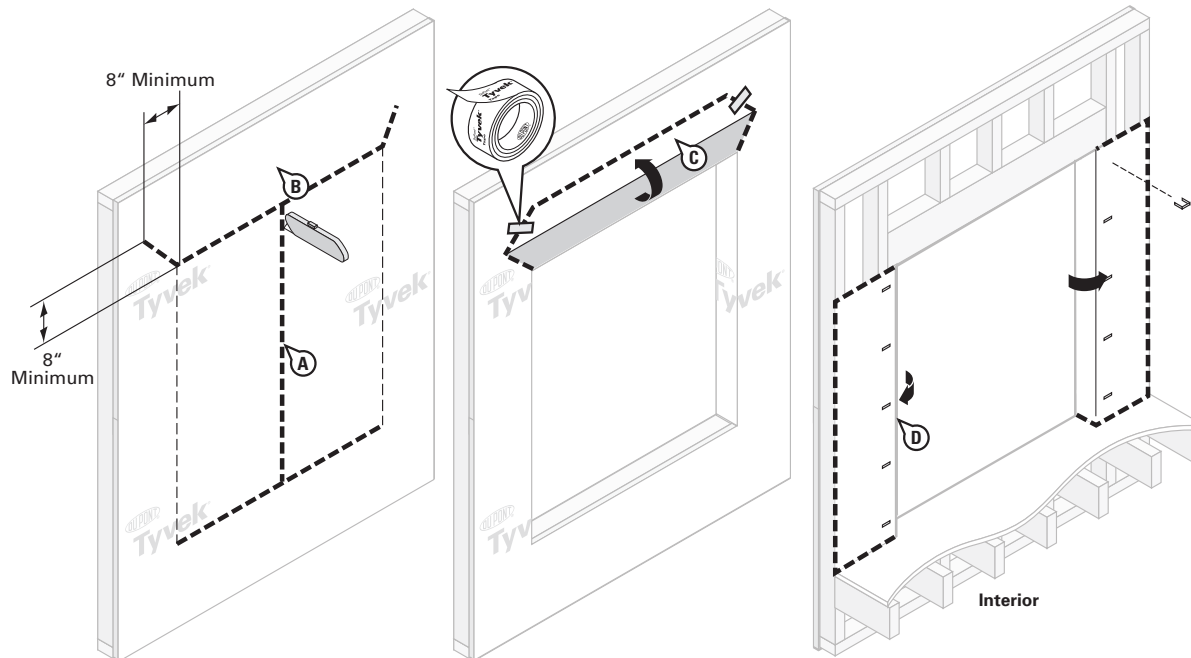
Method applies to the following products:

- DuPont™ StraightFlash™, DuPont™ FlexWrap™ NF and DuPont™ Flashing Tape

STEP 1

Prepare DuPont™ Tyvek® WRB for door installation:

- Make an “I-Cut” (Standard I-Cut) in the WRB. For an “I-Cut”, begin with a horizontal cut across the bottom and the top of the door frame. From the center, cut straight down to the sill.
- Cut two 45 degree slits a minimum of 8” extending from the corner of the door head up and away from door opening from the corner of the header, to create a flap above the rough opening to expose sheathing or framing members, to allow head flashing installation (see step 8). **NOTE:** Some doors and flashing widths may require longer slits.
- Flip head flap up and temporarily secure with DuPont™ Tyvek® Tape.
- Fold side flaps into rough opening and secure to inside wall. Cut off excess flaps if desired.

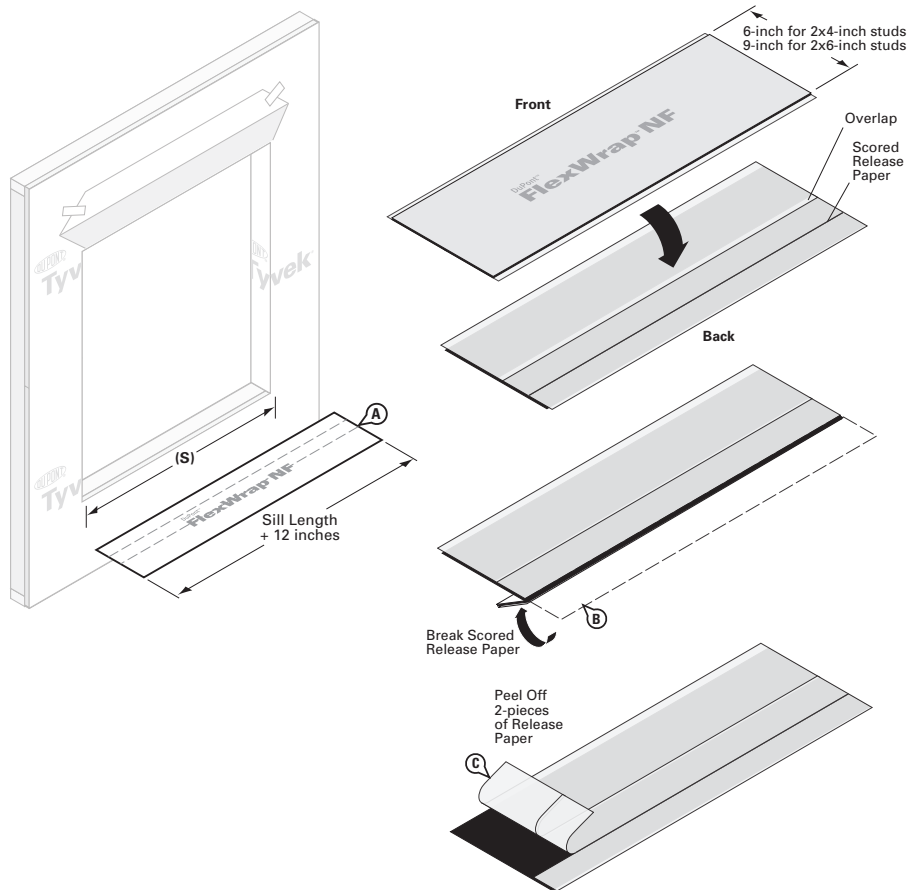


DuPont™ Flashing Systems Installation Guidelines

STEP 2

Preparation of sill flashing:

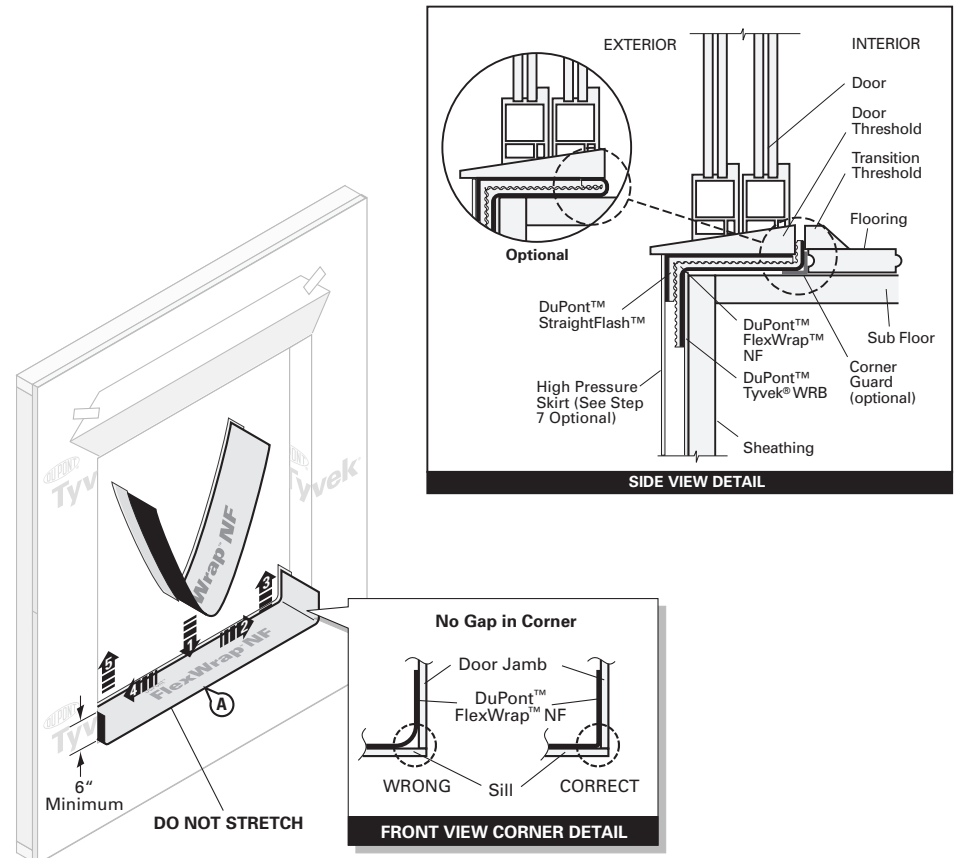
- Cut DuPont™ FlexWrap™ NF at least 12" **LONGER** than width of the sill (S).
- 9" DuPont™ FlexWrap™ NF has perforated release paper to help with the formation of the back dam. To ensure that the perforation tears cleanly, fold the perforation 180° and crease the flashing.
- Remove the two widest pieces of release paper leaving the narrowest release paper on the flashing. When the finished floor is applied, the release paper can be removed and the back dam can be completed.



STEP 3

- Install the sill flashing as indicated leaving the 1" of 9" DuPont™ FlexWrap™ NF with release paper extending it past the door threshold on the inside. When the 1" of release paper is removed, there should be 3/4" of flashing to form the back dam.

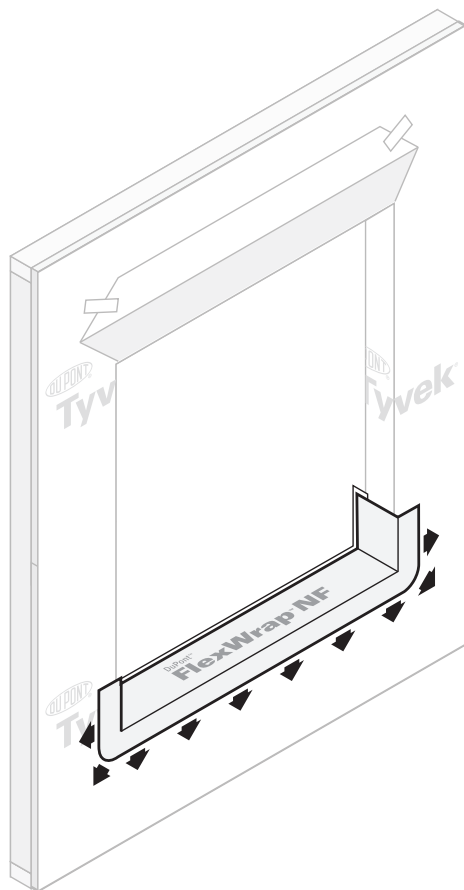
OPTIONAL: Some flooring cannot accommodate a back dam. In that case, fold the 1" back dam on top of 9" DuPont™ FlexWrap™ NF in the sill. Door will be installed on top of the 1" fold to create a back dam.



DuPont™ Flashing Systems Installation Guidelines

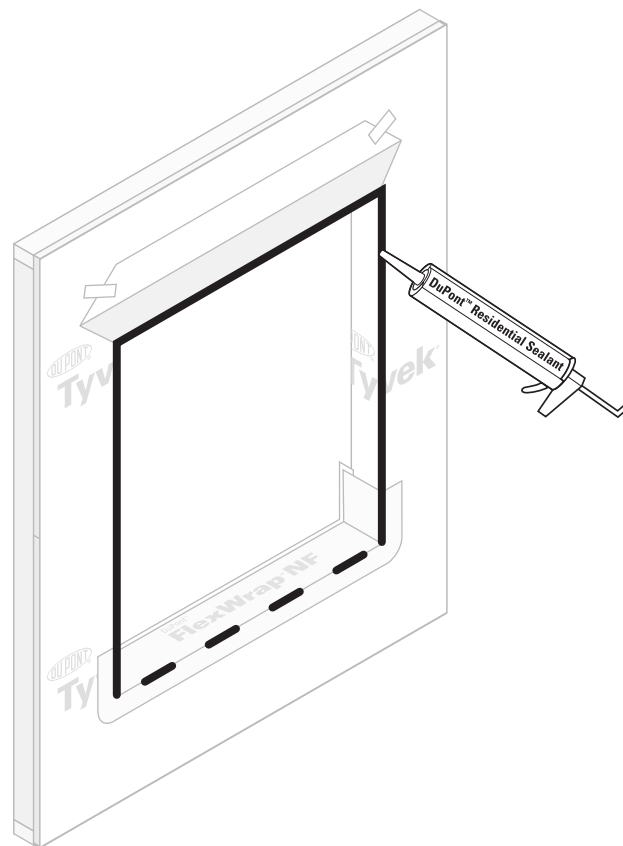
STEP 4

Fan out DuPont™ FlexWrap™ NF at bottom corners onto face of wall. Coverage of DuPont™ FlexWrap™ NF should be 2" to 3" onto the face of the wall.



STEP 5

Apply DuPont™ Residential Sealant, DuPont™ Commercial Sealant or recommended sealant on three sides (jamb and head) as shown below. If sealant is applied to the sill, ensure that there are at least two (2) 2" gaps in the sealant bead for every 4' of window to allow for drainage.

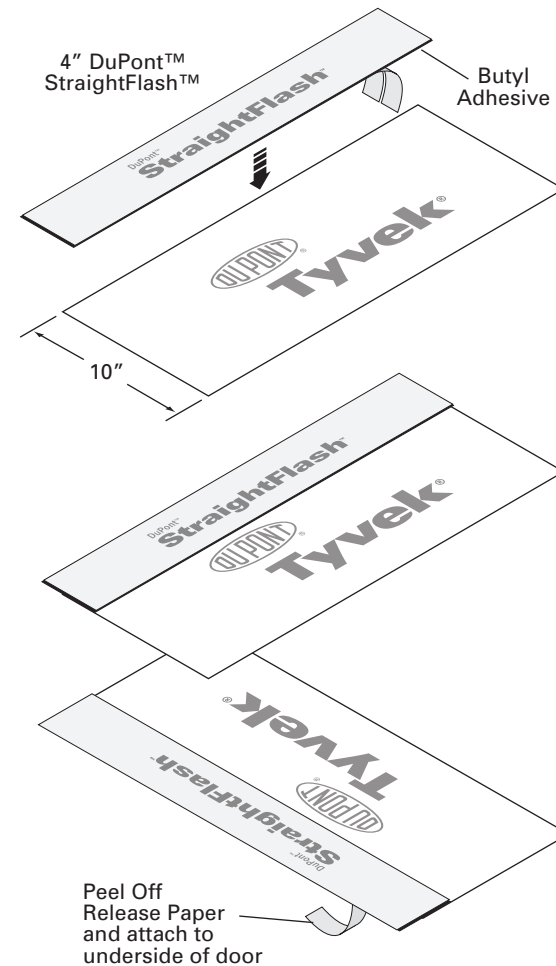


DuPont™ Flashing Systems Installation Guidelines

STEP 6 (OPTIONAL)

For extreme weather conditions, performance requirements exceeding ASTM E1677, or window/door design ratings of DP45 or greater, see General Instructions.

- A. Create the high pressure skirt by cutting a piece of DuPont™ Tyvek® WRB 1" wider than the width of door opening and approximately 10" in depth.
- B. Cut a 4" piece of DuPont™ StraightFlash™ or DuPont™ Flashing Tape to the same width as the skirt. Remove two pieces of release paper and adhere to the DuPont™ Tyvek® WRB.
- C. Remove the last piece of release paper and attach the skirt to the underside of the door. This skirt may be made with DuPont™ StraightFlash™, DuPont™ Flashing Tape, or DuPont™ StraightFlash™ VF.



DuPont™ Flashing Systems Installation Guidelines

STEP 7

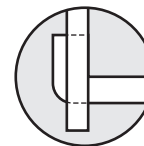
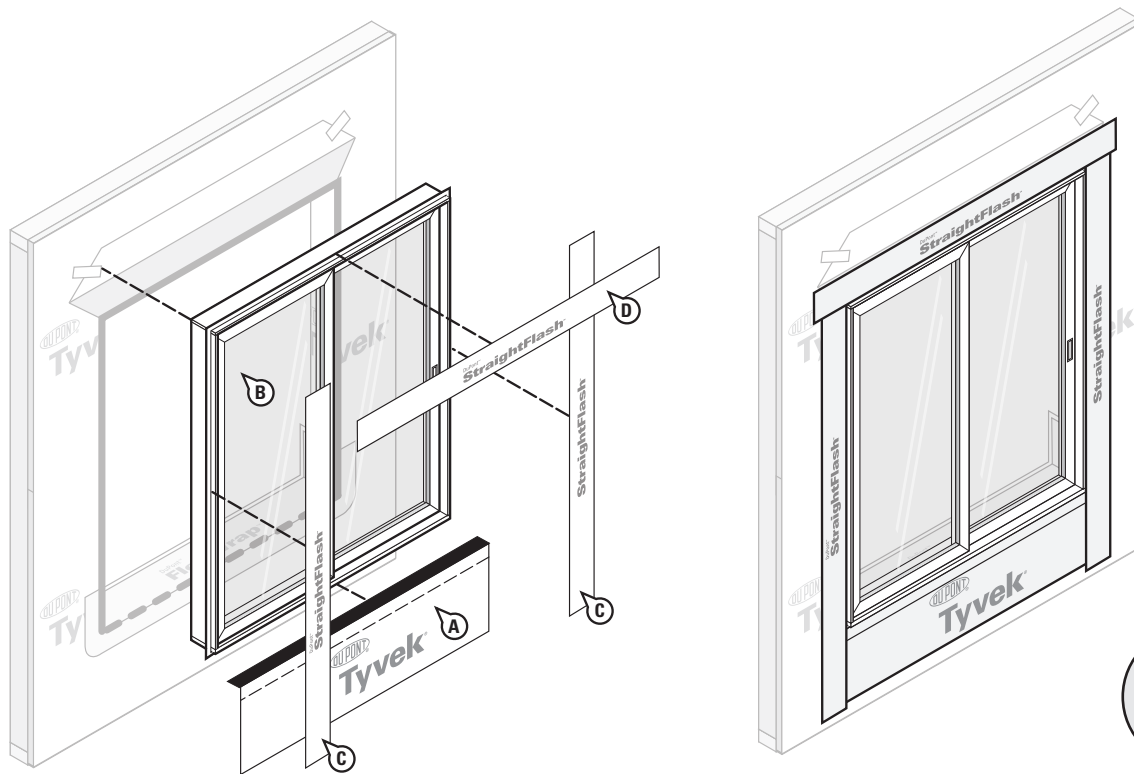
A. OPTIONAL: Adhere high pressure skirt to the bottom threshold of the door.

B. Install door according to manufacturer's instructions.

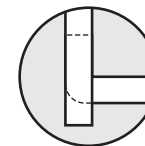
C. Cut two pieces of DuPont™ StraightFlash™, or DuPont™ FlexWrap™ NF, or DuPont™ Flashing Tape for jamb flashing extending 1" above door head flange and below bottom edge of sill flashing. Remove release paper and press tightly along sides of door frame.

D. Cut a piece of DuPont™ StraightFlash™, or DuPont™ FlexWrap™ NF, or DuPont™ Flashing Tape for head flashing, which extends beyond outer edges of jamb flashings. Remove release paper and install completely covering mounting flange and adhering to exposed sheathing or framing members (see D).

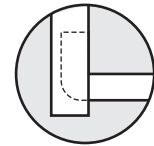
NOTE: Ensure proper shingling. DuPont™ StraightFlash™ or DuPont™ Flashing Tape must overlap DuPont™ FlexWrap™ NF and adhere to the DuPont™ Tyvek® WRB.



INCORRECT
DuPont™ FlexWrap™ NF
reverse flashed



INCORRECT
DuPont™ StraightFlash™
flush with DuPont™
FlexWrap™ NF

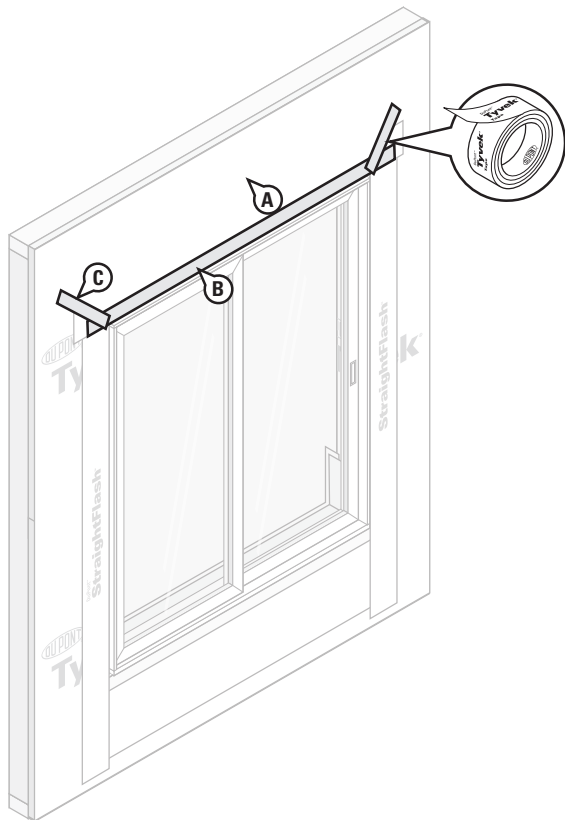


CORRECT
DuPont™ StraightFlash™
overlaps DuPont™
FlexWrap™ NF

DuPont™ Flashing Systems Installation Guidelines

STEP 8

- A. Flip down upper flap of DuPont™ Tyvek® WRB so it lays flat across head flashing.
- B. At the head, continuous tape seams as shown with DuPont™ Tyvek® Tape. Skip-taping at the head is acceptable if an air barrier is not required or if additional drainage is desired.
- DO NOT TAPE** at bottom of door.
- C. Tape down diagonal seams of DuPont™ Tyvek® WRB.

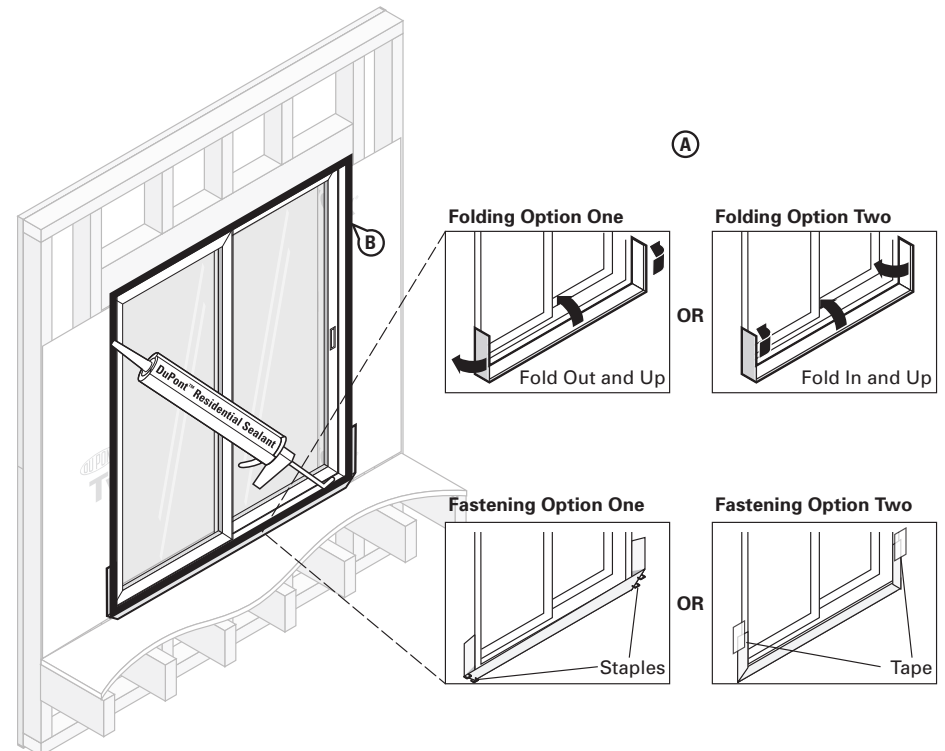


STEP 9

Final Step

- A. OPTIONAL: When the interior flooring is ready to install, remove release paper and use Folding Option One or Two (shown below) to form back dam.
- B. Install DuPont™ Residential Sealant, DuPont™ Commercial Sealant or recommended sealant (and backer rod as necessary) around the window opening at the interior. It is also acceptable to use DuPont™ Window & Door Foam or recommended foam. The seal created by the sealant (and backer rod as necessary) or foam will also serve as a back dam. DuPont™ Residential Sealant or DuPont™ Commercial Sealant should be tooled flat to allow the natural curing process to create a concave shape. Be sure that the sealant penetrates the grooves of the DuPont™ FlexWrap NF™ around the sill.

NOTE: Installations that specify a window/door design rating of DP45 or greater require extra precautions. See General Instructions for performance requirements exceeding this design rating.



Technical Specifications

DuPont™ Tyvek® WRBs used in construction products are made from 100% flash spunbonded high density polyethylene fibers which have been bonded together by heat and pressure, without binders or fillers, into a tough, durable sheet structure. Additives have been incorporated into the polyethylene to provide ultraviolet light resistance. DuPont requires that DuPont™ Tyvek® CommercialWrap® and CommercialWrap® D be covered within 9 months (270 days) of installation and that all other DuPont™ Tyvek® WRB's be covered within 4 months (120 days) of installation.

DuPont™ Flashing Systems products are made from a synthetic rubber adhesive and a laminate of polyethylene film, polypropylene film, elastic fiber, synthetic rubber adhesive, polyurethane adhesive, and a top sheet of flash spunbonded high density polyethylene fibers or polypropylene film. Additives have been incorporated into these materials to provide ultraviolet light resistance. DuPont requires that DuPont™ Flashing Systems products be covered within four months (120 days) of installation.

Warning

DuPont™ Tyvek® Water-Resistive Barriers are slippery and should not be used in any application where it will be walked on. In addition, because they are slippery, DuPont recommends using kickjacks or scaffolding for exterior work above the first floor. If ladders must be used, extra caution must be taken to use them safely by following the requirements set forth in ANSI Standards 14.1, 14.2 and 14.5 for ladders made of wood, aluminum, and fiberglass, respectively. DuPont™ Tyvek® products are combustible and should be protected from a flame and other high heat sources. DuPont™ Tyvek® products will melt at 275°F (135°C); if the temperature of DuPont™ Tyvek® products reaches 750°F (400°C), it will burn and the fire may spread and fall away from the point of ignition. For more information, call 1-800-44-Tyvek.

DuPont™ Flashing Systems products and their release paper are slippery and should not be walked on. Remove release paper from work area immediately. DuPont™ Flashing Systems products will melt at temperatures greater than 250°F (121°C). DuPont™ Flashing Systems products are combustible and should be protected from flames and other high heat sources. DuPont™ Flashing Systems products will not support combustion if the heat source is removed. However, if burning occurs, ignited droplets may fall away from the point of ignition. For more information, call 1-800-44-Tyvek.

DuPont™ Residential Sealant and DuPont™ Commercial Sealant are irritating to skin, eyes, and respiratory tract. For proper usage, follow directions stated on the product label. For health information, refer to the Material Safety Data Sheet or call Chemtrec at 1-800-424-9300.

Note

When installed in conjunction with other building materials, DuPont™ Flashing Systems products must be properly shingled with these materials such that water is diverted to the exterior of the wall system. DuPont™ Tyvek® products are air and water barriers and not the primary water barrier. The outer facade is the primary barrier. You must follow facade manufacturer's installation and maintenance requirements for all facade systems in order to maintain water holdout properties and ensure performance of DuPont™ Tyvek® products. Use of additives, coatings or cleansers on or in the facade system may impact the performance of DuPont™ Tyvek® water-resistive barriers. DuPont™ Tyvek® Weatherization Systems products are to be used as outlined in this installation guideline. DuPont Flashing Systems products should only be used to seal penetrations and flash openings in houses or buildings. DuPont™ Flashing Systems products are not to be used in roofing applications. For superior protection against bulk water penetration, DuPont suggests a system combining a quality exterior facade, a good secondary weather barrier and exterior sheathing, high quality windows and doors, and appropriate flashing materials paying attention to proper installation of each component. In a system where no exterior sheathing is used and DuPont™ Tyvek® WRB is installed directly over the wall studs, exterior facade materials should be selected to ensure maximum protection against water intrusion. Careful workmanship and proper installation of each component is very important.

DuPont believes this information to be reliable and accurate. This information may be subject to revision as additional experience and knowledge is gained. It is the user's responsibility to determine the proper construction materials needed on each project.

For complete warranty information, please visit www.Weatherization.Tyvek.com or call 1-800-44-Tyvek.

This information is not intended to be used by others for advertising, promotion or other publication for commercial purposes.

For more information about DuPont Weatherization Systems, please call 1-800-44-Tyvek or visit us at www.weatherization.tyvek.com



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