

DuPont Self-Adhered Flashing Products Installation Guidelines

For Buildings Greater than 4 Stories and High-Performance Installations of Any Height



July 2020



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¹ For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

²For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.

Applicable Products

Mechanically-Fastened Water-Resistive and Air Barriers (Tyvek® WRBs)

Product	Dimensions	Area
DuPont™ Tyvek® CommercialWrap®	5 ft x 200 ft 10 ft x 125 ft	1,000 sq ft 1,250 sq ft
DuPont™ Tyvek® CommercialWrap® D	5 ft x 200 ft 10 ft x 125 ft	1,000 sq ft 1,250 sq ft

Self-Adhered Flashing Products

Product	Width
DuPont™ FlexWrap™ (Formerly DuPont™ FlexWrap™ NF)	6 in 9 in
DuPont [™] FlexWrap [™] EZ	2.75 in
DuPont™ StraightFlash™	4 in 9 in
DuPont™ VersaFlange™ (Formerly DuPont™ StraightFlash™ VF)	6 in
DuPont™ Flashing Tape	4 in 6 in 9 in 12 in

Fluid Applied Products

Product	Quantity
DuPont™ Tyvek® Fluid Applied WB+™	5 gal, 50 gal
DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+	28 oz, 3.5 gal
DuPont™ Sealant for Tyvek® Fluid Applied*	28 oz

^{*}DuPont™ Sealant for Tyvek® Fluid Applied System should only be used as directed in the applicable DuPont™ Tyvek® Fluid Applied Products Installation Guidelines.

Installation Accessories

Product	Туре	Quantity
DuPont™ Adhesive/Primer	Can	13.5 oz
DuPont [™] Tyvek [®] Tape	3" Bulk Pack	24 rolls/case
DuPont™ Tyvek® Wrap Cap Screws	2" dia. plastic cap, 1-3/4" screw length	1,000 caps/box
Great Stuff Pro™ Window & Door Polyurethane Foam Sealant	Can (reusable dispensing gun sold separately)	20 oz
Great Stuff Pro™ Gaps & Cracks Polyurethane Foam Sealant	Can (reusable dispensing gun sold separately)	20 oz

Required Materials Based on Project Requirements, Details, and Specifications¹

- · Backer Rod
- Sealant²
- · Brushes for Surface Preparation
- I-Roller
- Trowels
- Rodenhouse Grip-Deck® screws with Thermal-Grip FastCap™ washers³

'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.

²For information regarding chemically compatibility of sealants, see technical bulletin *Chemical Compatibility* of Representative Building Sealants and Adhesives/Primers.

³For information regarding installation of Rodenhouse fasteners, refer to the *DuPont* ** *Tyvek* ** *Mechanically-Fastened Water-Resistive and Air Barriers (WRB) Installation Guidelines for Buildings Greater than 4 Stories and High Performance Installations of Any Height.*

Note

This installation guideline outlines recommended installation techniques and details for DuPont Self-Adhered Flashing Products and where applicable, DuPont™ Tyvek® CommercialWrap® D, and/or DuPont™ Tyvek® Fluid Applied Products. Both Tyvek® WRBs and Tyvek® Fluid Applied Products meet or exceed the requirements of a water-resistive barrier as defined in the 2018 International Residential Code (IRC) and the 2018 International Building Code (IBC). Tyvek® CommercialWrap® D and Tyvek® Fluid Applied Products also function as a high performance air barrier and pass ASTM E2357.

Warranty

Please refer to the <u>DuPont Building Envelope Solutions Products 10-Year Limited Warranty for Buildings Greater Than 4 Stories.</u> For buildings less than 5 stories, and low-rise multi-family buildings less than 6 stories, please refer to the <u>DuPont Building Envelope Solutions Products 10-Year Limited Warranty for Buildings Less Than 5 Stories and Low-Rise Multi-Family Residential Buildings Less Than 6 Stories.</u>

NOTE: In order to make a claim under the DuPont 10-Year Limited Product and Labor Warranty on DuPont Building Envelope Solutions Products, all terms and conditions of the warranty must be met, including use of the applicable DuPont Installation Guidelines available at the date of original installation. In the event that a specific detail or installation technique is not covered in the DuPont Installation Guidelines at the time of construction, then the Key Installation Requirements must have been followed in order to make a claim under the warranty. Compliance prior, during and post construction with the Key Installation Requirements are at the sole discretion of DuPont. Please contact DuPont or a DuPont* Tyvek* Specialist if you have any questions in connection with any DuPont Installation Guideline.

Special Considerations

- DuPont Self-Adhered Flashing 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.
- 2. **DuPont Self-Adhered Flashing Products** perform best when installed at temperatures above 25°F (-4°C).
- Adverse weather conditions or cold temperatures may require use of a primer to promote adhesion of DuPont Self-Adhered Flashing Products to most common building materials. Concrete, masonry, and fiber-faced exterior gypsum board require the use of DuPont™ Adhesive/Primer or recommended primer.
- 4. Apply pressure along entire surface of flashing for a good bond using firm hand pressure, J-roller, or alternate tool without sharp edges (such as a plastic carpet tuck tool) to assist with application of uniform pressure during installation of **DuPont Self-Adhered Flashing Products**.
- 5. Remove all wrinkles and bubbles by smoothing surface and repositioning as necessary.
- 6. **DuPont Self-Adhered Flashing Products** are not intended for through-wall flashing applications.
- 7. When flashing the sill area for windows and doors, DuPont recommends the use of 6" wide **DuPont™ FlexWrap™** for 2"x 4" framing and 9" wide **FlexWrap™** for 2" x 6" framing. When rigid back dams are required or desired, an option would be to use a ¾" corner guard (back dam) cut to the length of the sill and nail into place on the interior edge of the sill prior to installation of 9" wide **FlexWrap™**. Then install 9" wide **FlexWrap™** over sill and corner guard back dam.
- 8. **DO NOT STRETCH FlexWrap™** when installing along sills or jambs. **FlexWrap™** is only intended to be stretched when covering corners or curved sections.
- Avoid placing DuPont™ Tyvek® Wrap Cap Fasteners, or recommended fasteners, where flashing will be installed; however, fasteners can be installed over the flashing.
- 10. Great Stuff Pro™ Window and Door Polyurethane Foam Sealant can be used in lieu of sealant to create a continuous seal around the interior perimeter of the window openings. When using Great Stuff Pro™ Window and Door Polyurethane Foam Sealant in perimeter openings less than ½", apply using the plastic extension tip for the Great Stuff™ Dispenser Gun during installation.
- 11. For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro™ Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro™ Polyurethane Foam Sealant, or other

- recommended foam, extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **DuPont Self-Adhered Flashing**, **DuPont™ Tyvek® Fluid Applied Products** or **DuPont™ Tyvek® WRB**.
- 12. For extreme/coastal exposures installation of a high-pressure skirt is recommended to help prevent water intrusion at the sill or threshold.
- 13. For high pressure design loads, the use of **DuPont™ StraightFlash™** with **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners is required to secure the head flap of the windows.
- 14. Before applying 3" **DuPont™ Tyvek® Tape**, surfaces should be dry and clean. During installation apply firm, even pressure with hand or "J" roller.
- 15. In lieu of temporarily taping, **Tyvek**° **WRB** flaps at window head and jambs can be tucked under the installed **Tyvek**° **WRB**.
- 16. 4" **DuPont™ Flashing Tape** is an alternative to 3" **Tyvek® Tape** where specified in the *DuPont™ Tyvek® Mechanically Fastened Water-Resistive and Air Barrier* (WRB) Installation Guidelines for Buildings Greater Than 4 Stories and High Performance Installations of Any Height.
- 17. 3" **Tyvek**° **Tape** should not be used to terminate **Tyvek**° **WRB** flaps at window jambs and head when the building envelope design requirements exceed ASTM E1677, 65 mph equivalent structural load and 15 mph equivalent wind-driven rainwater infiltration resistance.
- 18. 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.
- 19. For window or door openings greater than 6 feet wide (commercial installations only): A 3-piece sill and head detail is allowed using StraightFlash™ and FlexWrap™ corners. StraightFlash™ should be applied the length of the sill prior to placing the FlexWrap™ corners. The FlexWrap™ corners should be at least 12″ long allowing for 6″ up the jamb and 6″ of overlap on the StraightFlash™ sill flashing. When applying the 3-piece flashing detail to the head of the opening, the StraightFlash™ head piece should be applied prior to installing the FlexWrap™ corner flashing. Minimum overlapping of the StraightFlash™ head flashing and jamb flashing should be a minimum of 6″.
- 20. Packaged Terminal Air Conditioners (PTAC) units can be flashed in accordance with the non-flanged window section or with the **DuPont™ VersaFlange™** for brick mold window sections of this installation quideline.
- 21. Suitable substrates for **DuPont™ Tyvek® Fluid Applied Products** include concrete masonry unit (CMU), concrete (48 hrs. for green concrete), exterior gypsum, OSB, plywood, wood, and metal. Contact your local DuPont™ Tyvek® Specialist for use with pressure treated or fire retardant treated wood (FRT).

- 22. **DuPont™ Tyvek® Fluid Applied Products** should only be used for wall systems that include a continuous path for drainage allowing moisture that penetrates the facade to exit to the exterior. The drainage path should be continuous throughout the wall assembly, including but not limited to areas such as eyebrows, band boards, penetrations, or other locations where transitions and changes of plane occur. For membrane drainage wall systems, ensure that the drainage path is not blocked or disrupted to prevent excess moisture buildup in the wall cavity.
- 23. Uncured **Tyvek**® **Fluid Applied Products** must not come in contact with building wraps due to potential impact on performance properties.
- 24. **DuPont™ Tyvek® CommercialWrap®** and **Tyvek® CommercialWrap® D** may be installed over **Tyvek® Fluid Applied Products** after 48 hours of curing at 70°F (20°C) and 50% RH.
- 25. **Tyvek**° **Fluid Applied Products** can be applied to damp surfaces. A surface is considered damp if there is no visible water on the surface and no transfer of water to the skin when touched.
- 26. **DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+** can be troweled or brushed to the required thickness in any application outlined in the guide.
- 27. **Tyvek**° **Fluid Applied Products** should be applied when air and surface temperatures are above 25°F. Do not install once the ambient temperature exceeds 95°F (35°C), unless the application surface is shaded. The maximum surface temperature for application is 140°F (60°C).
- 28. Tyvek° Fluid Applied Products may be overcoated once a tack-free skin has formed. Exterior insulation and/or exterior facade may be installed after Tyvek° Fluid Applied Products have cured for 48 hours. Please refer to Drying/Curing information in the DuPont™ Tyvek° Fluid Applied WB+™ Wall and Substrate Guidelines (43-D100680).
- 29. Performance testing, included but not limited to peel adhesion, pull strength analysis, field or third-party testing of air and/or water barrier properties, should be conducted after **Tyvek**° **Fluid Applied Products** are fully cured (~14 days).
- 30. Tyvek° CommercialWrap° and Tyvek° CommercialWrap° D must not come in direct contact with other manufacturers' cured or uncured fluid-applied and/or deck coating waterproofing products due to potential impact on performance properties. DuPont™ StraightFlash™ can be used as transitional membrane.
- 31. DuPont requires **Tyvek**® **WRBs** and **Tyvek**® **Fluid Applied Products** be covered within nine months (270 days) of installation.
- 32. The maximum in-service temperature for Tyvek® WRBs, DuPont Self-Adhered Flashing Products, and Tyvek® Fluid Applied Products is 180°F.

Key Installation Requirements for Drainable Window / Door Installation

When flashing windows or doors, the following principles must be followed:

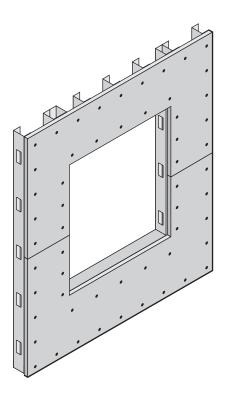
- When installed properly, DuPont™ StraightFlash™, DuPont™ VersaFlange™, DuPont™ FlexWrap™, and DuPont™ Flashing Tape provide nail sealability at window/door openings to help protect critical window-wall interfaces. Metal sill pan flashing may be used, but must not replace flexible sill flashing that provides nail sealability.
- DuPont Self-Adhered Flashing Products comply with AAMA 711-13, Voluntary
 Specification for Self Adhering Flashing Used for Installation of Exterior Wall
 Fenestration Products, which has a modified version of ASTM D 1970 and it is more representative for vertical wall applications.
- Tyvek® Fluid Applied Flashing and Joint Compound+ complies with AAMA 714-19,
 Voluntary Specification for Liquid Applied Flashing Used to Create a Water-Resistive Seal around Exterior Wall Openings in Buildings.
- Ensure that sill flashing does not slope to the interior. An exterior slope is recommended, but not required.
- Direct water onto an acceptable air and water barrier drainage plane with an
 unobstructed path to the exterior of the wall. Provide a drainage path for any water
 intrusion through the window/door attachment system that collects at the sill.
- Properly integrate flashing with acceptable DuPont™ Tyvek® WRB in accordance with the instructional drawing. Self-adhered flashing must be applied with a minimum 2" lap onto the WRB.
- DuPont requires that FlexWrap[™], FlexWrap[™] EZ, StraightFlash[™], and VersaFlange[™] be covered within nine months (270 days) of installation. DuPont requires that DuPont[™] Flashing Tape be covered within four months (120 days) of installation.
- Properly prepare all surfaces (remove dirt, dust, or moisture, etc.) per manufacturer's recommendations.
- Barrier installations (full perimeter seal on exterior) are acceptable only in the following instances:
 - Slab on grade doors, store front windows, or other systems with built-in drainage mechanisms that have potential for exposure to standing water
 - Surface barrier wall systems with non-water sensitive framing material (i.e., CMU walls)
 - Very low wind / rain exposure regions (southwest / desert) that follow AAMA
 2400 installation guideline

- Ensure that window / door and flashing system design takes into account common factors that will impact performance, such as:
 - Climate considerations: Rainfall, Wind, Temperature (hot / cold cycles), Humidity
 - Building design: Window / Wall Design (overhangs, recessed openings, bumpouts), Wall Assembly (wood frame or masonry), Window System (wood or vinyl), New Construction or Replacement Window drainage path
 - UV exposure prior to the construction of the exterior facade
 - Compliance with fire resistance code requirements. For more information about NFPA 285 compliant wall assemblies utilizing Tyvek® WRBs visit building.dupont.com.
- Field testing the window / door and wall installation as a complete system is a recommended best practice.
- · Use of trained installers is highly recommended.

Sealants and Adhesives/Primers

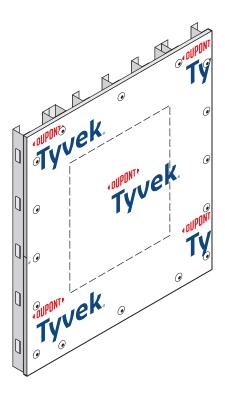
Review the manufacturers' literature or label to confirm that the product(s) used have the chemical and adhesive properties necessary for use with Tyvek® WRBs, DuPont Self-Adhered Flashing Products, and DuPont™ Tyvek® Fluid Applied Products. Ensure the sealant materials meet the installation temperature requirements of the sealant manufacturer. Refer to Chemical Compatibility of Representative Building Sealants and Adhesives/Primers for more information about chemical compatibility.

Method applies to following products: DuPont™ StraightFlash™, and DuPont™ FlexWrap™



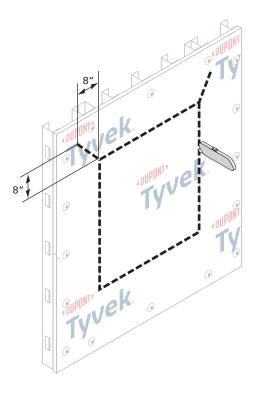
STEP 1

A. Cut rough opening in sheathing for window. Ensure that sheathing is cut flush with, or slightly below the sill framing to allow for positive drainage.



STEP 2

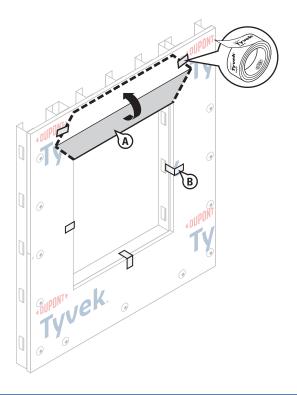
A. Wrap wall as shown in *DuPont™ Tyvek® Mechanically-Fastened Water-Resistive and Air Barrier (WRB) Installation Guidelines for Buildings Greater Than 4 Stories* that can be found at <u>building.dupont.com</u>. Do not install fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings.



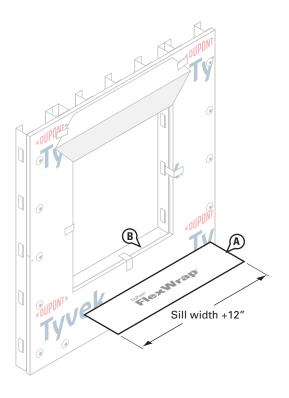
STEP 3

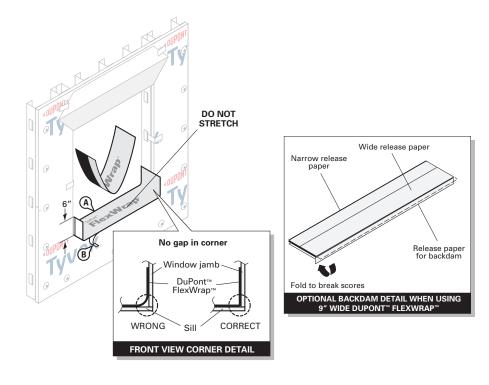
Prepare the **Tyvek**® **WRB** for window installation.

- A. Cut an opening in the **Tyvek® WRB** using a square cut around the perimeter of the rough opening.
- B. Cuts should be made along the dashed indicated lines. (Ensure that the **Tyvek**° **WRB** is cut flush with the sheathing and is not wrapped into the rough opening.)
- C. Cut a head flap at a 45° angle to expose 8" of sheathing to allow for head flashing installation.



- A. Flip the head flap up to expose the sheathing and temporarily secure flap with tape.
- B. Temporarily secure the **Tyvek® WRB** with **DuPont™ Tyvek® Tape** around rough opening before flashing is installed to help facilitate flashing installation.





STEP 5

- A. Cut **DuPont™ FlexWrap™** at least 12″ **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1″ adhesion **BEYOND** where the window frame will be located, ensuring 2″–3″ adhesion onto the face of the wall.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

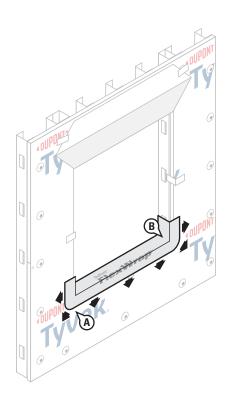
STEP 6

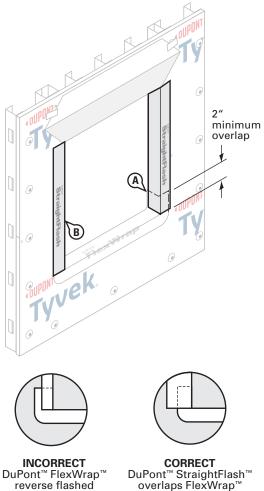
A. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"− 3" of the **FlexWrap**™ will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

Optional Back Dam: Fold 9" **FlexWrap**™ to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap**™ inside rough opening to finish back dam after window installation.

B. Remove narrow release paper.

DO NOT STRETCH MATERIAL ALONG THE SILL OR JAMBS.



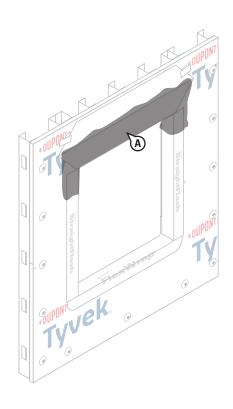


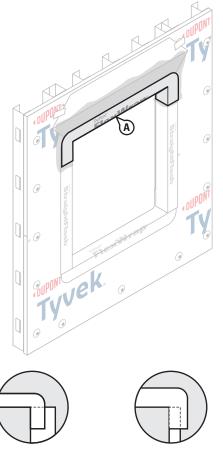


STEP 7

- A. Fan out the **DuPont™ FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap**™ should be 2″– 3″ onto the face of the wall.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.

- A. Cut the jamb flashing the vertical length of the rough opening. Jamb flashing should be long enough to overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2".
- B. Wrap 9" **DuPont™ StraightFlash™** into the rough opening at each jamb and onto wall face. The flashing should align with the interior edge of the jamb framing.







INCORRECT DuPont™ FlexWrap™ reverse flashed

CORRECT

DuPont™ StraightFlash™

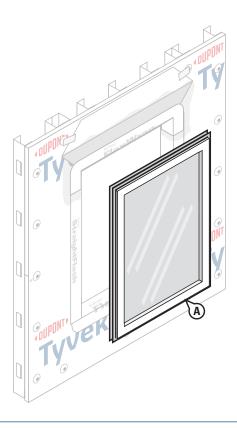
overlaps FlexWrap™

STEP 9

A. Apply **DuPont™ Adhesive/Primer** or recommended primer to the top of the jambs and exposed sheathing.

STEP 10

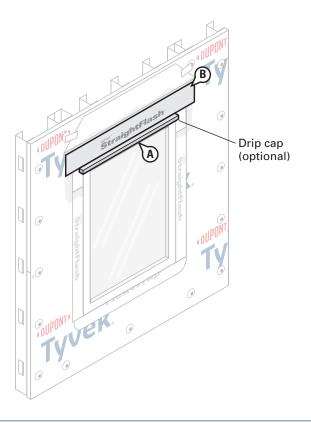
A. Adhere **DuPont™ FlexWrap™** to the head using the same installation process as shown in steps 6 and 7 for the sill flashing. Make sure the **FlexWrap**™ is cut long enough to overlap the jamb flashing by at least 2".



STEP 11

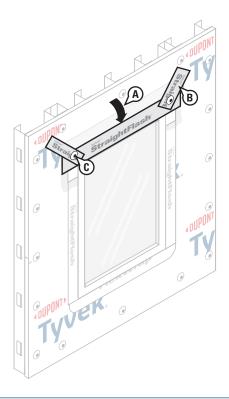
A. Install window per manufacturer's installation instructions. Apply an exterior perimeter seal using backer rod and sealant along the jambs and head of the window opening.

NOTE: Ensure window and sealant installation allows for drainage at the sill. If sealant is applied at the sill, as a best practice, ensure that there are at least two (2) 2" gaps in the sealant bead for every 4" of window to allow for drainage.



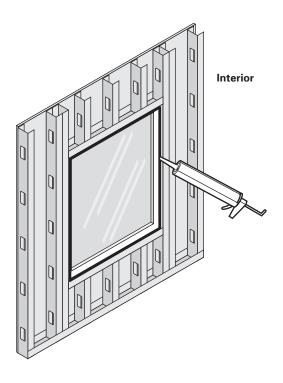
STEP 12 - OPTIONAL

- A. As a best practice for high exposure areas, install metal drip cap above the head joint when specified.
- B. Apply a strip of 4" **DuPont**™ **StraightFlash**™ over the drip cap.



STEP 13

- A. Flip down the head flap and **trim 1"-2" above the window opening**. Terminate flap along the top of the window with 3" **DuPont™ Tyvek® Tape** or 4" **DuPont™ StraightFlash™**. (See *Special Considerations* for when 3" **Tyvek® Tape** is allowed).
- B. Apply 4" **StraightFlash**™ over the diagonal seams.
- C. For high performance designs or areas of extreme exposure use 4" **StraightFlash**™ to seal the head flap and install additional recommended mechanical fasteners through the flashing at the head flap and perimeter of window.

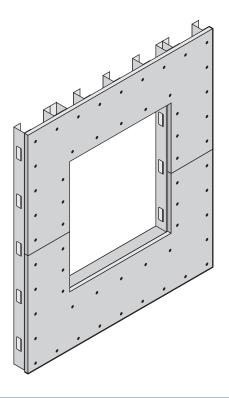


STEP 14

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2″, apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

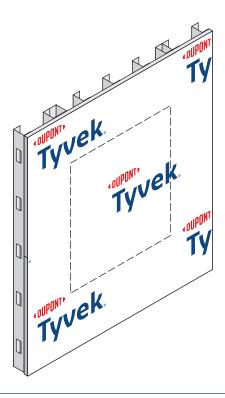
NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont™ Tyvek® WRB.

Method applies to following products: DuPont™ StraightFlash™ and DuPont™ FlexWrap™



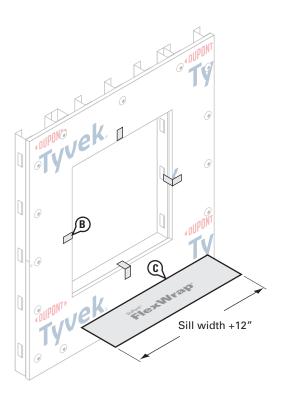
STEP 1

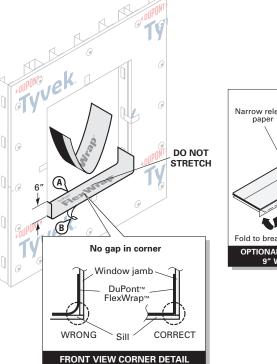
A. Cut rough opening in sheathing for window. Ensure that sheathing is cut flush with, or slightly below the sill framing to allow for positive drainage.

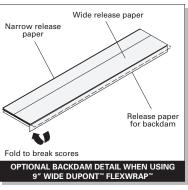


STEP 2

A. Wrap wall as shown in *DuPont™ Tyvek® Mechanically-Fastened Water-Resistive* and *Air Barrier (WRB) Installation Guidelines for Buildings Greater Than 4 Stories* that can be found at <u>building.dupont.com</u>. Do not install fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings.







STEP 3

- A. Cut an opening in the **DuPont™ Tyvek® WRB** using a full cut out around the perimeter of the opening.
- B. Temporarily secure **Tyvek**° **WRB** with **DuPont**™ **Tyvek**° **Tape** around rough opening before flashing is installed to help facilitate flashing installation.
- C. Cut DuPont™ FlexWrap™ at least 12" LONGER than width of rough opening sill. Use roll widths sufficient to achieve a minimum of 1" adhesion BEYOND where the window frame will be located, ensuring 2"- 3" adhesion onto the face of the wall.
- D. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

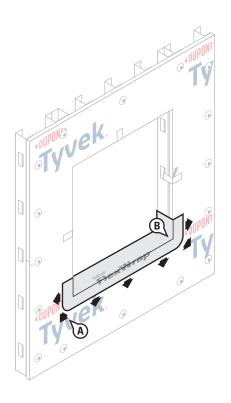
STEP 4

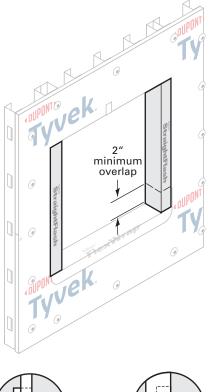
A. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"–3" of the **FlexWrap**[™] will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

Optional Back Dam: Fold 9" **FlexWrap**™ to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap**™ inside rough opening to finish back dam after window installation.

B. Remove narrow release paper.

DO NOT STRETCH MATERIAL ALONG THE SILL OR IAMBS.









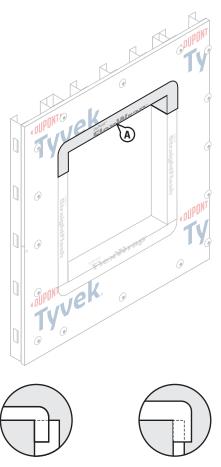


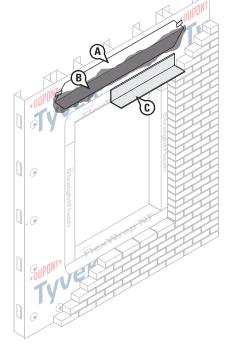
CORRECT
DuPont™ StraightFlash™
overlaps FlexWrap™

STEP 5

- A. Fan out the **DuPont™ FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap™** should be 2″– 3″ onto the face of the wall.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface.

- A. Cut the jamb flashing the vertical length of the rough opening. Jamb flashing should be long enough to overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2". Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the window frame will be located, ensuring 2"–3" adhesion onto the face of the wall.
- B. Wrap 9" **DuPont™ StraightFlash™** into the rough opening at each jamb and onto wall face. The flashing should align with the interior edge of the jamb framing.







INCORRECT

CORRECT
DuPont™ StraightFlash™
overlaps FlexWrap™

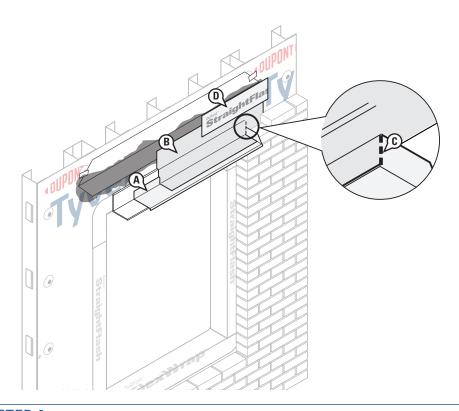
STEP 7

A. Adhere **DuPont™ FlexWrap™** to the head using the same installation process as shown in steps 4 and 5 for the sill flashing. Make sure the **FlexWrap™** is cut long enough to overlap the jamb flashing by at least 2 inches.

STEP 8

Install Floating Lintel

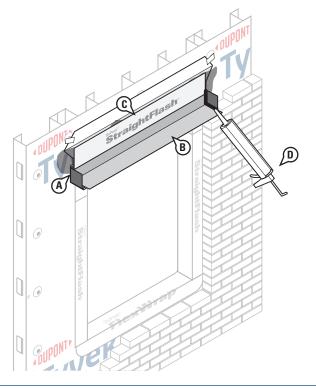
- A. Cut flap in the Tyvek® WRB.
- B. Apply **DuPont™ Adhesive/Primer** or recommended primer to exposed sheathing.
- C. Install lintel per plans and specifications.



STEP 9

Head Detail Using Metal Pan and Mechanically Attached Through Wall Flashing

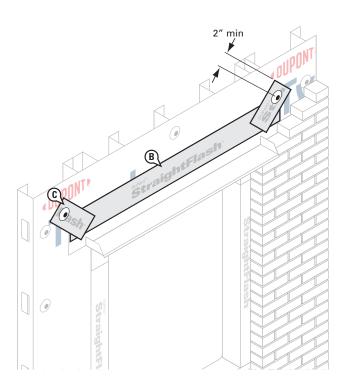
- A. Install corrosion-resistant metal pan with drip and soldered/sealed end dams above lintel. Extend flashing beyond the end of lintel.
- B. Install through wall flashing a minimum of 3" onto the wall sheathing, overlapping the lintel, and extending onto the horizontal surface of the metal pan leaving minimum 1" of metal drip exposed.
- C. Cut a vertical slit in the through wall flashing to accommodate the vertical edge of the metal pan.
- D. Install 4" wide **DuPont™ StraightFlash™** along the top edge of through wall flashing to achieve the 2" minimum contact to the exposed exterior sheathing.



STEP 9 (ALTERNATE)

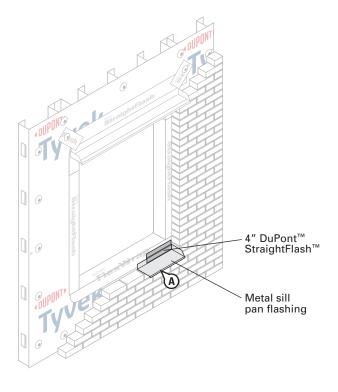
Head Detail Using Self-Adhered Through Wall Flashing

- A. Embed through wall flashing end dams in sealant and install along outer edge of lintel.
- B. Install self-adhered through wall flashing with a minimum of 3" adhering to the wall sheathing, then overlapping the lintel. Extend the through wall flashing a minimum of 1/4" beyond the outside edge of the lintel to form a drip edge.
- C. **OPTIONAL**: Install 4" wide **StraightFlash**™ along the top edge of through wall flashing to achieve the 2" minimum contact to the exposed exterior sheathing.
- D. Apply sealant along the edges of the through wall flashing.



STEP 10

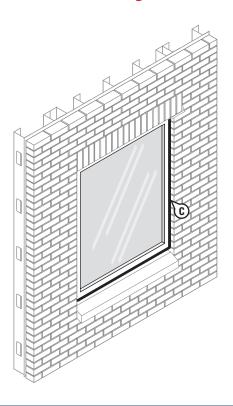
- A. Fold head flap back into place.
- B. Tape along bottom edge of cut in the **Tyvek**® **WRB** with **DuPont**™ **StraightFlash**™.
- C. Use 4" wide **StraightFlash**™ at diagonal cut in **Tyvek® WRB** to secure head flap.



STEP 11

Install Metal Sill Pan

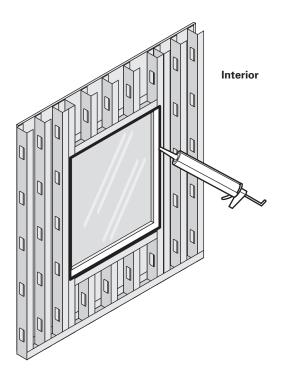
A. Anchor the non-corrosive metal sill pan flashing to the wall and integrate to the **Tyvek® WRB** with 4" **StraightFlash™**.



STEP 12

- A. Install remaining masonry with weeps along flashing.
- B. Install window per manufacturer's instructions.
- C. Seal all four sides of the perimeter of the window.

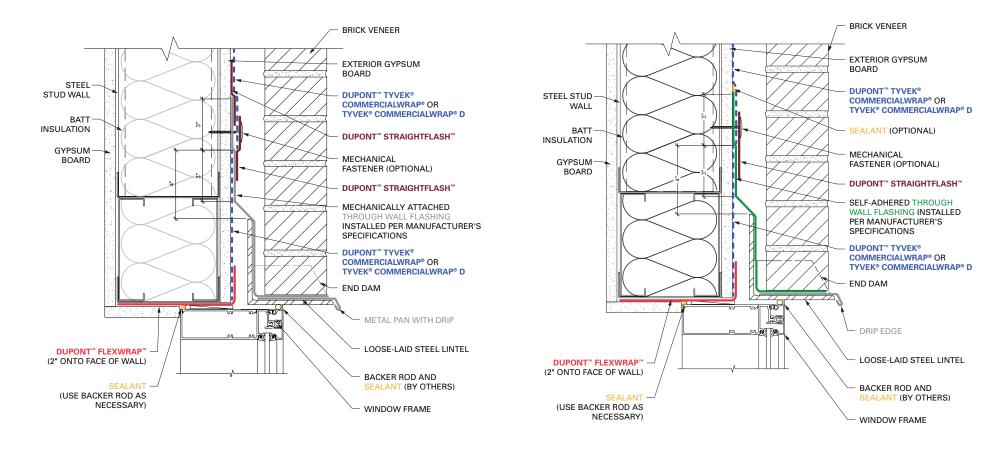
DO NOT SEAL ANY WEEPS OF WINDOW FRAME.



STEP 13

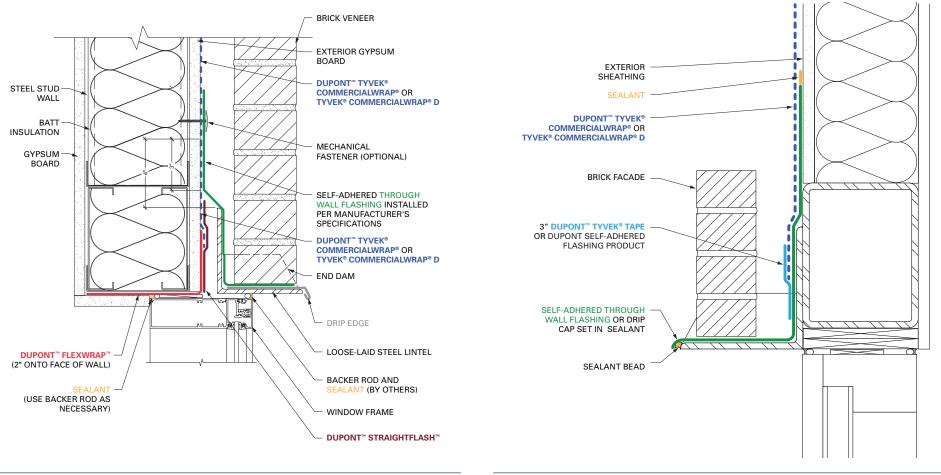
Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½″, apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro[™] Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont Tyvek WRB.



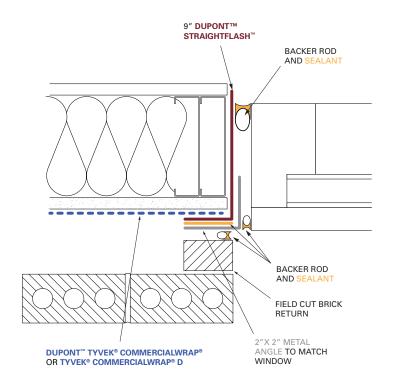
FLOATING LINTEL WITH METAL PAN AND MECHANICALLY ATTACHED THROUGH WALL FLASHING (SIDE VIEW)

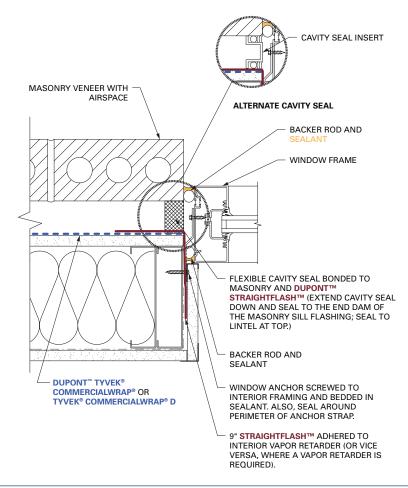
FLOATING LINTEL WITH SELF-ADHERED THROUGH WALL FLASHING (SIDE VIEW)



FLOATING LINTEL WITH THROUGH WALL FLASHING ADHERED TO DUPONT™ TYVEK® WRB (SIDE VIEW)

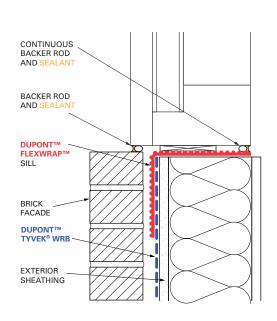
HEAD DETAIL FOR ATTACHED LINTEL WITH SELF-ADHERED THROUGH WALL FLASHING (SIDE VIEW)

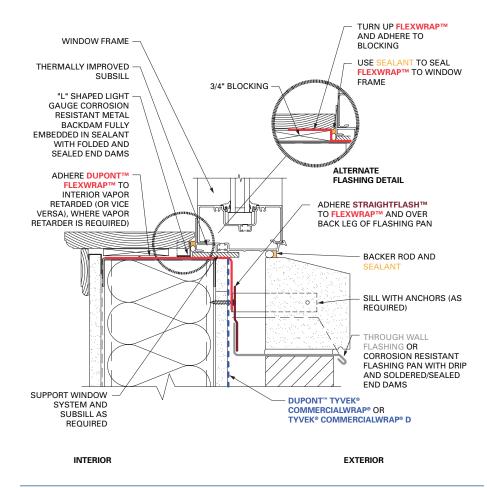




OPTIONAL JAMB DETAIL (TOP VIEW)

OPTIONAL JAMB DETAIL (TOP VIEW)



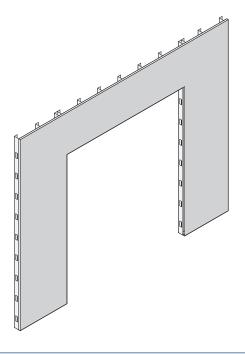


SILL DETAIL (SIDE VIEW)

SILL DETAIL (SIDE VIEW) METAL THROUGH WALL FLASHING

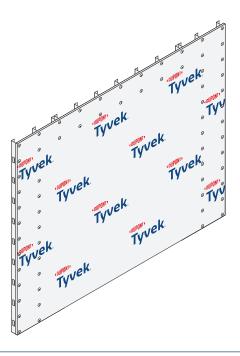
This door detail can be used for any non-flanged door rough opening, including storefront or hollow metal doors. Use of this detail requires the ability to protect the rough opening at the jambs and head with **DuPont Self-Adhered Flashing**. For welded hollow metal doors or other welded-in-place doors where the rough opening cannot be protected, the **DuPont Tyvek WRB** must be terminated on the face of the wall around the perimeter of the opening with **DuPont StraightFlash**.

Method applies to following products: DuPont™ StraightFlash™ and DuPont™ FlexWrap™



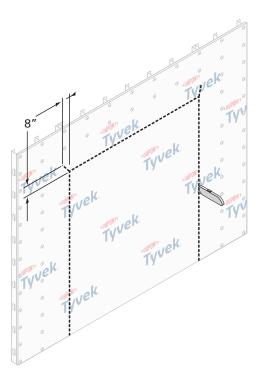
STEP 1

A. Cut rough opening in sheathing for door.



STEP 2

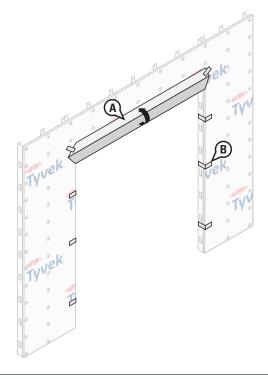
A. Wrap wall as shown in *DuPont™ Tyvek® Mechanically-Fastened Water-Resistive and Air Barrier (WRB) Installation Guidelines for Buildings Greater Than 4 Stories* that can be found at <u>building.dupont.com</u>. Do not install fasteners within 6" of the jambs of the openings and within 9" of the head of the openings.



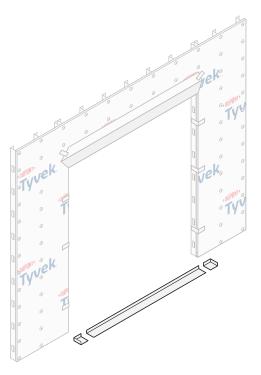
STEP 3

Prepare the **Tyvek**® **WRB** for door installation.

- A. Cut an opening in the **Tyvek® WRB** using a square cut around the perimeter of the rough opening.
- B. Cuts should be made along the dashed indicated lines. (Ensure that the **Tyvek**° **WRB** is cut flush with the sheathing and is not wrapped into the rough opening.)
- C. Cut a head flap at a 45° angle to expose 8" of sheathing to allow for head flashing installation.

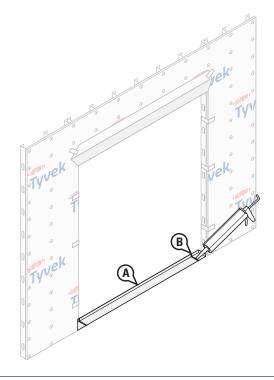


- A. Flip the head flap up to expose the sheathing and temporarily secure with tape.
- B. Temporarily secure **Tyvek**° **WRB** with **DuPont**™ **Tyvek**° **Tape** around rough opening before flashing is installed to help facilitate flashing installation.

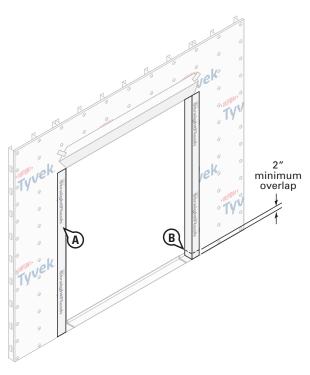


STEP 5

- A. Prepare the sill flashing and/or threshold per manufacturer's recommendation and seal the corner pan flashing with sealant if applicable.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

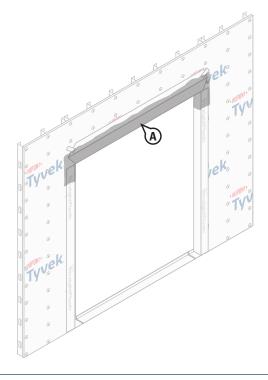


- A. Shim, level, and anchor pan/threshold per manufacturer's instructions flashing to concrete.
- B. Seal corner pan flashing seams with sealant if applicable.



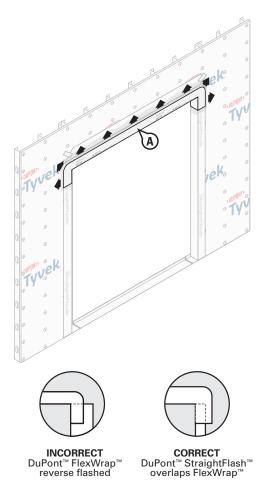
STEP 7

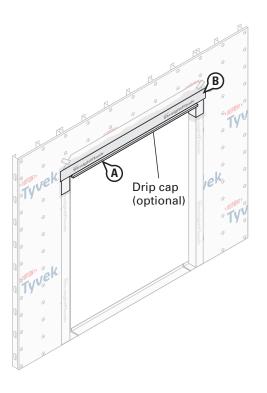
- A. Wrap 9" **DuPont™ StraightFlash™** into the rough opening at each jamb and onto wall face. The flashing should align with the interior edge of the jamb framing. Cut the jamb flashing the vertical length of the rough opening.
- B. Jamb flashing should be long enough to overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2".



STEP 8

A. Apply **DuPont™ Adhesive/Primer** or recommended primer to the top of the jambs and exposed sheathing.



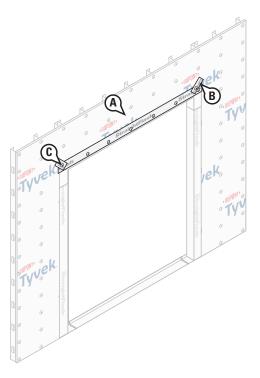


STEP 9

- A. Adhere **DuPont[™] FlexWrap[™]** to the head. Make sure the **FlexWrap[™]** is cut long enough to overlap the jamb flashing by at least 2".
- B. Use sufficient width of **FlexWrap**™ to avoid reverse shingling of flashing at the jamb and head interface. See detail above.

STEP 10 - OPTIONAL

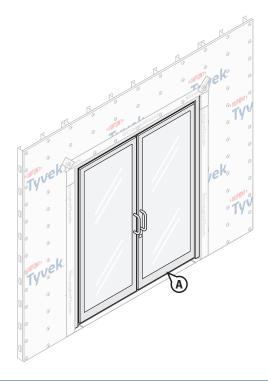
- A. As a best practice for high exposure areas, install metal drip cap above the head joint when specified.
- B. Apply a strip of 4" **DuPont**™ **StraightFlash**™ over the drip cap.



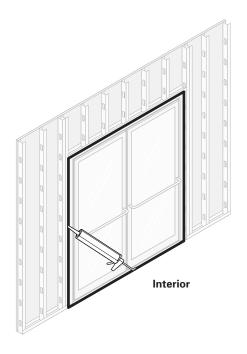
STEP 11

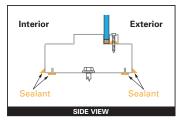
- A. Flip down the head flap and trim 1"-2" above the door opening. Terminate flap along the top of the door with 3" **DuPont™ Tyvek® Tape** or 4" **DuPont™ StraightFlash™**. (See *Special Considerations* for when 3" **Tyvek® Tape** is allowed).
- B. Apply 4" **StraightFlash**™ over the diagonal seams.
- C. Install remaining **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners at head according to the fastening schedule (every 12" to 18" depending on the vertical stud line).

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash**™ to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of door.



- A. Install door per manufacturer's installation instructions.
- B. If applicable, glaze door per manufacturer's instructions.

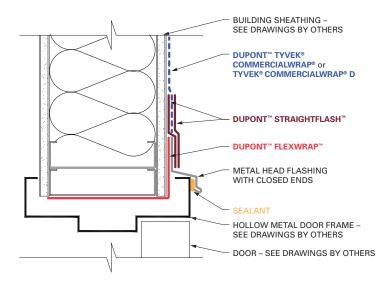


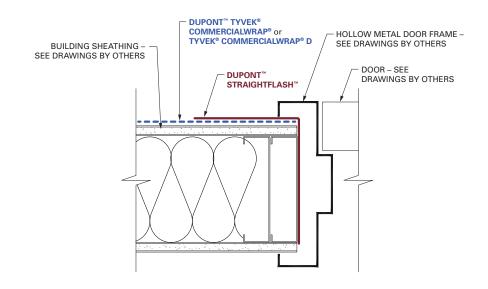


STEP 13

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on door interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the door frame and rough opening around the entire interior perimeter. If Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the door frame, shave the excess cured foam flush with the door frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont™ Tyvek® WRB.

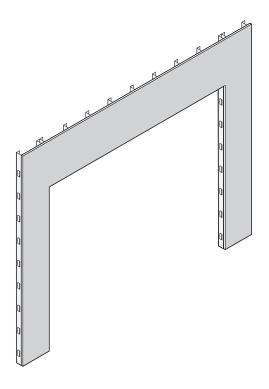




HEAD DETAIL (SIDE VIEW) - HOLLOW METAL DOOR

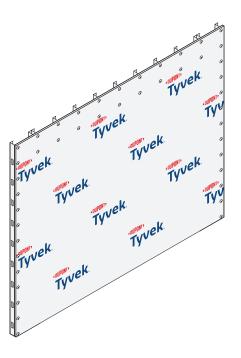
JAMB DETAIL (TOP VIEW) - HOLLOW METAL DOOR

Method applies to following products: DuPont™ StraightFlash™ and DuPont™ FlexWrap™



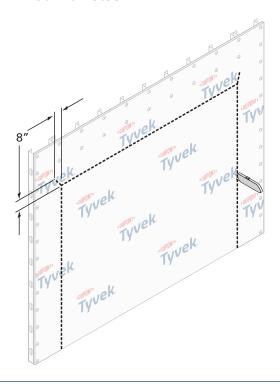
STEP 1

A. Cut rough opening in sheathing for window.



STEP 2

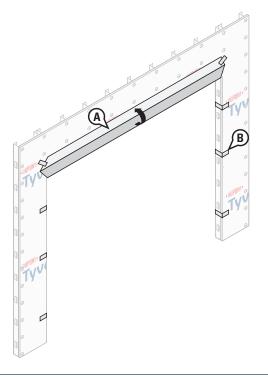
A. Wrap wall as shown in *DuPont™ Tyvek® Mechanically-Fastened Water-Resistive and Air Barrier (WRB) Installation Guidelines for Buildings Greater Than 4 Stories* that can be found at <u>building.dupont.com</u>. Do not install fasteners within 6" of the jambs of the openings and within 9" of the head of the openings.



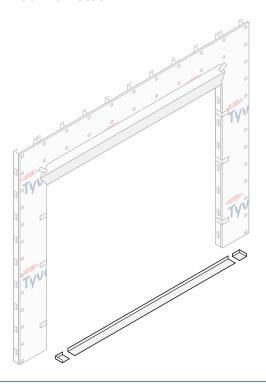
STEP 3

Prepare the **Tyvek**® **WRB** for window installation.

- A. Cut an opening in the **Tyvek® WRB** using a square cut around the perimeter of the rough opening.
- B. Cuts should be made along the dashed indicated lines. (Ensure that the **Tyvek® WRB** is cut flush with the sheathing and is not wrapped into the rough opening.)
- C. Cut a head flap at a 45° angle to expose 8" of sheathing to allow for head flashing installation.

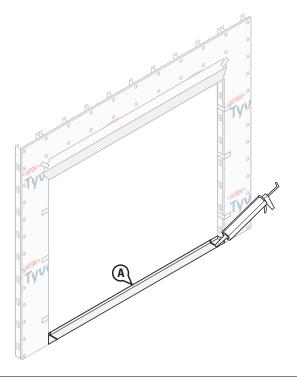


- A. Flip the head flap up to expose the sheathing and temporarily secure with tape.
- B. Temporarily secure **Tyvek**° **WRB** with **DuPont**™ **Tyvek**° **Tape** around rough opening before flashing is installed to help facilitate flashing installation.

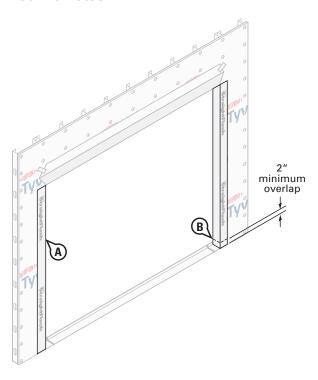


STEP 5

- A. Prepare the sill flashing per manufacturer's recommendation and seal the corner pan flashing with sealant.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

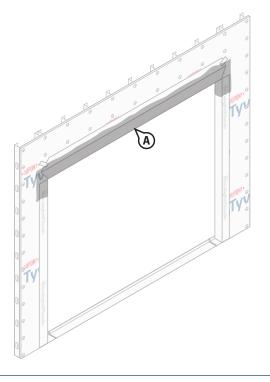


- A. Shim, level and anchor pan per manufacturer's instructions flashing to concrete.
- B. Seal corner pan flashing seams with sealant.



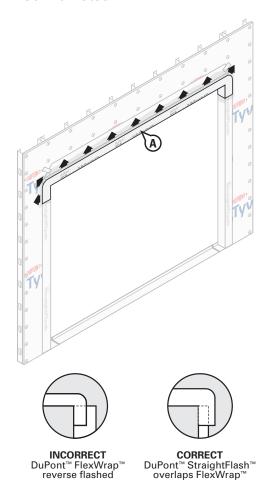
STEP 7

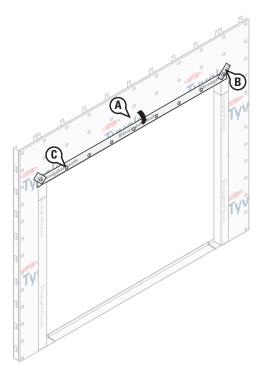
- A. Wrap 9" **DuPont™ StraightFlash™** into the rough opening at each jamb and onto wall face. The flashing should align with the interior edge of the jamb framing. Cut the jamb flashing the vertical length of the rough opening.
- B. Jamb flashing should be long enough to overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2".



STEP 8

A. Apply **DuPont™ Adhesive/Primer** or recommended primer to the top of the jambs and exposed sheathing.





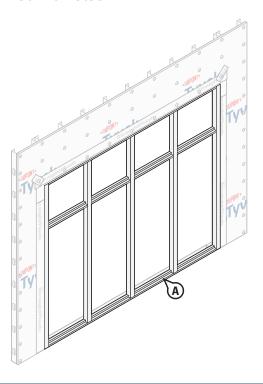
STEP 9

- A. Adhere **DuPont™ FlexWrap™** to the head. Make sure the **FlexWrap™** is cut long enough to overlap the jamb flashing by at least 2".
- B. Use sufficient width of **FlexWrap**™ to avoid reverse shingling of flashing at the jamb and head interface. See detail above.

STEP 10

- A. Flip down the head flap and trim 1"-2" above the window opening. Terminate flap along the top of the window with 3" **DuPont™ Tyvek® Tape** or 4" **DuPont™ StraightFlash™**. (See *Special Considerations* for when 3" **Tyvek® Tape** is allowed).
- B. Apply 4" **StraightFlash**™ over the diagonal seams.
- C. Install remaining DuPont™ Tyvek® Wrap Cap Fasteners or recommended fasteners at head according to the fastening schedule (every 12" to 18" depending on the vertical stud line).

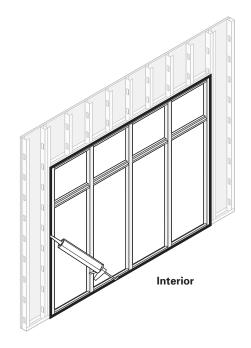
NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash**™ to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.

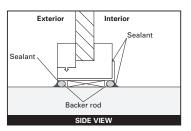




A. Install store front window per manufacturer's installation instructions.

B. Glaze windows per manufacturer's instructions.



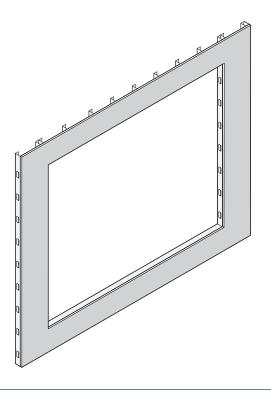


STEP 12

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

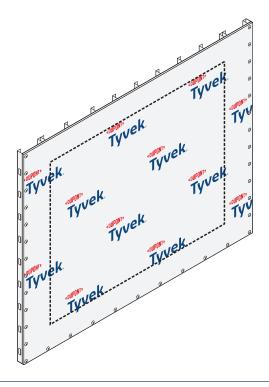
NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont™ Tyvek® WRB.

Method applies to following products: DuPont™ StraightFlash™ and DuPont™ FlexWrap™



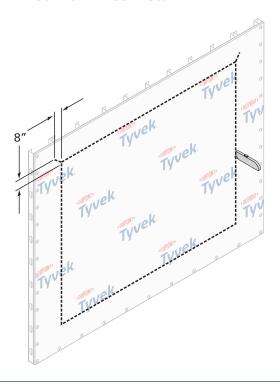
STEP 1

A. Cut rough opening in sheathing for window. Ensure that sheathing is cut flush with, or slightly below the sill framing to allow for positive drainage.



STEP 2

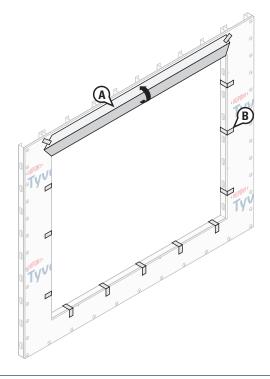
A. Wrap wall as shown in *DuPont™ Tyvek® Mechanically-Fastened Water-Resistive* and *Air Barrier Installation Guidelines for Buildings Greater Than 4 Stories* that can be found at <u>building.dupont.com</u>. Do not install fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings.



STEP 3

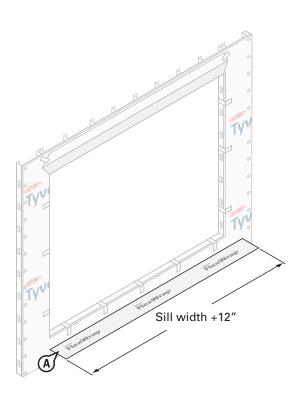
Prepare the **Tyvek**® **WRB** for window installation.

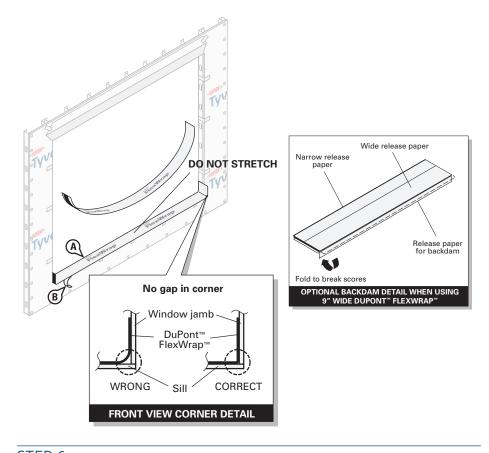
- A. Cut an opening in the **Tyvek® WRB** using a square cut around the perimeter of the rough opening.
- B. Cuts should be made along the dashed indicated lines. (Ensure that the **Tyvek® WRB** is cut flush with the sheathing and is not wrapped into the rough opening.)
- C. Cut a head flap at a 45° angle to expose 8" of sheathing to allow for head flashing installation.



STEP 4

- A. Flip the head flap up to expose the sheathing and temporarily secure with tape.
- B. Temporarily secure **Tyvek® WRB** with **DuPont™ Tyvek® Tape** around rough opening before flashing is installed to help facilitate flashing installation.





STEP 5

- A. Cut **DuPont™ FlexWrap™** at least 12″ **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1″ adhesion **BEYOND** where the window frame will be located, ensuring 2″–3″ adhesion onto the face of the wall.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

STEP 6

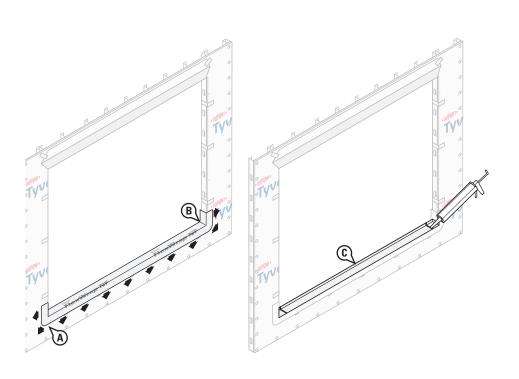
A. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"–3" of the **FlexWrap**[™] will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

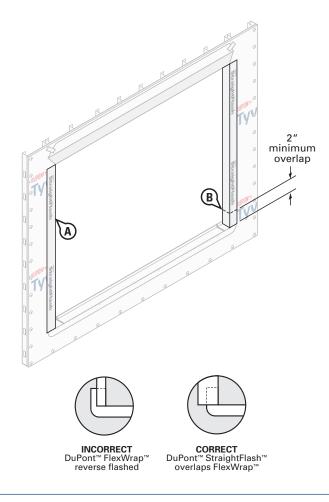
Optional Back Dam: Fold 9" **FlexWrap**™ to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap**™ inside rough opening to finish back dam after window installation.

B. Remove narrow release paper.

DO NOT STRETCH MATERIAL ALONG THE SILL OR JAMBS.

C. Firmly press **FlexWrap**™ into the corners



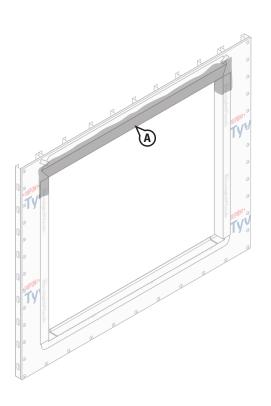


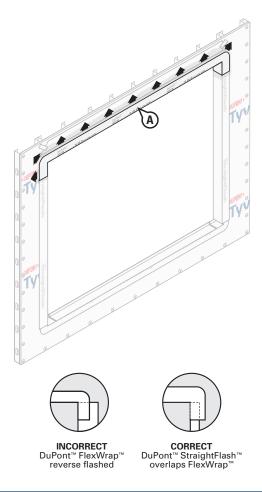
STEP 7

- A. Fan out the **DuPont**™ **FlexWrap**™ at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap**™ should be 2″– 3″ onto the face of the wall.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.
- C. Shim, level and anchor sill pan flashing and seal corner seams per manufacturer's instructions with sealant.

STEP 8

- A. Wrap 9" **StraightFlash**™ into the rough opening at each jamb and onto wall face. The flashing should align with the interior edge of the jamb framing. Cut the jamb flashing the vertical length of the rough opening.
- B. Jamb flashing should be long enough to overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2".



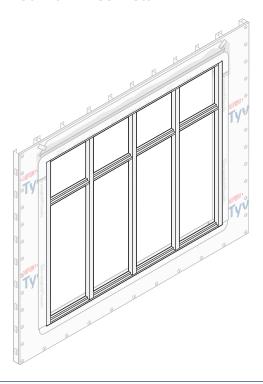


STEP 9

A. Spray the top of the jambs and exposed sheathing with **DuPont™ Adhesive/Primer** or recommended primer.

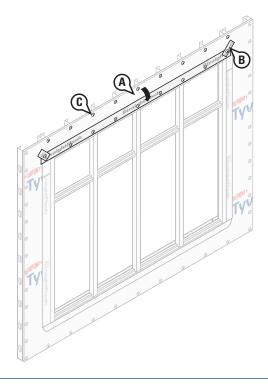
STEP 10

A. Adhere **DuPont™ FlexWrap™** to the head using the same installation process as shown in steps 6 and 7 for the sill flashing. Make sure the **FlexWrap™** is cut long enough to overlap the jamb flashing by at least 2″.



STEP 11

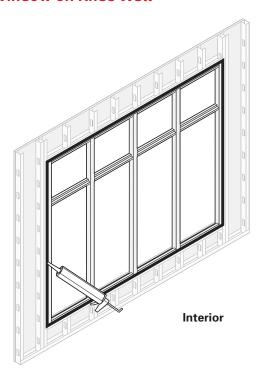
- A. Install storefront window per manufacturer's installation instructions.
- B. Glaze windows per manufacturer's instructions.



STEP 12

- A. Flip down the head flap and trim 1"-2" above the window opening. Terminate flap along the top of the window with 3" **DuPont™ Tyvek® Tape** or 4" **DuPont™ StraightFlash™**. (See *Special Considerations* for when 3" **Tyvek® Tape** is allowed).
- B. Apply 4" **StraightFlash**™ over the diagonal seams.
- C. Install remaining **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners at head per the fastening schedule (every 12" to 18" depending on the vertical stud line).

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash**™ to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.

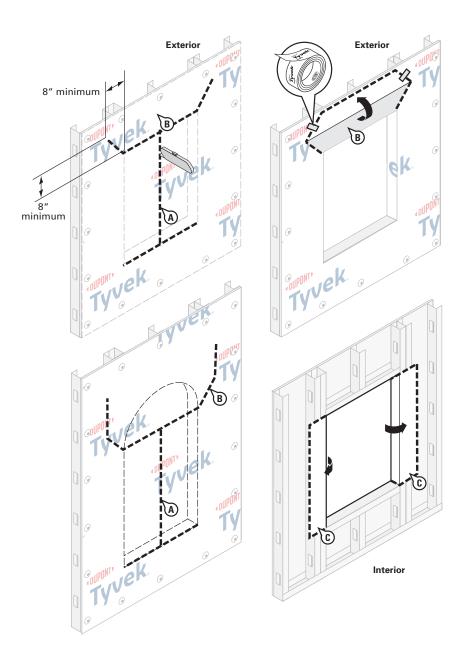


STEP 13

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than 1/2″, apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro[™] Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont WRB.

Method applies to following products: DuPont™ StraightFlash™, DuPont™ FlexWrap™ and DuPont™ Flashing Tape

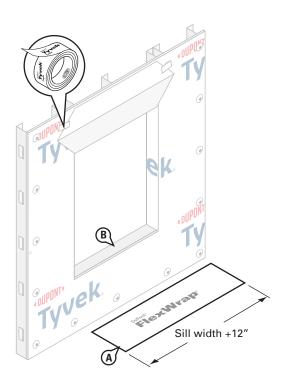


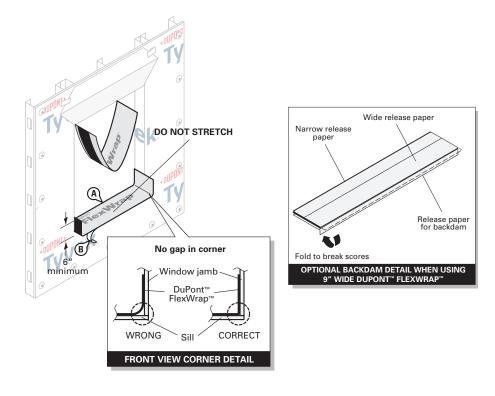
STEP 1

Prepare Tyvek® WRB for window installation:

- A. Make an "I-Cut" in the **Tyvek**® **WRB** (a modified I-Cut is also acceptable). For an "I-Cut" begin with a horizontal cut across the bottom and the top of the window frame (for round top windows, the cut should begin 2" above the mull joint). From the center cut straight down to the sill.
- B. Cut two 45° degree slits a minimum of 8" from the corner of the header to create a flap above the rough opening to expose sheathing or framing members and to allow head flashing installation (see step 5). Flip head flap up and temporarily secure with **DuPont™ Tyvek® Tape**. Some windows and flashing widths may require longer slits.
- C. Fold side flaps into rough opening, cut excess flaps, and secure.

NOTE: See the details in this guide for alternative flashing Methods A, B, and C for flanged windows aligned with Section 7 of FMA/AAMA 100-12, *Standard Practice* for the Installation of Windows with Flanges or Mounting Fins in Wood Framed Construction for Extreme Wind/Water Conditions.





STEP 2

- A. Cut **DuPont™ FlexWrap™** at least 12″ **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1″ adhesion **BEYOND** where the window frame will be located, ensuring 2″-3″ adhesion onto the face of the wall.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

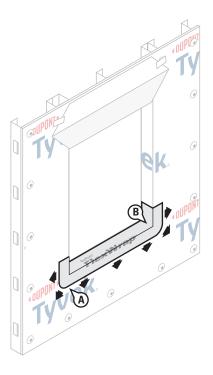
STEP 3

A. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"–3" of the **FlexWrap**[™] will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

Optional Back Dam:Fold 9" **FlexWrap**™ to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap**™ inside rough opening to finish back dam after window installation.

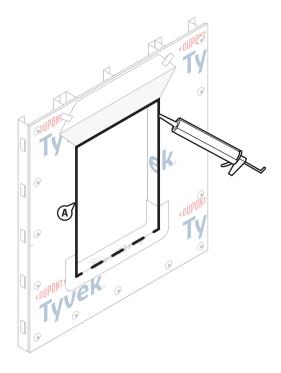
B. Remove narrow release paper.

DO NOT STRETCH MATERIAL ALONG THE SILL OR JAMBS.



STEP 4

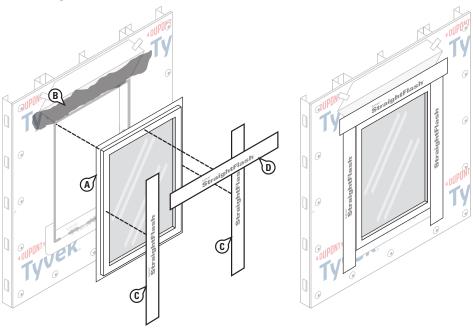
- A. Fan out the **DuPont™ FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap™** should be 2″– 3″ onto the face of the wall.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.



STEP 5

A. Apply continuous bead of sealant at the window head and jambs to wall or back side of window mounting flange. **Do not apply continuous sealant bead across bottom sill flange** to allow for drainage. 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.

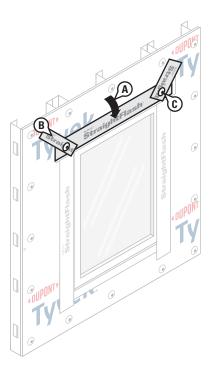
For rectangular windows





A. Install window according to manufacturer's instructions.

- B. Apply **DuPont**™ **Adhesive/Primer** or recommended primer to exposed sheathing.
- C. Cut two pieces of **DuPont™ StraightFlash™** or **DuPont™ Flashing Tape*** for jamb flashing extending 1" above window head flange and 4" to 6" below bottom edge of sill flashing. Remove release paper and press tightly along sides of window frame.
- D. Cut a piece of **StraightFlash**™ 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.



STEP 7

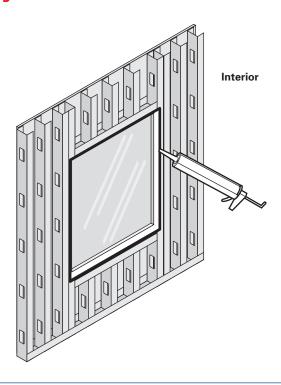
- A. Flip down upper flap of **Tyvek**® **WRB** so it lays flat across head flashing, then trim 1"-2" above the window opening.
- B. Tape along all cuts in Tyvek® WRB and tape across head of the window with 3"

 DuPont™ Tyvek® Tape, DuPont™ Flashing Tape* or 4" DuPont™ StraightFlash™. (See

 Special Considerations for when 3" Tyvek® Tape is allowed.)
- C. Install **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners at appropriate spacing at head.

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash™** to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.

^{*}DuPont* Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

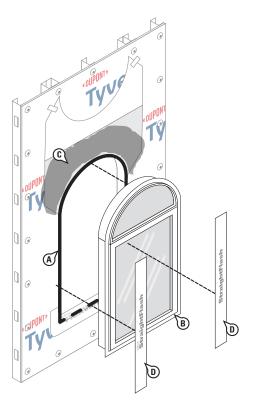


STEP 8

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

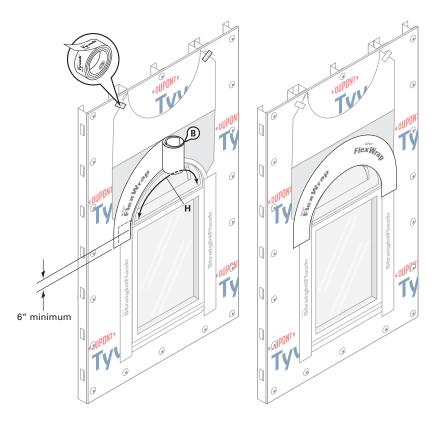
NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont™ Tyvek® WRB.

For roundtop windows





- A. Apply continuous bead of sealant at the window head and jambs to wall or back side of window mounting flange. **Do not apply continuous sealant bead across bottom sill flange** to allow for drainage. 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.
- B. Install window according to manufacturer's instructions.
- C. Apply **DuPont™ Adhesive/Primer** or recommended primer to the top of the jambs and exposed sheathing.
- D. Cut two pieces of **DuPont™ StraightFlash™** or **DuPont™ Flashing Tape*** for jamb flashing extending 1" above window head flange and 4" to 6" below bottom edge of sill flashing. Remove release paper and press tightly along sides of window frame.



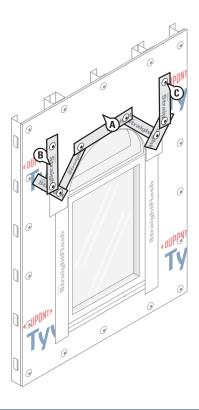
STEP 7

Install head flashing

- A. Cut head flashing at least 12" longer than the arc length (H) of round-top window.
- B. Remove both release papers and install to conform around top of window, covering entire mounting flange and adhering to exposed sheathing or framing members. Head flashing should overlap jamb flashings at least 6".

*DuPont™ Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

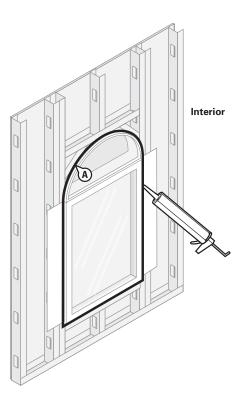
For roundtop windows



STEP 8

- A. Flip down upper flap of **Tyvek**® **WRB** so it lays flat across head flashing, then trim 1"-2" above the window opening.
- B. Tape along all cuts in **Tyvek® WRB** and across head of the window with 3" **DuPont™ Tyvek® Tape**, **DuPont™ Flashing Tape*** or 4" **DuPont™ StraightFlash™**. (See *Special Considerations* for when 3" **Tyvek® Tape** is allowed.)
- C. Install **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fastener at appropriate spacing at head.

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash**™ to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.

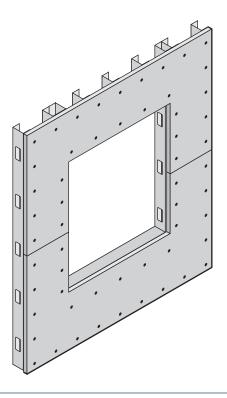


STEP 9

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

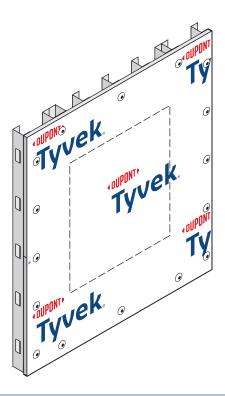
NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont™ Tyvek® WRB.

Method applies to following products: DuPont™ StraightFlash™, DuPont™ FlexWrap™ and DuPont™ Flashing Tape



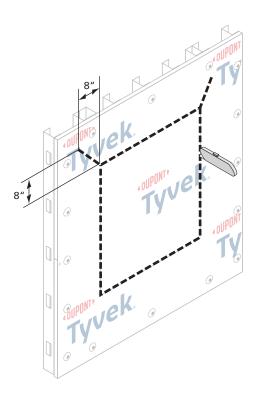
STEP 1

A. Cut rough opening in sheathing for window. Ensure that sheathing is cut flush with, or slightly below the sill framing to allow for positive drainage.



STEP 2

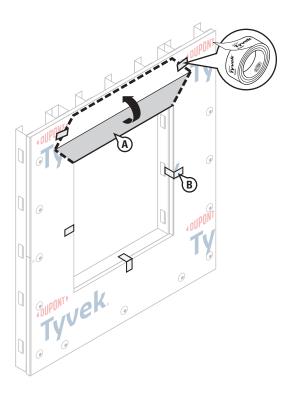
A. Wrap wall as shown in *DuPont™ Tyvek® Mechanically-Fastened Water-Resistive and Air Barrier (WRB) Installation Guidelines for Buildings Greater Than 4 Stories* that can be found at <u>building.dupont.com</u>. Do not install fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings.



STEP 3

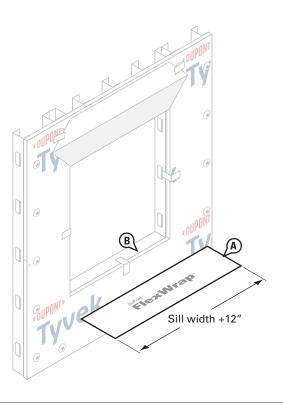
Prepare the **Tyvek**® **WRB** for window installation.

- A. Cut an opening in the **Tyvek® WRB** using a square cut around the perimeter of the rough opening.
- B. Cuts should be made along the dashed indicated lines. (Ensure that the **Tyvek® WRB** is cut flush with the sheathing and is not wrapped into the rough opening.)
- C. Cut a head flap at a 45° angle to expose 8" of sheathing to allow for head flashing installation.



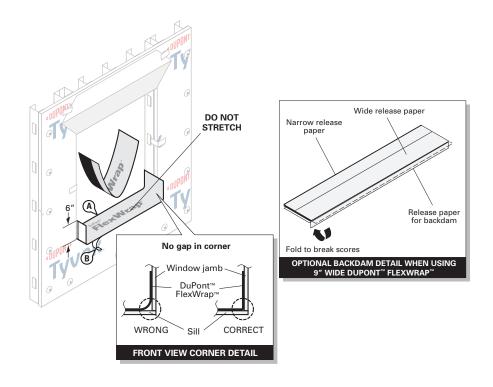
STEP 4

- A. Flip the head flap up to expose the sheathing and temporarily secure with tape.
- B. Temporarily secure **Tyvek® WRB** with **DuPont™ Tyvek® Tape** around rough opening before flashing is installed to help facilitate flashing installation.



STEP 5

- A. Cut **DuPont™ FlexWrap™** at least 12″ **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1″ adhesion **BEYOND** where the window frame will be located, ensuring 2″–3″ adhesion onto the face of the wall.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.



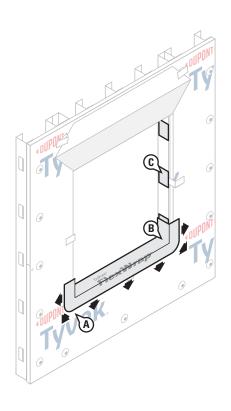
STEP 6

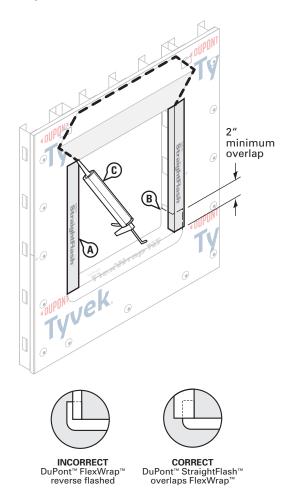
A. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"− 3" of the **FlexWrap**™ will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

Optional Back Dam: Fold 9" **FlexWrap**™ to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap**™ inside rough opening to finish back dam after window installation.

B. Remove narrow release paper.

DO NOT STRETCH MATERIAL ALONG THE SILL OR JAMBS.



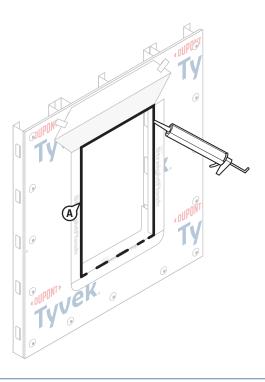


STEP 7

- A. Fan out the **DuPont**™ **FlexWrap**™ at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap**™ should be 2″– 3″ onto the face of the wall.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.
- C. Cover holes in studs with patches of **DuPont™ StraightFlash™** as necessary.

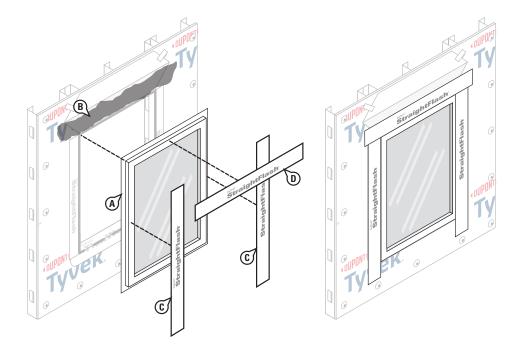
STEP 8

- A. Install 4" **DuPont™ StraightFlash™** into the rough opening at each jamb and onto wall face. The flashing does not need to align with the interior edge of the jamb framing. Cut the jamb flashing the vertical length of the rough opening.
- B. Jamb flashing should be long enough to overlap the sill flashing by at least 2" and be overlapped by future head flashing by at least 2".
- C. Apply sealant to inside corners of rough opening at jamb/head.



STEP 9

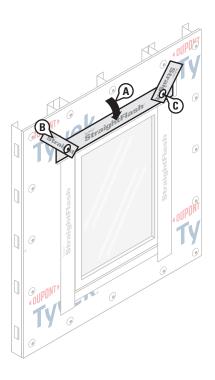
A. Apply continuous bead of sealant at the window head and jambs to wall or back side of window mounting flange. **Do not apply continuous sealant bead across bottom sill flange** to allow for drainage. If sealant is applied to the sill, ensure that there are at least two (2) 2" gaps in the sealant bead for every 4' of window to allow for drainage.



STEP 10

- A. Install window according to manufacturer's instructions.
- B. Apply **DuPont™ Adhesive/Primer** or recommended primer to exposed sheathing.
- C. Cut two pieces of **DuPont™ StraightFlash™** or **DuPont™ Flashing Tape*** for jamb flashing extending 1" above window head flange and 4" to 6" below bottom edge of sill flashing. Remove release paper and press tightly along sides of window frame.
- D. Cut a piece of **StraightFlash**™ 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.

^{*}DuPont" Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

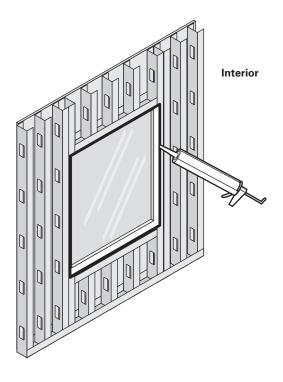


STEP 11

- A. Flip down upper flap of **Tyvek**° **WRB** so it lays flat across head flashing, then trim 1"-2" above the window opening.
- B. Tape along all cuts in **Tyvek**® **WRB** and tape across head of the window with 3" **DuPont™ Tyvek® Tape**, **DuPont™ Flashing Tape*** or 4" **DuPont™ StraightFlash™**. (See Special Considerations for when 3" **Tyvek® Tape** is allowed.)
- C. Install **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners at appropriate spacing at head.

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash**™ to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.

*DuPont** Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

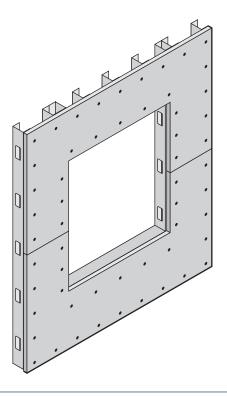


STEP 12

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

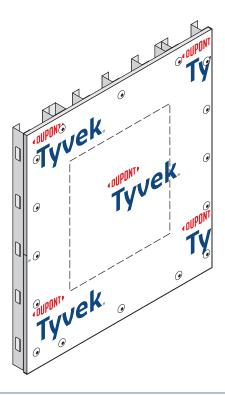
NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont™ Tyvek® WRB.

Method applies to following products: DuPont™ StraightFlash™, DuPont™ FlexWrap™ and DuPont™ Flashing Tape



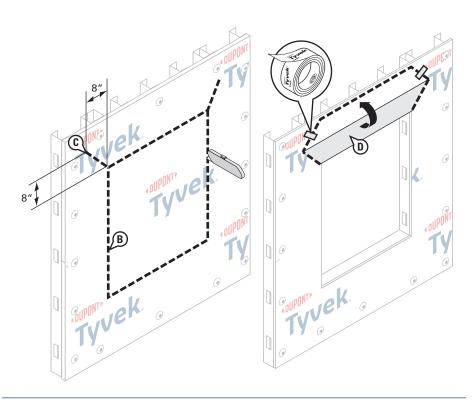
STEP 1

A. Cut rough opening in sheathing for window. Ensure that sheathing is cut flush with, or slightly below the sill framing to allow for positive drainage.



STEP 2

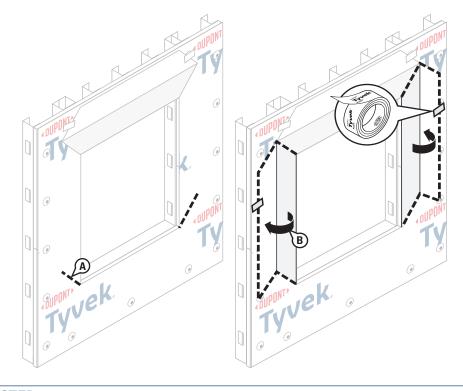
A. Wrap wall as shown in *DuPont™ Tyvek® Mechanically-Fastened Water-Resistive* and *Air Barrier (WRB) Installation Guidelines for Buildings Greater Than 4 Stories* that can be found at <u>building.dupont.com</u>. Do not install fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings.



STEP 3

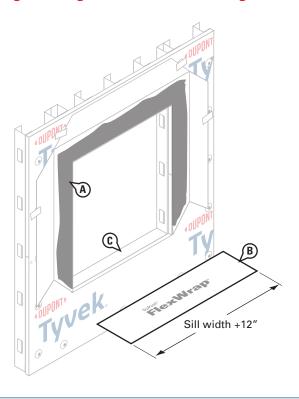
Prepare the Tyvek® WRB for window installation.

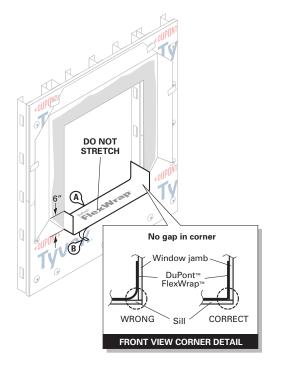
- A. Cut an opening in the **Tyvek® WRB** using a square cut around the perimeter of the rough opening.
- B. Cuts should be made along the dashed indicated lines. (Ensure that the **Tyvek**° **WRB** is cut flush with the sheathing and is not wrapped into the rough opening.)
- C. Cut a head flap at a 45° angle to expose 8" of sheathing to allow for head flashing installation.
- D. Flip the head flap up to expose the sheathing and temporarily secure with **DuPont™ Tyvek® Tape**.

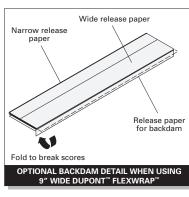


STEP 4

- A. Cut two 45° slits extending from the bottom corner up and away from the window opening to expose approximately 8" of sheathing. This will create a flap at each jamb to allow for jamb flashing installation.
- B. Flip the flaps to the side to expose the sheathing and temporarily secure with **Tyvek® Tape**.







STFP 5

- A. Apply **DuPont™ Adhesive/Primer** or recommended primer to exposed sheathing at jambs and head.
- B. Cut **DuPont™ FlexWrap™** at least 12" **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the window frame will be located, ensuring 2"–3" adhesion onto the face of the wall.
- C. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

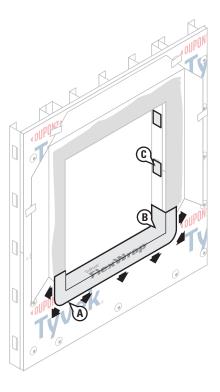
STEP 6

A. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"–3" of the **FlexWrap**[™] will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

Optional Back Dam: Fold 9" **FlexWrap**™ to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap**™ inside rough opening to finish back dam after window installation.

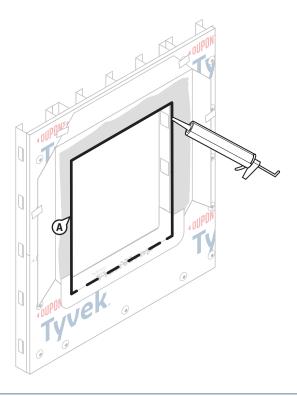
B. Remove narrow release paper.

DO NOT STRETCH MATERIAL ALONG THE SILL OR JAMBS.



STEP 7

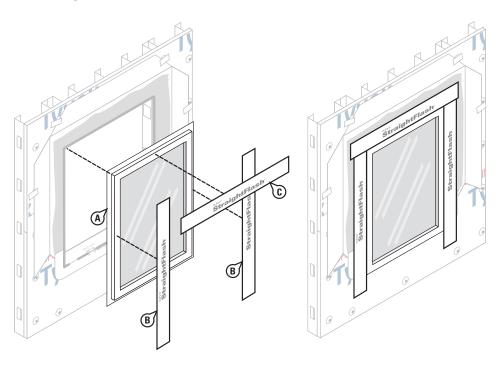
- A. Fan out the **DuPont**™ **FlexWrap**™ at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap**™ should be 2″– 3″ onto the face of the wall.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.
- C. Cover holes in studs with patches of **DuPont™ StraightFlash™** as necessary.

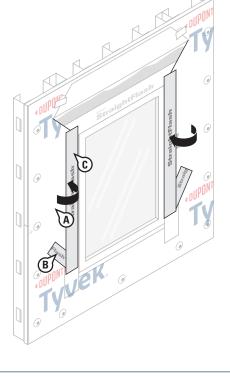


STEP 8

A. Apply continuous bead of sealant at the window head and jambs to wall or back side of window mounting flange. **Do not apply continuous sealant bead across bottom sill flange** to allow for drainage. 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.

For rectangular windows





STEP 9

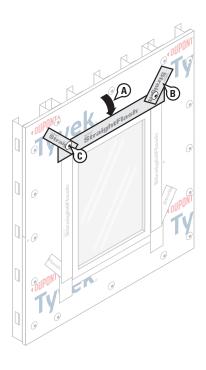
- A. Install window according to manufacturer's instructions.
- B. Cut two pieces of **DuPont™ StraightFlash™** or **DuPont™ Flashing Tape*** for jamb flashing extending 1" above window head flange and 4" to 6" below bottom edge of sill flashing. Remove release paper and press tightly along sides of window frame.
- C. Cut a piece of StraightFlash™ 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.

STEP 10

- A. Flip over flaps of **Tyvek® WRB** so each lays flat across jamb flashing, then **trim 1"-2" from the window opening** using shears so as not to damage the **StraightFlash™**below.
- B. Starting at the bottom of the window, install 4" **StraightFlash**™ along the angled cut in in the **Tyvek® WRB**. (See Special Consideration for when 3" **DuPont™ Tyvek® Tape** is allowed.)
- C. Install 4" **StraightFlash**™ along the jamb flaps.
- D. Repeat on other side of window.

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash**™ to seal the head flap and install additional mechanical fasteners through the flashing at the jamb flap and perimeter of window.

*DuPont™ Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.



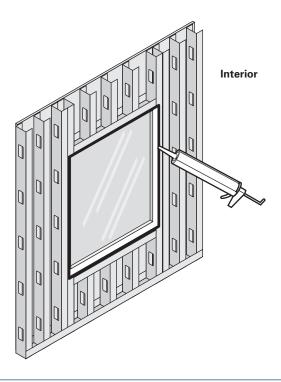
STEP 11

- A. Flip down upper flap of **Tyvek**° **WRB** so it lays flat across head flashing, then **trim 1"-2" above the window opening**.
- B. Tape along all cuts in Tyvek® WRB and tape across head of the window with 3"

 DuPont™ Tyvek® Tape, DuPont™ Flashing Tape* or 4" DuPont™ StraightFlash™. (See

 Special Considerations for when 3" Tyvek® Tape is allowed.)
- C. Install **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners at appropriate spacing at head.

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash™** to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.



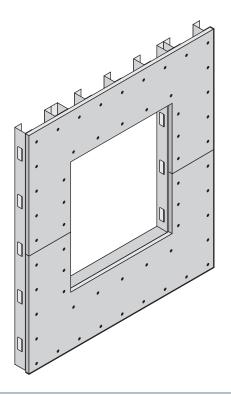
STEP 12

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the **DuPont Self-Adhered Flashing Product** or **DuPont™ Tyvek® WRB**.

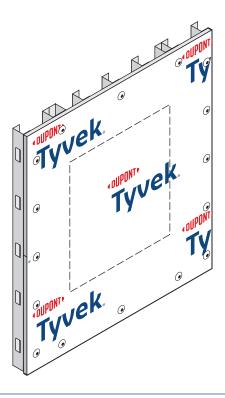
*DuPont" Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

Method applies to following products: DuPont™ StraightFlash™, DuPont™ FlexWrap™ and DuPont™ Flashing Tape



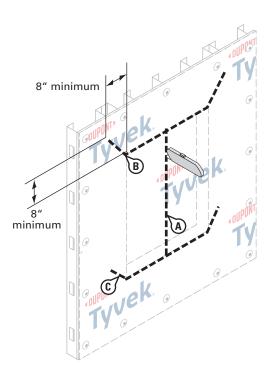
STEP 1

A. Cut rough opening in sheathing for window. Ensure that sheathing is cut flush with, or slightly below the sill framing to allow for positive drainage.



STEP 2

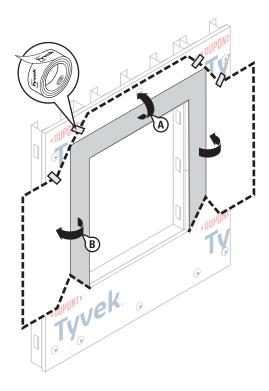
A. Wrap wall as shown in *DuPont™ Tyvek® Mechanically-Fastened Water-Resistive and Air Barrier (WRB) Installation Guidelines for Buildings Greater Than 4 Stories* that can be found at <u>building.dupont.com</u>. Do not install fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings.



STEP 3

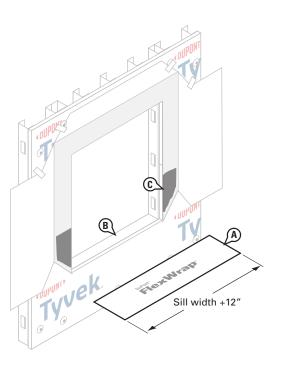
Prepare the **Tyvek**® **WRB** for window installation.

- A. Make an "I-Cut" in the **Tyvek**® **WRB**. For an "I-Cut" begin with a horizontal cut across the bottom and the top of the window frame (for round top windows, cut from the center cut straight down to the sill.
- B. Cut a head flap at a 45° angle to expose 8" of sheathing to allow for head flashing installation.
- C. Cut two 45° slits extending from the bottom corner up and away from the window opening to expose 6''-8'' of sheathing. This will create a flap at each jamb to allow for jamb flashing installation.



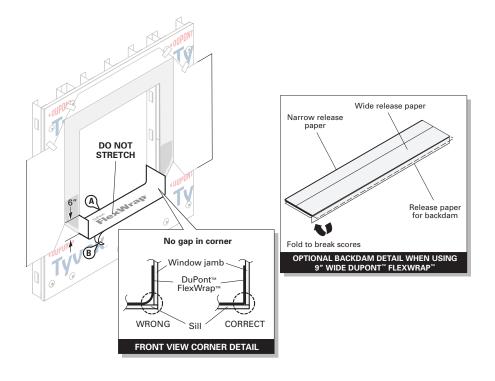
STEP 4

- A. Flip the head flap up to expose the sheathing and temporarily secure with **DuPont™ Tyvek® Tape**.
- B. Flip the flaps to the side to expose the sheathing and temporarily secure with **Tyvek**° **Tape**.





- A. Cut **DuPont™ FlexWrap™** at least 12″ **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1″ adhesion **BEYOND** where the window frame will be located, ensuring 2″–3″ adhesion onto the face of the wall.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.
- C. Starting at the bottom corner, apply **DuPont™ Adhesive/Primer** or recommended primer to exposed sheathing at least 6" up the jamb.



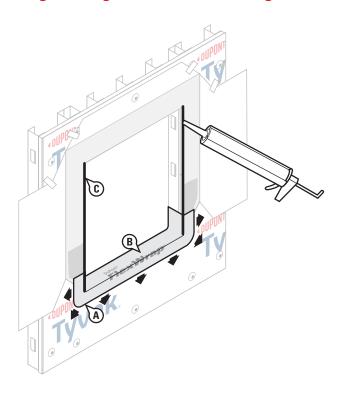
STEP 6

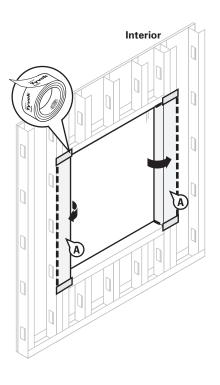
A. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"− 3" of the **FlexWrap**™ will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

Optional Back Dam: Fold 9" **FlexWrap**™ to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap**™ inside rough opening to finish back dam after window installation.

B. Remove narrow release paper.

DO NOT STRETCH MATERIAL ALONG THE SILL OR JAMBS.





STEP 7

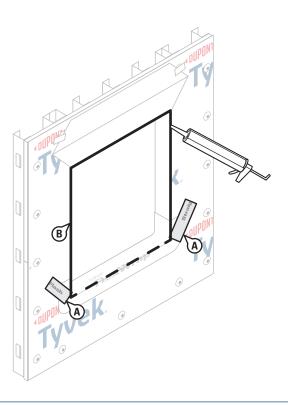
- A. Fan out the **DuPont**[™] **FlexWrap**[™] at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap**[™] should be 2″– 3″ onto the face of the wall.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.
- C. Apply continuous bead of sealant to wall at the window jambs.

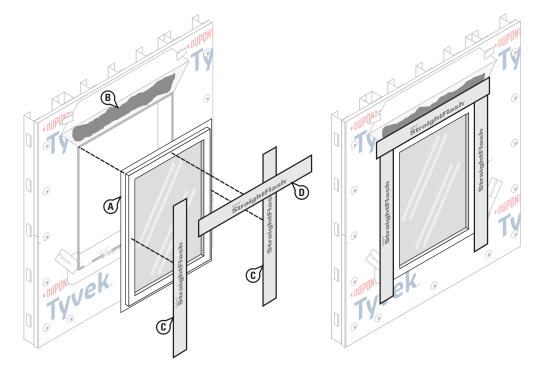
STEP 8

A. Fold side flaps into rough opening, cut excess flaps, and secure secure with 3"

DuPont™ Tyvek® Tape, DuPont™ Flashing Tape* or 4" DuPont™ StraightFlash™.

^{*}DuPont** Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.





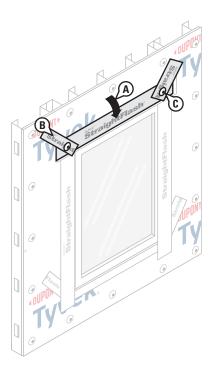
STEP 9

- A. Starting at the bottom of the window, install 4" **DuPont**™ **StraightFlash**™ or **DuPont**™ **Flashing Tape*** along the angled cut in in the **Tyvek**® **WRB**.
- B. Apply continuous bead of sealant at the window head and jambs to wall or back side of window mounting flange. **Do not apply continuous sealant bead across bottom sill flange** to allow for drainage. 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.

STEP 10

- A. Install window according to manufacturer's instructions.
- B. Apply **DuPont™ Adhesive/Primer** or recommended primer to exposed sheathing at jambs and head.
- C. Cut two pieces of **DuPont™ StraightFlash™** or **DuPont™ Flashing Tape*** for jamb flashing extending 1" above window head flange and 4" to 6" below bottom edge of sill flashing. Remove release paper and press tightly along sides of window frame.
- D. Cut a piece of StraightFlash™ 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.

*DuPont™ Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.



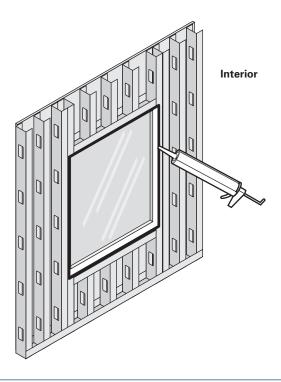
STEP 11

- A. Flip down upper flap of **Tyvek**° **WRB** so it lays flat across head flashing, then trim 1"-2" above the window opening.
- B. Tape along all cuts in Tyvek® WRB and tape across head of the window with 3"

 DuPont™ Tyvek® Tape, DuPont™ Flashing Tape* or 4" DuPont™ StraightFlash™. (See

 Special Considerations for when 3" Tyvek® Tape is allowed.)
- C. Install **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners at appropriate spacing at head.

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash™** to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.



STEP 12

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

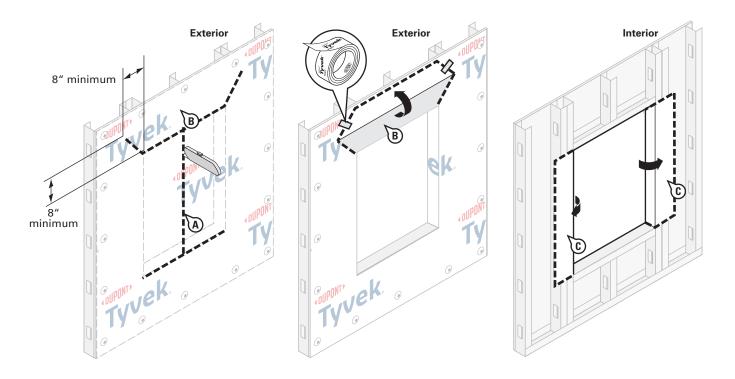
NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro[™] Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro[™] Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont Tyvek® WRB.

*DuPont" Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015 International Building Code.

Installation Methods for DuPont Self-Adhered Flashing Products **AFTER** the DuPont[™] Tyvek[®] WRB is Installed Brick Mold Window^{1,2}

This installation guide can also be used for windows with field applied nailing fins.

Method applies to following products: DuPont™ VersaFlange™ and DuPont™ FlexWrap™



STEP 1

Prepare Tyvek® WRB for window installation:

- A. Make an "I-Cut" in the **Tyvek** WRB (a modified I-Cut is also acceptable). For an "I-Cut" begin with a horizontal cut across the bottom and the top of the window frame (for round top windows, cut from the center cut straight down to the sill.
- B. Cut two 45° slits a minimum of 8" from the corner of the header to create a flap above the rough opening to expose sheathing or framing members and to allow head flashing installation (see step 5). Flip head flap up and temporarily secure with **DuPont™ Tyvek® Tape**. Some windows and flashing widths may require longer slits due to window shape.

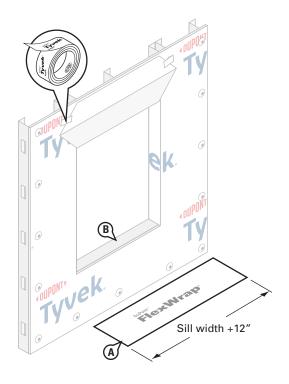
C. Fold side flaps into rough opening, cut excess flaps, and secure.

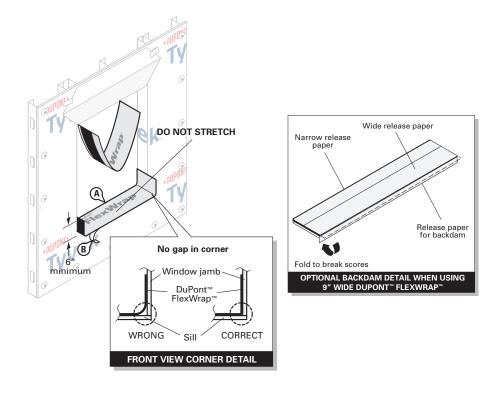
NOTE: Side flaps should cover interior facing framing stud.

¹ For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

² For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.

Installation Methods for DuPont Self-Adhered Flashing Products **AFTER** the DuPont[™] Tyvek[®] WRB is Installed Brick Mold Window^{1,2}





STEP 2

- A. Cut **DuPont™ FlexWrap™** at least 12" **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the window frame will be located, ensuring 2"–3" adhesion onto the face of the wall.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

STEP 3

A. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"− 3" of the **FlexWrap**™ will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

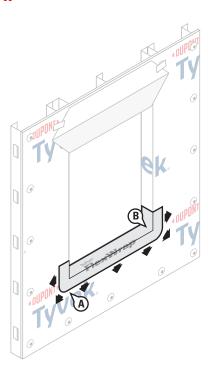
Optional Back Dam: Fold 9" **FlexWrap**™ to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap**™ inside rough opening to finish back dam after window installation.

B. Remove narrow release paper.

DO NOT STRETCH MATERIAL ALONG THE SILL OR JAMBS.

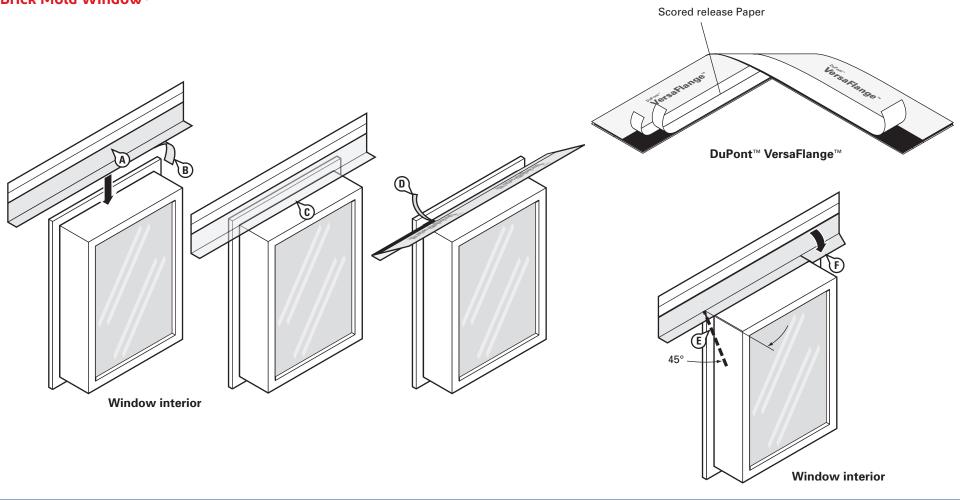
¹ For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

² For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.



- A. Fan out the **DuPont™ FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap**™ should be 2″– 3″ onto the face of the wall.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.

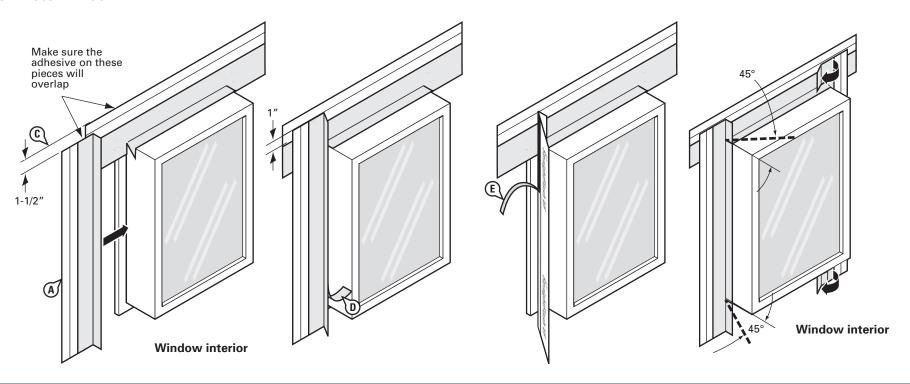
¹ For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.
² For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.



- A. Prepare head flashing by cutting a piece of **DuPont™ VersaFlange™** at least 12" LONGER than the head length.
- B. Break the scored release paper on one side of the head flashing by folding it back and forth upon itself.
- C. Center the flashing on the window head and position so that it contacts the window frame and interior side of the brick mold. Remove the outer release paper and adhere the flashing to the window frame. Use the inner release paper to form a tight seal in the corner where the brick mold attaches to the window frame.
- D. Remove the inner release paper and adhere the flashing to the back of the brick mold and the window casing.
- E. At the corner of the window frame, cut the **VersaFlange**™ along the corner at a 45° angle.
- F. Fold the **VersaFlange**[™] down flat against the brick mold.

¹ For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

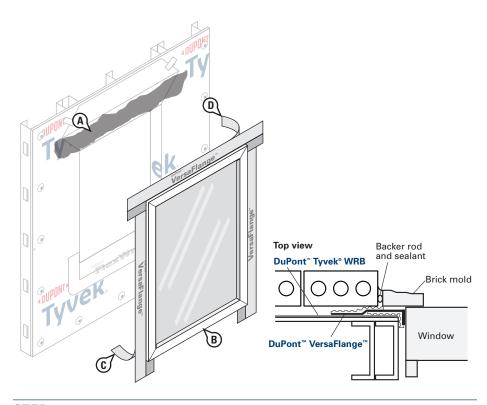
² For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.



- A. Prepare jamb flashing by cutting a piece of **DuPont™ VersaFlange™** at least 6" LONGER than the jamb.
- B. Break the scored release paper on one side of the jamb flashing by folding it back and forth upon itself.
- C. Position so that it contacts the window frame and interior side of the brick mold. Ensure that the jamb flashing is positioned 1-1/2" below the top edge of the head flashing. Jamb flashing adhesive must come in contact with head flashing adhesive and overlap by 1".
- D. Remove the outer release paper and adhere the flashing to the window frame. Use the inner release paper to form a tight seal in the corner.
- E. Remove the inner release paper and adhere the flashing to the back of the brick mold.
- F. At the corner of the window frame, cut the **VersaFlange**™ along the corner and fold it down flat to adhere against the head flashing.

¹ For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

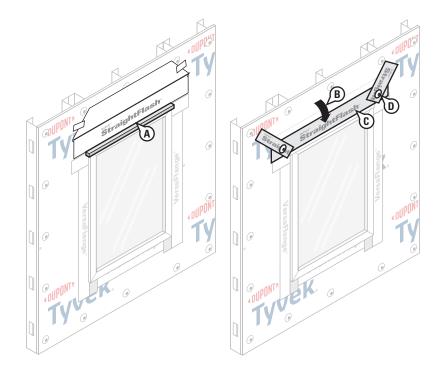
² For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.





- A. Apply **DuPont™ Adhesive/Primer**, or recommended primer, to exposed sheathing.
- B. Install window according to manufacturer's installation instructions.
- C. Remove the remaining release paper from the **DuPont™ VersaFlange™** jamb flashing and press firmly to adhere it to the **Tyvek® WRB**.
- D. Remove the release paper at the head and adhere it to the wall surface.

Optional: Cover exposed butyl with **DuPont**[™] **StraightFlash**[™] or **DuPont**[™] **Tyvek**[®] **Tape**.



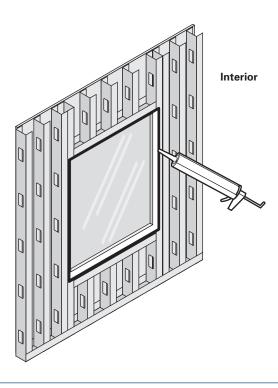
STEP 8

- A. Cut a piece of metal or vinyl drip cap slightly longer than the window's width and place a bead of sealant on the rear side. Install the drip cap tight against the window head and cover the top edge with 4" **StraightFlash**".
- B. Flip down upper flap of **Tyvek® WRB** so it lays flat across head flashing, then trim 1"-2" above the window opening.
- C. Tape along all cuts in **Tyvek**° **WRB** and tape across drip cap with 3″ **Tyvek**° **Tape** or 4″ **StraightFlash**™. (See *Special Considerations* for when 3″ **Tyvek**° **Tape** is allowed.)
- D. Install **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners according to fastening schedule.

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash**™ to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.

¹ For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

² For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.



STEP 9

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

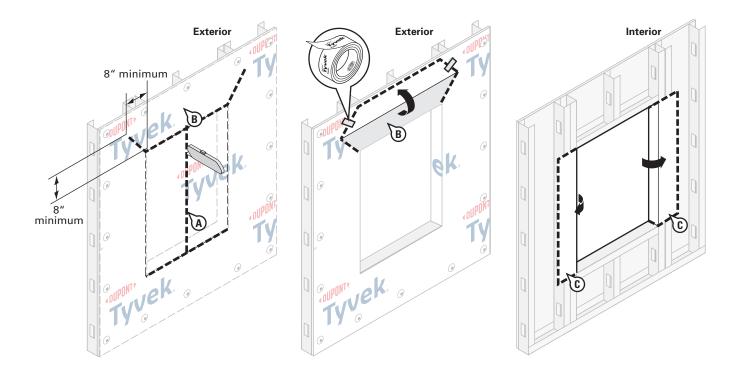
NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro[™] Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont Tyvek WRB.

¹ For Residential-Use building structures, Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

² For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.

While the depictions and instructions for this method refer to a non-flanged window, this method is also applicable for a non-flanged door^{1,2}.

Method applies to following products: DuPont™ VersaFlange™, DuPont™ FlexWrap™, and DuPont™ FlexWrap™ EZ



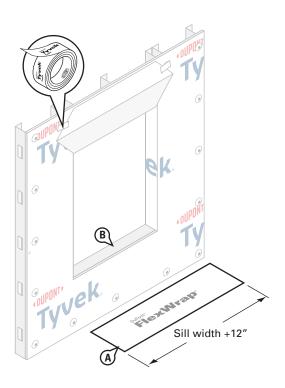
STEP 1

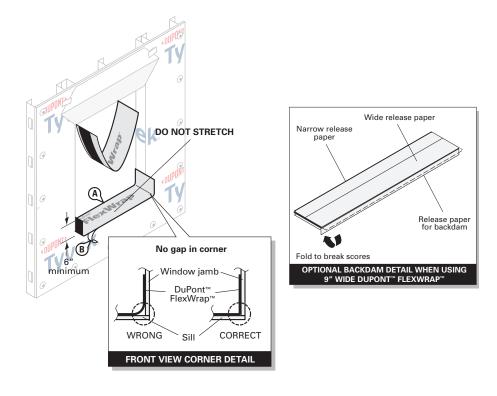
Prepare Tyvek® WRB for window installation. Do not install fasteners within 6" of the sills and jambs, and within 9" of the head of the openings.

- A. Make an "I-Cut" in the **Tyvek**® **WRB** (a modified I-Cut is also acceptable). For an "I-Cut" begin with a horizontal cut across the bottom and the top of the window frame. From the center cut straight down to the sill.
- B. Cut two 45° slits a minimum of 8" from the corner of the header to create a flap above the rough opening to expose sheathing or framing members and to allow head flashing installation (see step 5). Flip head flap up and temporarily secure with **DuPont** "Tyvek" Tape. Some windows and flashing widths may require longer slits.
- C. Fold side flaps into rough opening, cut excess flaps, and secure. Side flaps should cover interior facing framing stud.

¹For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.





STEP 2

- A. Cut **DuPont™ FlexWrap™** at least 12″ **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1″ adhesion **BEYOND** where the window frame will be located, ensuring 2″–3″ adhesion onto the face of the wall.
- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.

STEP 3

A. Remove wide piece of release paper. Position on horizontal sill by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"− 3" of the **FlexWrap**™ will be adhered to the face of the wall with a minimum of 6" up each jamb. Adhere into rough opening.

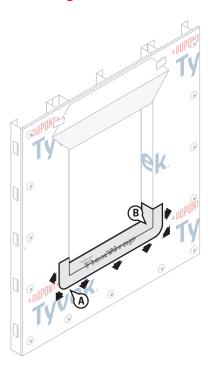
Optional Back Dam:Fold 9" **FlexWrap**™ to break perforation. Remove center piece of release paper. Cover horizontal sill to accommodate back dam as appropriate, and adhere into rough opening along sill and up jambs (min 6" on each side). Leave 1" release paper on **FlexWrap**™ inside rough opening to finish back dam after window installation.

B. Remove narrow release paper.

DO NOT STRETCH MATERIAL ALONG THE SILL OR JAMBS.

¹For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

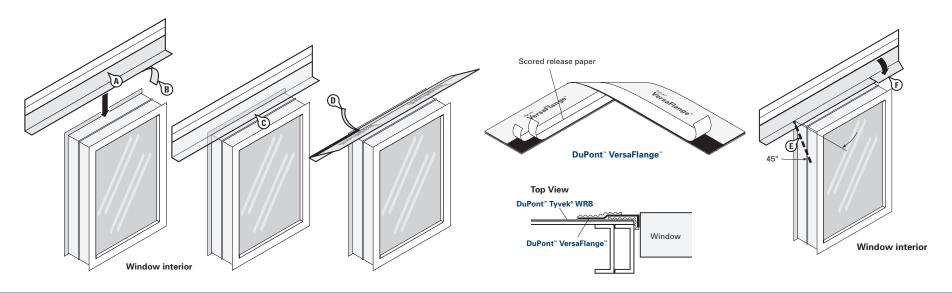
For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.



- A. Fan out the **DuPont™ FlexWrap™** at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap™** should be 2″– 3″ onto the face of the wall.
- B. Firmly press sill flashing to ensure full adhesion on all surfaces. Eliminate wrinkles and bubbles by smoothing surface and repositioning as necessary.

¹For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

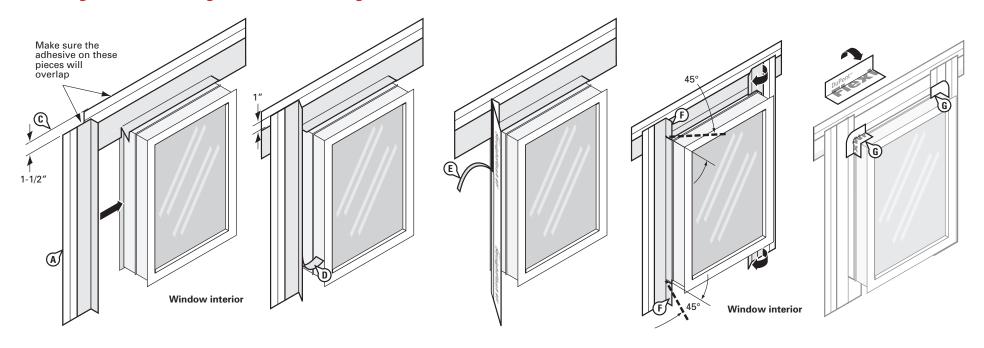
²For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.



- A. Prepare head flashing by cutting a piece of **DuPont™ VersaFlange™** at least 12″ LONGER than the head length. Before flashing, prime window fins and casings with **DuPont™ Adhesive/Primer** or recommended primer.
- B. Break the scored release paper on one side of the head flashing by folding it back and forth upon itself.
- C. Center the flashing on the window head and position so that it contacts the window frame and interior side of the front flange. Remove the outer release paper and adhere the flashing to the window frame. Use the inner release paper to form a tight seal in the corner.
- D. Remove the inner release paper and adhere the flashing to the back of the aluminum window fin and casing.
- E. At the corner of the window frame, cut the **VersaFlange**™ along the corner at a 45° angle.
- F. Fold the **VersaFlange**[™] down flat.

¹For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

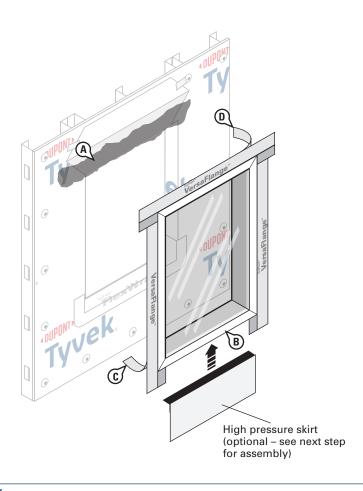
For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.



- A. Prepare jamb flashing by cutting a piece of **DuPont™ VersaFlange™** at least 6" LONGER than the jamb.
- B. Break the scored release paper on one side of the jamb flashing by folding it back and forth upon itself.
- C. Position the flashing so that it contacts the window frame and interior side of the aluminum window fin. Ensure that the jamb flashing is positioned 1-1/2 inch below the top edge of the head flashing. Jamb flashing adhesive must come in contact with head flashing adhesive and overlap by 1".
- D. Remove the outer release paper and adhere the flashing to the window frame. Use the inner release paper to form a tight seal in the corner.
- E. Remove the inner release paper and adhere the flashing to the back of the aluminum window fin.
- F. At the corner of the window frame, cut the **VersaFlange**™ along the corner and fold it down flat to adhere against the head flashing.
- G. Cut a 2" x 4" piece of **DuPont™ FlexWrap™** or a 4" piece of **DuPont™ FlexWrap™ EZ** and patch each corner.

¹For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

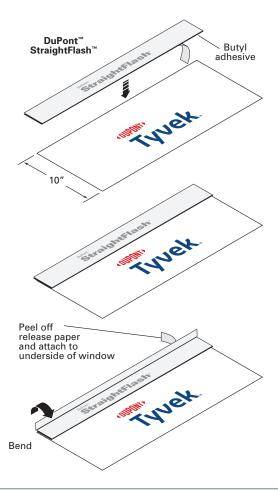
²For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.





- A. Apply DuPont™ Adhesive/Primer or recommended primer to the top of the jambs and exposed sheathing.
- B. Install window according to manufacturer's installation instructions. 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.
- C. Remove the remaining release paper from the **DuPont™ VersaFlange™** jamb flashing and press firmly to adhere it to the **Tyvek® WRB**.
- D. Remove the release paper at the head and adhere it to the wall surface.

Optional: Cover exposed butyl with DuPont™ StraightFlash™ or DuPont™ Tyvek® Tape.

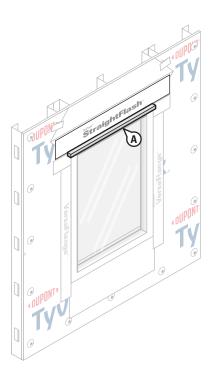


STEP 7 - OPTIONAL HIGH-PRESSURE SKIRT

- A. Create the high-pressure skirt by cutting a piece of **Tyvek® WRB** 1" wider than the width of window opening and approximately 10" in depth.
- B. Attach skirt to underside of window using a piece of VersaFlange™ or 4" StraightFlash™ cut to the same width as the skirt.

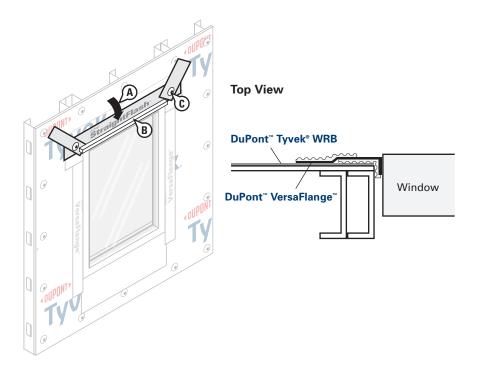
¹For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

²For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.



STEP 8

A. Cut a piece of metal or vinyl drip cap slightly longer than the window's width and place a bead of recommended sealant on the rear side. Install the drip cap tight against the window head and cover the top edge with **DuPont™ StraightFlash™** or **DuPont™ Tyvek® Tape**.



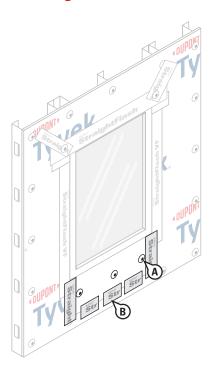
STEP 9

- A. Flip down upper flap of **Tyvek**° **WRB** so it lays flat across head flashing, then trim 1"-2" above the window opening.
- B. Tape along all cuts in **Tyvek® WRB** and tape across drip cap with 3" **Tyvek® Tape** or 4" **StraightFlash™**. (See *Special Considerations* for when 3" **Tyvek® Tape** is allowed.)
- C. Install **DuPont™ Tyvek® Wrap Cap Fasteners** or recommended fasteners at jambs and head flap according to fastening schedule.

NOTE: For high performance designs or areas of extreme exposure use 4" **StraightFlash™** to seal the head flap and install additional mechanical fasteners through the flashing at the head flap and perimeter of window.

¹For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.

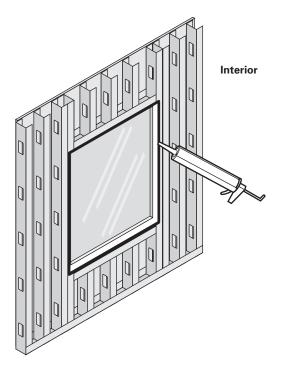


STEP 10

For High-Pressure Skirt Installations

A. Install **DuPont™ Tyvek® Wrap Cap Fasteners** through the skirt.

B. Secure sides of high-pressure skirt to the **Tyvek® WRB** with **DuPont™ StraightFlash™** and skip tape bottom with 3" **DuPont™ Tyvek® Tape** or 4" **StraightFlash™**. Skip taping provides weeps that allows drainage behind the skirt.



STEP 11

A. Create a continuous perimeter seal using backer rod and sealant or **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** on window interior to resist air and water infiltration. When using **Great Stuff Pro™ Window and Door Polyurethane Foam Sealant** in perimeter openings less than ½″, apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

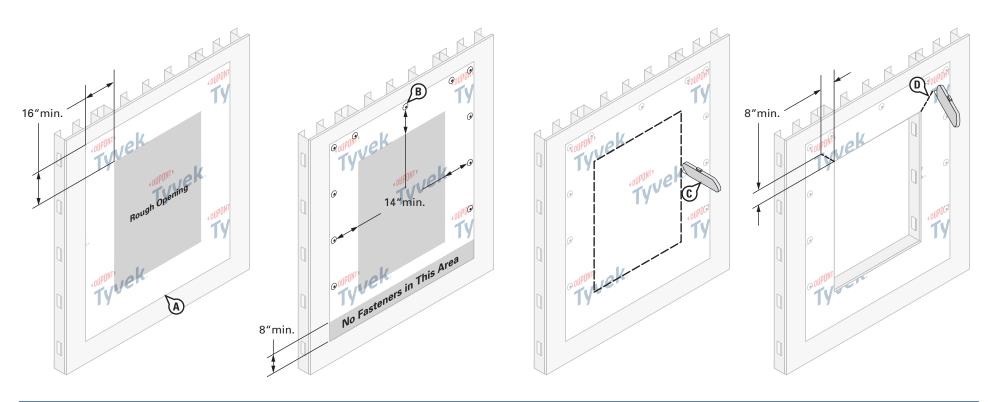
NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro™ Window and Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing Product or DuPont™ Tyvek® WRB.

¹For Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

For smooth-framed window installations not exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf.

Installation Method for Installing DuPont Self-Adhered Flashing Products **BEFORE** DuPont[™] Tyvek[®] WRB Non-Flanged or Integral Flanged Window

Installation of **Tyvek**° **WRB** frame around window rough opening prior to window installation is necessary for proper shingling and integration with the **Tyvek**° **WRB** when it is installed after the window. The method shown here is installation of a non-flanged window but may be applied to all the flashing methods included in this installation guideline.



STEP 1

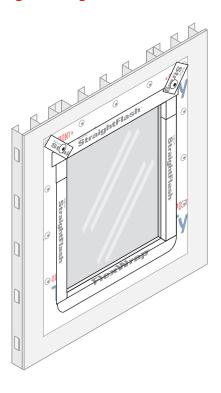
Install Tyvek® WRB Frame Around Window Rough Opening

- A. Cut a piece of **Tyvek® WRB** that is 32" wider and 32" taller than the window rough opening to allow a 12" width around all sides.
- B. Center the piece of **Tyvek® WRB** over the rough opening and fasten along the sides and across the top using **DuPont™ Tyvek® Wrap Caps** or recommended fasteners. Fasteners should not be installed within 14" of the edge of the rough opening, and no fasteners should be installed within 8" of the bottom edge of the **Tyvek® WRB**.
- C. Cut an opening in the **Tyvek® WRB** using a square cut around the perimeter of the rough opening to create a frame around the window (ensure that the **Tyvek® WRB** frame is cut flush with the sheathing and is not wrapped into the rough opening).

NOTE: Use standard I-cut per the applicable section of these installation guides when installing an integral flanged window.

D. Cut a head flap at a 45° angle to expose 8" of sheathing to allow for head flashing installation.

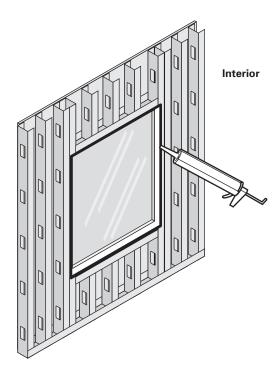
Installation Method for Installing DuPont Self-Adhered Flashing Products **BEFORE** DuPont[™] Tyvek[®] WRB Non-Flanged or Integral Flanged Window



STEP 2

Install Window Per Applicable Method Based on Window Type

A. Follow the applicable instructions in these install guidelines to prepare the window rough opening accordingly and install window.

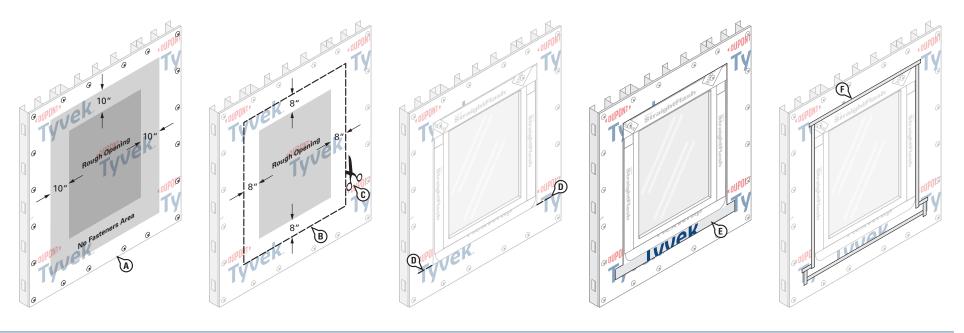


STEP 3

A. Install sealant (and backer rod as necessary) around the window opening at the interior. It is also acceptable to use **Great Stuff Pro™ Window & Door Polyurethane**Foam Sealant, or recommended foam. When using **Great Stuff Pro™ Window & Door Polyurethane Foam Sealant** in perimeter openings less than ½", apply using the plastic extension tip for the **Great Stuff Pro™ Dispenser Gun** during installation.

NOTE: For high performance installations exceeding ASTM E1677 wind loading pressures (10.8 psf, 65 mph equivalent structural load) and ASTM E331 water infiltration resistance of 6.24 psf, it is necessary to install sealant over the cured foam when using Great Stuff Pro™ or other recommended foam. Sealant should be installed over the foam between the window frame and rough opening around the entire interior perimeter. If Great Stuff Pro™ Window & Door Polyurethane Foam Sealant or other recommended foam extends beyond the window frame, shave the excess cured foam flush with the window frame before applying sealant. Avoid damaging the DuPont Self-Adhered Flashing or Tyvek® WRB.

Installation Method for Installing DuPont Self-Adhered Flashing Products **BEFORE** DuPont™ Tyvek® WRB Non-Flanged or Integral Flanged Window



STEP 4

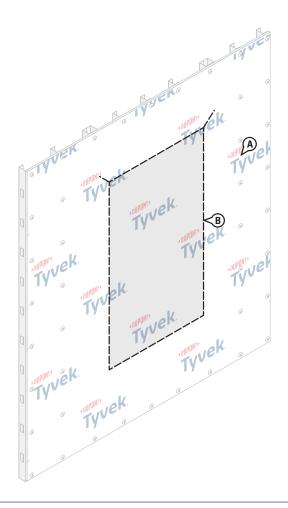
Install and Integrate the Tyvek® WRB

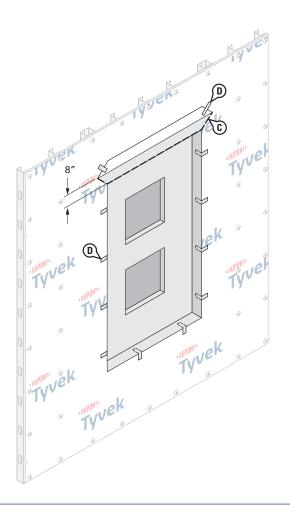
- A. Install the **Tyvek® WRB** according to the *DuPont™ Tyvek® Mechanically-Fastened*Water-Resistive and Air Barrier (WRB) Installation Guidelines for Buildings Greater
 Than 4 Stories that can be found at <u>building.dupont.com</u>. Do not install fasteners
 within 10" of the rough opening along jambs and head and within 12" along the sill.
- B. Mark a perimeter box 8" away from the rough opening sill, jambs and head.
- C. Cut the **Tyvek**® **WRB** along perimeter marking to expose window and **Tyvek**® **WRB** frame below. Do not cut **Tyvek**® **WRB** frame underneath.

- D. Create 6" horizontal slits in the **Tyvek**® **WRB** at each lower corner of the perimeter cut.
- E. Bring the bottom portion of the **Tyvek**° **WRB** frame through the slits so it laps over the top layer of **Tyvek**° **WRB**.
- F. Tape seams at bottom, sides, and top of rough opening using 3" **DuPont™ Tyvek® Tape**.

NOTE: 3" **Tyvek**® **Tape** can be used to seal **Tyvek**® **WRB**-to-**Tyvek**® **WRB** seams. If the cut edges of the **Tyvek**® **WRB** are positioned over the window flashing, the **Tyvek**® **WRB** must be terminated around the perimeter of the window (jambs and head) with another layer of **DuPont**™ **StraightFlash**™.

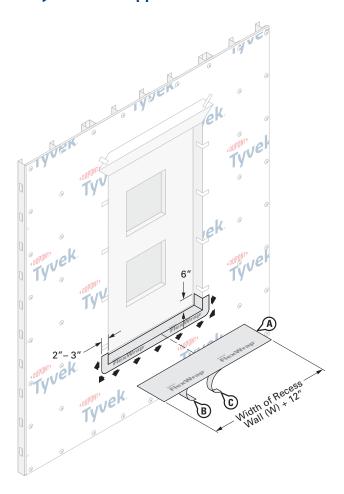
Complex wall and window flashing conditions may require the use of **Tyvek**° **Fluid Applied Products** for part of a wall or window and/or door flashing. While there are many variations of this condition, it is important to properly integrate the **Tyvek**° **WRB** with the **Tyvek**° **Fluid Applied Products** using **StraightFlash**™ and **FlexWrap**™. The following example shows a recessed wall plane treated with **DuPont**™ **Tyvek**° **Fluid Applied WB+**™ with a window flashed with **Tyvek**° **Fluid Applied Products** and integrated with the **Tyvek**° **WRB** on the face of the wall. Refer to the *DuPont*™ *Tyvek*° *Fluid Applied Flashing Installation Guidelines* for more information.





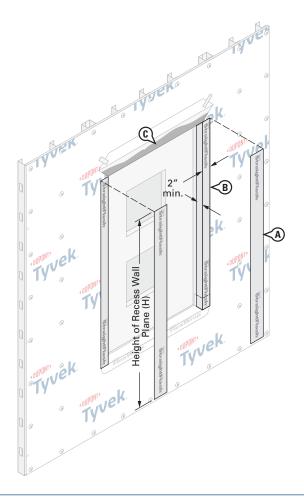
- A. Install **Tyvek**® **WRB** on wall per *DuPont*™ *Tyvek*® *Mechanically-Fastened Water-Resistive and Air Barrier (WRB) Installation Guidelines for Buildings Greater Than 4*Stories that can be found at <u>building.dupont.com</u>. Do not install fasteners within 6" of the bottom and sides of the openings and within 9" of the top of the recessed wall.
- B. Cut along perimeter of recessed wall plane.

- C. Cut a flap at top of recessed wall plane at a 45° angle to expose 8" of sheathing to allow for installation of transition flashing in Step 4. Flip up to expose the sheathing and temporarily secure flap with **DuPont**™ **Tyvek**® **Tape**..
- D. Temporarily secure **Tyvek**° **WRB** with **Tyvek**° **Tape** at perimeter of recessed wall plane to facilitate transition flashing installation.



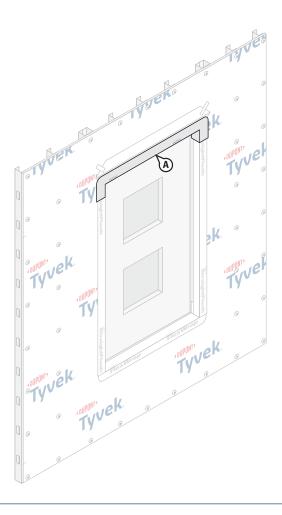


- A. Cut the **FlexWrap**[™] at least 12" **LONGER** than width of recessed wall plane (W).
- B. Remove wide piece of release paper and adhere on horizontal ledge by aligning the inside edge of the narrow release paper with the face of the wall to ensure 2"-3" of the FlexWrap™ will be adhered to the face of the wall with a minimum of 6" up each side.
- C. Remove narrow piece of release paper. Fan out the **FlexWrap**™ at corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Coverage of **FlexWrap**™ should be 2″-3″ onto the face of the wall.*



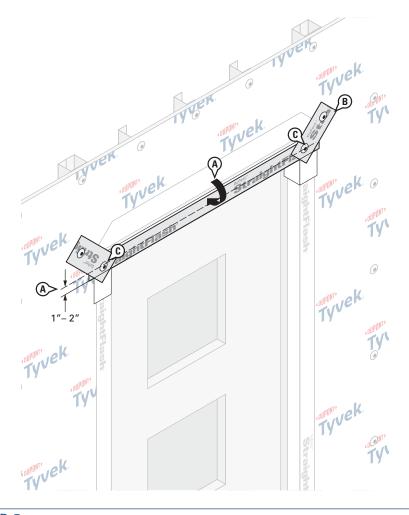
- A. Cut (2) pieces of **StraightFlash**™ the height of the recessed wall plane (H) or long enough to overlap the bottom of recessed wall flashing by at least 2" and be overlapped by future top of recess wall flashing by at least 2".
- B. Terminate the **Tyvek® WRB** along each side of recessed wall, ensuring the StraightFlash™ extends 2" onto the face of the wall and 2" into the recess.
- C. Apply **DuPont™ Adhesive/Primer** or recommended primer to the top of the recessed wall plane and exposed sheathing.

^{*}A 3-piece transition flashing method can also be used with StraightFlash™ in combination with FlexWrap™ corners. The StraightFlash™ in installed the width of the bottom or top of recessed wall plane prior to placing the FlexWrap™ corners. The FlexWrap™ corners should be at least 12″ long allowing for 6″ overlap onto the StraightFlash™ at bottom, top, and sides of recessed wall plane.



STEP 4

A. Install **FlexWrap**™ at top of recess wall using method shown in Step 2.*

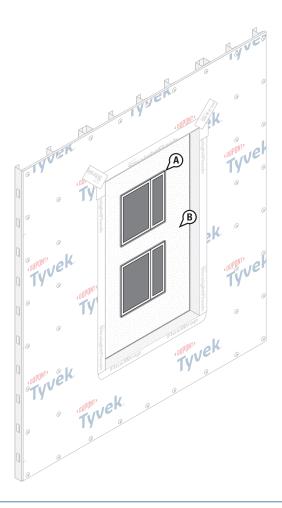


STEP 5

A. Flip down **Tyvek**® **WRB** flap and trim 1"- 2" above top edge of recessed wall plane.

- B. Terminate flap along the top of the recessed wall plane and along diagonal seams with 3" **DuPont™ Tyvek® Tape** or 4" **StraightFlash™** (see *Special Considerations* for when 3" Tyvek® Tape is allowed).
- C. For high performance designs or areas of extreme exposure use 4" **StraightFlash**™ to seal the flap and install **DuPont**™ **Tyvek**® **Wrap Cap Fasteners**, or recommended fasteners, at the flap and perimeter of the recessed wall plane.

^{*}A 3-piece transition flashing method can also be used with StraightFlash** in combination with FlexWrap** corners. The StraightFlash** in installed the width of the bottom or top of recessed wall plane prior to placing the FlexWrap** corners. The FlexWrap** corners should be at least 12" long allowing for 6" overlap onto the StraightFlash** at bottom, top, and sides of recessed wall plane.



STEP 6

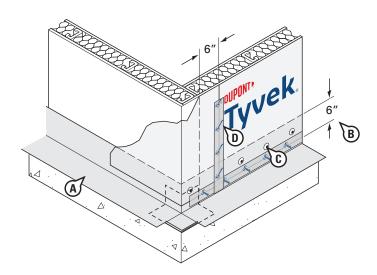
A. Install **DuPont**™ **Tyvek**® **Fluid Applied Flashing and Joint Compound+** and/or **DuPont Self-Adhered Flashing Products** and window per the *DuPont*™ *Tyvek*® *Fluid Applied Flashing Installation Guidelines*.

NOTE: Window/flashing installation sequence will vary by project and window type. All installations must allow for drainage at window sill.

B. Install **DuPont™ Tyvek® Fluid Applied WB+™** per the *DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines*. Overlap the **Tyvek® Fluid Applied WB+™** onto the **StraightFlash™** and **FlexWrap™** at recess wall transition by a minimum of 2″.

Installation Methods for DuPont™ Tyvek® WRB Interfaces with Through Wall Flashing

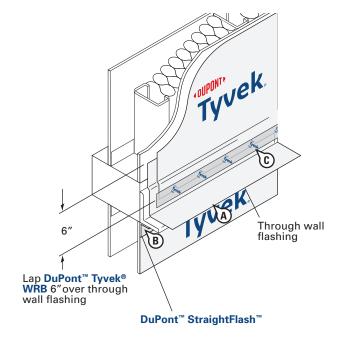
Base of wall



- A. Install through wall flashing on the vertical wall per plans and specifications. The through wall flashing may be terminated by using a reglet, counterflashing, termination bar or by embedding in a mortar joint.
- B. Overlap through wall flashing with **Tyvek® WRB** by 6".
- C. Mechanically fasten bottom of **Tyvek**® **WRB** through top of through wall flashing.
- D. Seal vertical and horizontal seams using 3" **DuPont™ Tyvek® Tape** or **DuPont Self-Adhered Flashing Product**.

NOTE: For high performance designs or areas of extreme exposure install additional mechanical fasteners through the **Tyvek**° **WRB** terminated at the base of wall. Use appropriate fastener for each substrate.

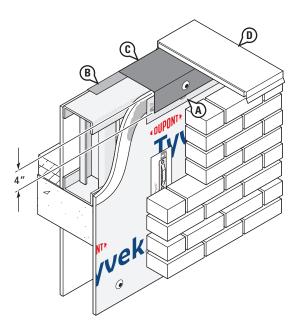
Shelf angle



- A. Through wall flashing should be applied to the top of the shelf angle and the **Tyvek**® **WRB** should be properly shingled over by at least 6".
- B. Seal the **Tyvek® WRB** to the bottom of the shelf angle using **DuPont™ StraightFlash™**.
- C. Seal bottom of the **Tyvek**° **WRB** to through wall flashing using 3" **Tyvek**° **Tape** or a **DuPont Self-Adhered Flashing Product**.

Installation Methods for DuPont™ Tyvek® WRB Interfaces with Through Wall Flashing

Parapet wall with brick



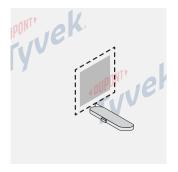
- A. Apply **DuPont™ Adhesive/Primer** or recommended primer to wall surface or sheathing and install a minimum 4" **DuPont™ StraightFlash™**.
- B. Install roofing membrane
- C. Install through wall flashing over parapet wall, overlapping the **Tyvek® WRB** and the roofing membrane by a minimum of 4" in the proper shingling manner.
- D. Install coping cap.

NOTE: Additional CAD details are available in the Technical Information section of <u>building.dupont.com</u>.

Penetrations

Seal around plumbing pipes, HVAC components, electrical outlets, exterior lights, flashing panels, and other objects that penetrate the **DuPont™ Tyvek® WRB**. Always use positive shingling by installing Tyvek® WRBs and DuPont Self-Adhered Flashing **Products** from bottom to top, with upper layer installed over lower layer. **Optional last** step for all installations: Install a piece of Tyvek® WRB and seal with DuPont™ Tyvek®

Flashing Integral Flanged Products AFTER Installation of Tyvek® WRB



STFP 1

Install Tyvek® WRB and cut as necessary to accommodate integral flanged product.



STEP 2

Install integral flanged product per manufacturer's instructions.



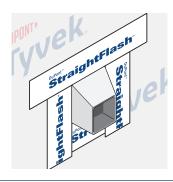
STEP 3

below).

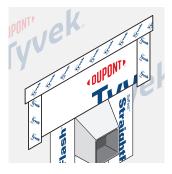
Flashing Tape* onto flanges, extending onto



Tape to overlap the top edge of the **DuPont Self-Adhered Flashing Product** (shown



Install **DuPont™ StraightFlash™** or **DuPont™** Tyvek® WRB by a minimum of 2".



STEP 4 (OPTIONAL)

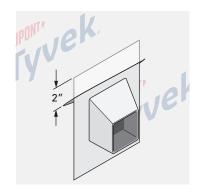
Install a piece of **Tyvek® WRB** to overlap the top edge of the **StraightFlash**™. Seal sides and top with **Tvvek**® **Tape**

Method 2



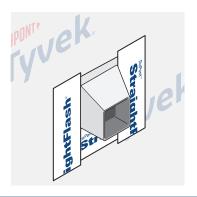
STEP 1

Install Tvvek® WRB and make horizontal cut a minimum of 1" wider than flange.



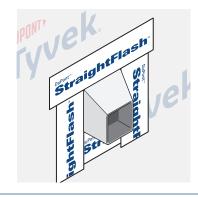
STEP 2

Slide top flange into slit with minimum 2" overlap of Tyvek® WRB, and install per manufacturer's instructions.



STEP 3

Adhere DuPont Self-Adhered Flashing Product onto bottom and side flanges, extending onto Tyvek® WRB by 2".



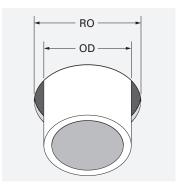
STEP 4

Install DuPont Self-Adhered Flashing Product to top flange, extending beyond DuPont Self-Adhered Flashing Product on side flanges.

^{*}DuPont** Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

Penetrations

Option 1: Flashing Non-Flanged **AFTER**Installation of DuPont™ Tyvek® WRB Using DuPont™ FlexWrap™ EZ



Use **DuPont™ FlexWrap™ EZ** only when penetration rough opening (**RO**) is not more than ½" larger than the outside diameter/dimension (**OD**) of non-flanged product.

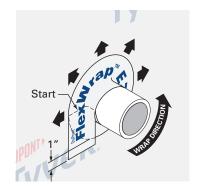
NOTE: For more information regarding the installation of **FlexWrap™ EZ**, refer to the Installation Information Bulletin for **FlexWrap™ EZ**.

For non-flanged products with OD GREATER than 2"



STEP 1

Install **Tyvek**° **WRB** over non-flanged product and cut around penetration.



STEP 2

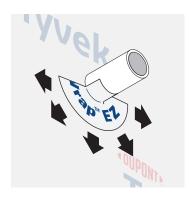
Cut a piece of FlexWrap™ EZ longer than circumference of non-flanged product to ensure a minimum 1" overlap onto the Tyvek® WRB. Starting at the horizontal position on either side, adhere around penetration and onto Tyvek® WRB.

For non-flanged products with OD LESS than 2"



STEP 1

Install **Tyvek**° **WRB** over non-flanged product and cut around penetration.



STEP 2

Cut a piece of **FlexWrap™ EZ** the length of ½ the circumference of the non-flanged product. Adhere onto bottom section and fan out onto **Tyvek® WRB**.



STEP 3

Cut a second piece of FlexWrap™ EZ the length of the pipe circumference. Adhere onto top section and fan out onto face of wall with a minimum of 1" overlap of the edges of FlexWrap™ EZ below.

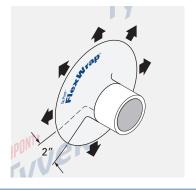
Penetrations

Option 2: Flashing Non-Flanged Products **AFTER** Installation of DuPont™ Tyvek® WRB Using DuPont™ FlexWrap™



STEP 1

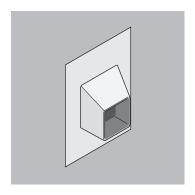
Install **Tyvek® WRB** over non-flanged product and cut around penetration.



STEP 2

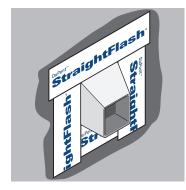
Working counterclockwise, install **DuPont™ FlexWrap™** around penetration with a minimum 2" overlap.

Flashing Integral Flanged Products BEFORE Installation of Tyvek® WRB



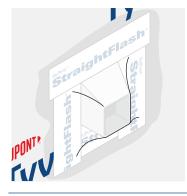
STEP 1

Install integral flanged product onto sheathing per manufacturer's instructions.



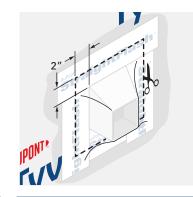
STEP 2

Prime as necessary with **DuPont™**Adhesive/Primer. Install **DuPont™**StraightFlash™ or **DuPont™** Flashing
Tape* onto flanges, extending onto sheathing by a minimum of 2".



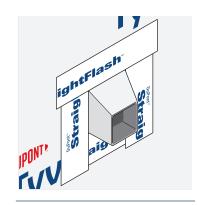
STEP 3

Install Tyvek® WRB.



STEP 4

Make cut in **Tyvek® WRB**, ensuring a minimum of 2" gap for adhesion of **StraightFlash™**.



STEP 5

Seal edges of **Tyvek® WRB** with **StraightFlash**[™].

^{*}DuPont** Flashing Tape is only permitted for Residential-Use building structures. Residential-Use (Group R) is defined by the 2015/2018 International Building Code.

Product Composition and UV Stability

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 Tyvek® CommercialWrap® D be covered within 9 months (270 days) of installation.

DuPont Self-Adhered Flashing Products are made from a synthetic rubber adhesive and a laminate of polyethylene film, polypropelene film, elastic fiber, synthetic rubber adhesive, polyurethane adhesive, and a top sheet of flash spunbonded high density polyethylene fibers or polypropelene film. Additives have been incorporated into these materials to provide ultraviolet light resistance. DuPont requires that **DuPont**™ FlexWrap™, DuPont™ FlexWrap™ EZ, **DuPont**[™] **StraightFlash**[™] and **DuPont**[™] **VersaFlange**[™] be covered within nine months (270 days) of installation. DuPont requires that **DuPont**™ **Flashing Tape** be covered within 4 months (120 days) of installation

DuPont™ Tyvek® Fluid Applied Products
are formulated to include elastomeric
polymers that cure to a continuous,
fully-adhered, tough, durable membrane.
Additives have been incorporated to
provide ultraviolet light resistance.
DuPont requires that the DuPont™
Tyvek® Fluid Applied WB+™ and DuPont™
Tyvek® Fluid Applied Flashing and Joint
Compound+ are to be covered within
9 months (270 days) of installation.

Design Considerations

When installed in conjunction with other building materials, Tyvek® WRBs, **DuPont Self-Adhered Flashing Products**, and Tyvek® Fluid Applied Products must be properly shingled with these materials such that water is diverted to the exterior of the wall system. Tyvek® WRBs and Tyvek® Fluid Applied WB+™ are secondary weather barriers. The outer facade is the primary barrier. Follow facade manufacturer's installation and maintenance requirements for all facade systems in order to maintain water holdout properties and ensure performance of Tyvek® WRBs and Tyvek® Fluid Applied WB+[™]. Do not install on a wall that does not feature a continuous path for moisture drainage. Any standing water must be allowed to drain off the membrane. 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**® **WRBs** and **Tyvek**® Fluid Applied WB+™. Use of additives, coatings or cleansers on or in the facade system may impact the performance of **DuPont**™ **Tyvek**° **WRBs** and **Tyvek**° **Fluid Applied WB+**[™]. DuPont Building Envelope Solutions Products are to be used as outlined in this installation guideline. **DuPont Self-Adhered Flashing** and Tyvek® Flashing and Joint Compound+ should only be used to seal penetrations and flash openings in buildings. Tyvek® WRBs, Tyvek® Fluid Applied Products, and **DuPont Self-Adhered Flashing 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 air and water 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 **Tyvek® WRBs** are 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.

Depending on job site conditions, it is possible that stains may appear, but will not alter performance of the **Tyvek® Fluid Applied Product**.

Safety and Handling

Warning

Tyvek® WRBs are slippery and should not be used in any application where they will be walked on. In addition, because they are slippery. DuPont recommends using kickjacks, scaffolding, or lifts 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®** is combustible and should be protected from flames and other high heat sources. **DuPont**[™] **Tyvek**[®] will melt at 275°F (135°C) and if the temperature of **DuPont**™ **Tyvek**® 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 1-833-338-7668

DuPont Self-Adhered Flashing Products and their release paper are slippery and should not be walked on. Remove release paper from work area immediately. **DuPont Self-Adhered Flashing Products**

will melt at temperatures greater than 250°F (121°C). **DuPont Self-Adhered Flashing Products** are combustible and should be protected from flames and other high heat sources. **DuPont Self-Adhered Flashing 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 1-833-338-7668.

Tyvek® Fluid Applied Products may cause irritation. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons. May cause irritation of respiratory tract. This product is a mixture. Health Hazard information is based on its components. Refer to Safety Data Sheet (SDS) for further information.

KEEP OUT OF REACH OF CHILDREN.

Children can fall in to bucket and drown. Keep children away from bucket with even a small amount of liquid.

Use only as directed. Avoid inhalation of vapor aerosol.

Caution

Obtain special instructions for Tyvek® Fluid Applied Products before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fumes/gas/mist/vapors/ spray. Vapor and aerosols are harmful if using spray application. Use in a wellventilated area. Use NIOSH approved respirator. NIOSH-approved particulate filtering full-face respirator with a P95 particulate filter or half-mask respirator with a P95 particulate filter and splash impact goagles when spraying. NIOSHapproved N95 disposable safety mask with splash impact goggles for manual application such as troweling or rolling, and for clean-up. If vapors are inhaled, immediately move from exposure to fresh air and contact a physician. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ protective clothing/eye protection/face protection. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Immediately call a POISON CENTER/ doctor. If skin irritation or rash occurs: Get medical advice/ attention. Wash contaminated clothing before reuse. Store locked up. Dispose of contents/ container to an approved waste disposal plant. Avoid contact with eyes and skin.

When cured, **Great Stuff Pro™ Window** & Door Polyurethane Foam Sealant is combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information, consult (Material) Safety Data Sheet ((M)SDS), call DuPont at 1-866-583-2583. When air sealing buildings, ensure that combustion appliances, such as furnaces, water heaters, wood burning stoves, gas stoves and gas dryers are properly vented to the outside. See website: http://www.epa.gov/iaq/homes/hip-ventilation.html.

In Canada visit: http://archive.nrc-cnrc.gc.ca/eng/ibp/irc/bsi/83-house-ventilation.html.

Great Stuff Pro™ polyurethane foam sealant and adhesive products contain isocvanate and a flammable blowing agent. Read all instructions and (Material) Safety Data Sheet ((M)SDS), carefully before use. Eliminate all sources of ignition before use. Cover all skin. Wear long sleeves, gloves, and safety glasses or goggles. Not for use in aviation, or food/ beverage contact, or as structural support in marine applications. Provide adequate ventilation or wear proper respiratory protection. Contents under pressure. Not to be used for filling closed cavities or voids such as behind walls and under tub surrounds: this improper use of the product could result in the accumulation of flammable vapors and/or uncured material. Failure to follow the warnings and instructions provided with the product, and/or all applicable rules and regulations, can result in injury or death.

Building and/or construction practices unrelated to building materials could greatly affect moisture and the potential for mold formation. No material supplied by DuPont can give assurance that mold will not develop in any specific system.

Read all instructions and (Material) Safety Data Sheet ((M)SDS) carefully before use.

For more information, visit greatstuffpro.com or building.dupont.com

Hazard Statement

Tyvek® Fluid Applied Products may cause an allergic skin reaction. May cause serious eye damage. May cause genetic defects. May damage fertility or the unborn child. As it relates to California Prop 65, Tyvek® Fluid Applied Products can expose you to substances including Crystalline silica, which is /are known to the State of California to cause cancer. For more information, visit p65Warnings.ca.qov.

For complete warranty information please call 1-833-338-7668 or visit us at building dupont com

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For more information about DuPont Performance Building Solutions, please call 1-833-338-7668 or visit us at <u>building.dupont.com</u>