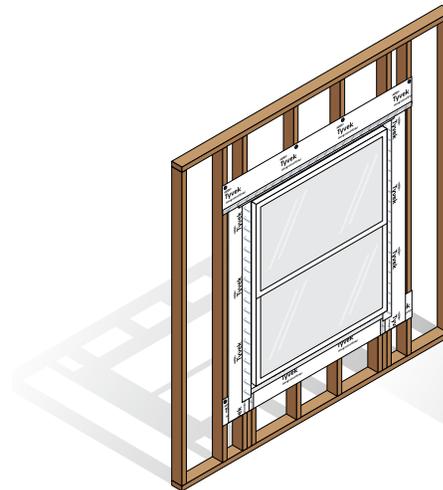


DuPont Self-Adhered Flashing Products Installation Guidelines

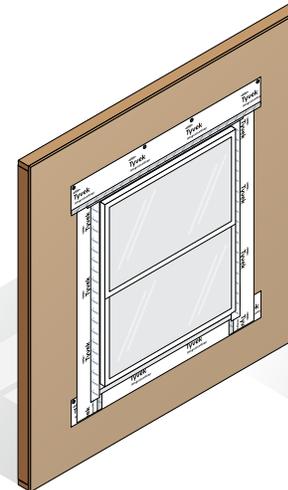
Integral Flanged Windows Installed **BEFORE** the
DuPont™ Tyvek® Water-Resistive and Air Barrier (WRB)
using **DuPont™ Tyvek® IntegrationWrap™**



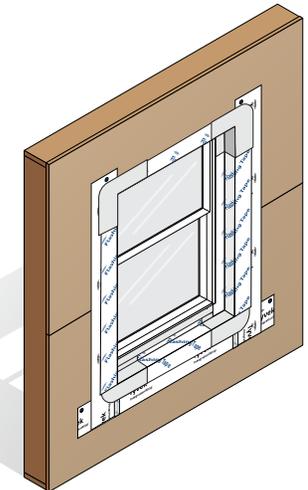
**For Single-Family Residential and
Wood-Framed Multi-Family/Light
Commercial Buildings**



Open Stud Framing



Sheathing Wall Construction

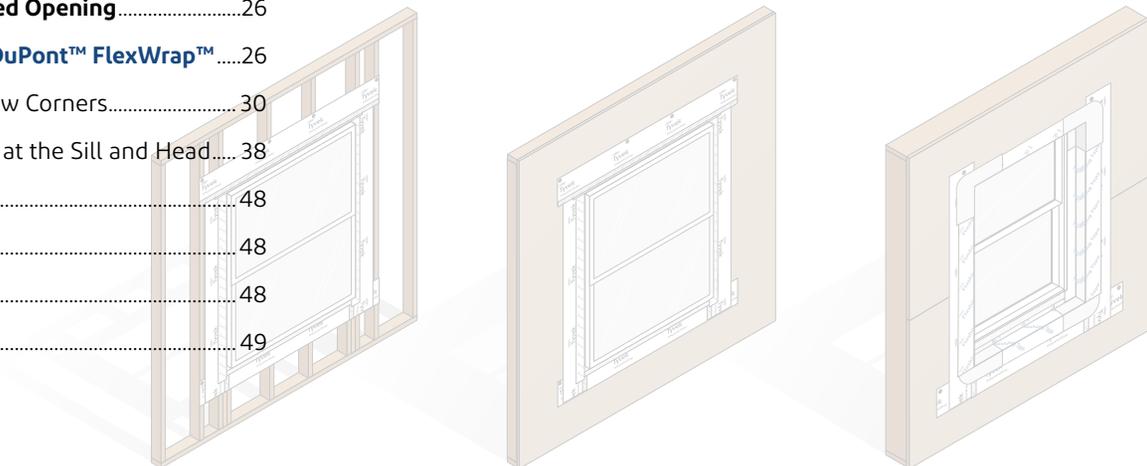


Sheathing Wall Construction
with Shallow (Up to 4")
Recessed Opening

November 2024

Table of Contents

- Introduction..... 3
- Applicable Products..... 3
- Additional Materials Based on Project Requirements, Details, and Specifications4
- Warranty.....4
- Applicable Structures and Performance Criteria..... 5
- Flashing Products Code Requirements.....8
- Water-Resistive Barrier (WRB) Code Requirements.....8
- Additional Codes and Standards Information for DuPont™ Tyvek® Commercial Air and Water Barrier Systems..... 9
- General Instructions..... 9
- Special Considerations..... 9
- Key Installation Requirements for Drainable Window/Door Installation 11
- Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™**
- Integral Flanged Window Installed Over Standard Open Stud Framing12**
- Integral Flanged Window Installed Over Standard Sheathing Wall Construction.... 19**
- Integral Flanged Window with Shallow (Up to 4”) Recessed Opening.....26**
 - Field Preparation of Recessed Window Corners Using DuPont™ FlexWrap™26
 - Method 1: Using DuPont™ FlexWrap™ Recessed Window Corners..... 30
 - Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head..... 38
- Product Composition and UV Stability.....48
- Design Considerations..... 48
- Safety and Handling 48
- For More Information..... 49



Introduction

This Installation Guideline pertains to wood-framed buildings of any height, of Type III and Type V construction, including single-family residential, multi-family, and light commercial buildings. See [Applicable Structures and Performance Criteria](#) for more information regarding building types and building envelope performance.

This Installation Guideline outlines recommended installation techniques and details for integral flanged windows installed **BEFORE** the **DuPont™ Tyvek® Water-Resistive and Air Barriers**, referred to in this document as **DuPont™ Tyvek® WRBs**, using the **DuPont™ Tyvek® IntegrationWrap™** method. **Tyvek® WRBs** meet or exceed the requirements of a water-resistive barrier as defined in the 2024 International Residential Code (IRC) and 2024 International Building Code (IBC).

Always check building.dupont.com for the latest versions of DuPont Installation Guidelines and other product literature.

Applicable Products

Flashing Integration Membrane

Product	Dimensions	Area
DuPont™ Tyvek® IntegrationWrap™	9 in x 300 ft	225 sq ft

Self-Adhered Flashing Products

Product	Width
DuPont™ FlexWrap™	6 in 9 in
DuPont™ Flashing Tape	4 in 6 in 9 in 12 in
DuPont™ StraightFlash™	4 in 9 in

Water-Resistive and Air Barriers (Tyvek® WRBs)

Product	Dimensions	Area
DuPont™ Tyvek® HomeWrap®	3 ft x 100 ft	300 sq ft
	3 ft x 165 ft	495 sq ft
	5 ft x 200 ft	1,000 sq ft
	9 ft x 100 ft	900 sq ft
	9 ft x 150 ft	1,350 sq ft
	10 ft x 100 ft	1,000 sq ft
	10 ft x 150 ft	1,500 sq ft
DuPont™ Tyvek® StuccoWrap®	5 ft x 200 ft	1,000 sq ft
DuPont™ Tyvek® DrainWrap™	9 ft x 125 ft	1,125 sq ft
	10 ft x 125 ft	1,250 sq ft
DuPont™ Tyvek® CommercialWrap®	5 ft x 200 ft	1,000 sq ft
	10 ft x 125 ft	1,250 sq ft
DuPont™ Tyvek® CommercialWrap® D	5 ft x 200 ft	1,000 sq ft
	10 ft x 125 ft	1,250 sq ft

Installation Accessories

Product	Type	Quantity
DuPont™ Tyvek® Tape	2 in Bulk Pack 3 in Bulk Pack	6 rolls/bulk pack
DuPont™ Tyvek® Wrap Cap Staples or other cap staples for Stinger® Cap Stapler	7/8 in, 1¼ in, and 1½ in lengths 3/8 in and 5/8 in lengths	2,000/box 2,016/box
DuPont™ Tyvek® Wrap Cap Nails	1 in electro-galvanized ring shank nail	2,000/box
DuPont™ Tyvek® Wrap Cap Screws	2 in dia. plastic cap, 1-3/4 in screw length	1,000/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
Tower® Residential Sealant¹		
TRUFAST® Walls Grip-Deck® screws with Thermal-Grip FastCap™ washers²		

¹For information regarding installation and performance of Tower® Residential Sealant, refer questions to Tower at 1-866-897-7568.

²For information regarding installation of TRUFAST® Walls fasteners, refer to the *Key Installation Requirements for DuPont™ Tyvek® WRBs* section of the applicable Tyvek® WRB Installation Guideline that can be found at building.dupont.com.



Additional Materials Based on Project Requirements, Details, and Specifications¹

- Backer Rod
- Sealant²
- Adhesive/Primer²
- J-Roller

Warranty

Please refer to the applicable DuPont Performance Building Solutions Warranty:

- [*DuPont Building Envelope Solutions Products 10-Year Limited Warranty for Single-Family Residential Buildings*](#)
- [*DuPont Building Envelope Solutions Products 10-Year Limited Warranty for Wood-Framed Multi-Family and Light Commercial Buildings*](#)

NOTE: In order to make a claim under the DuPont Performance Building Solutions 10-Year Limited Product and Labor Warranty, you must have met all of the terms and conditions of the warranty, 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 outlined in this document must have been followed in order to make a claim under the warranty. It is in the sole discretion of DuPont to determine if full compliance with the Key Installation Requirements exists. Please contact DuPont or a DuPont Representative if you have any questions regarding any DuPont Installation Guideline.

¹Apply 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-compatible sealants and adhesives/primers, see technical bulletin [*Chemical Compatibility of Representative Building Sealants and Adhesives/Primers*](#).

Applicable Structures and Performance Criteria

Applicable Structures

These Installation Guidelines pertain to Single-Family Residential, and Wood-Framed Multi-Family and Light Commercial Buildings as defined below.

DuPont categorizes structures into three primary groups:

- i.) **“Single-Family Residential Buildings”** are defined as fully-detached one or two family structures, as well as townhouse structures not more than three stories above grade plane as defined in the 2024 International Residential Code (IRC) Section R101.2, both to the extent they are exclusively Residential Use building structures.
- ii.) **“Wood-Framed Multi-Family and Light Commercial Buildings”** are defined as the following (must meet **ALL** criteria):
 - a. Constructed of wood-based structural exterior framing of Type III or Type V Construction* (International Building Code (IBC) (Chapter 6)); and
 - b. Does not exceed 2024 IBC max height (Table 504.3) for Type V construction (70 ft.) or Type III construction (85 ft.), including allowances for Automatic Sprinkler height increase (IBC 504.1 and Table 504.4) and ‘podium’ structures outlined in the Special Provisions* (IBC Section 510); and
 - c. Design requirements for the building envelope do not exceed air barrier performance of ASTM E1677 (10.8 psf structural load, 65 mph equivalent wind load), and water infiltration resistance criteria of 6.24 psf (50 mph equivalent wind-driven rain) when tested in accordance with ASTM E331, ASTM E1105, or equivalent.
- iii.) **“Commercial and High-Performance Buildings of Any Height”** can be defined as any of the following:
 - a. Structures constructed of steel-based structural exterior framing and any exterior sheathing, or
 - b. Structures with exterior above grade walls constructed of concrete or concrete masonry units (CMU), or
 - c. Structures of any height and construction type (including any framing type) that are designated as high-performance. “High-performance” is defined as air barrier performance exceeding ASTM E1677 and/or water infiltration resistance criteria exceeding 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent.

*Special Provisions (IBC Section 510) allows for a “horizontal building separation”, or ‘podium’, to be built under the wood-framed Type III or Type V building. The podium is typically constructed of steel framing or concrete. Podium-style buildings are included under “Wood-Framed Multi-Family and Light Commercial Buildings”, as long as all other definition criteria (a. through c. above) are met.

NOTE: “Podium” style structures with wood-framed floors built above steel-framed or concrete/CMU floors are covered under “Wood-Framed Multi-Family and Light Commercial Buildings” unless they are “high-performance”.

Water-Resistive Barrier Performance Requirements

These Installation Guidelines pertain to single family residential, wood-framed multi-family and light commercial buildings with air barrier performance not exceeding ASTM E1677 (10.8 psf structural load, 65 mph equivalent wind load), and water infiltration resistance criteria not exceeding 6.24 psf (50 mph equivalent wind-driven rain) when tested in accordance with ASTM E331, ASTM E1105, or equivalent.

Buildings with high-performance air barrier designs are defined by DuPont as those with air barrier performance equivalent to ASTM E2357 (or other exceeding ASTM E1677), and/or water infiltration resistance criteria greater than 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent.

Allowable Building Height and Number of Stories

Chapter 5 of the 2024 IBC contains information regarding the maximum height and number of stories for buildings of Group R Occupancy Classification (IBC Section 310). Including increased allowances for automatic sprinklers and a “podium” horizontal building separation (Section 510), Group R buildings of Type III or Type V construction can have the following **maximum heights above grade plane**:

Buildings with Group R (Residential) Occupancy Classification

Type of Construction	Maximum Building Height in Feet Per 2024 IBC Table 504.3
VA	70
VB	60
IIIA	85
IIIB	75

For Wood-Framed Multi-Family and Light Commercial Buildings up to 70 feet in height, any DuPont™ Tyvek® WRB can be used. For buildings between 70 and 85 feet in height, DuPont™ Tyvek® CommercialWrap® or DuPont™ Tyvek® CommercialWrap® D must be used on all above grade wood-framed exterior walls, and 3” Tyvek® Tape must be used.

NOTE: In general, **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** are recommended for Wood-Framed Multi-Family and Light Commercial Buildings due to their increased durability and UV exposure limit which can help accommodate longer construction times. See [Product Composition and UV Stability](#) section for more information.

Applicable Structures and Performance Criteria

DuPont Building Envelope Solutions Products Installation Considerations for Single-Family Residential Buildings

These Installation Guidelines should be used for buildings which meet the applicable structures definitions and performance criteria on the previous page. The following table provides a summary of typical installation information.

Installation Considerations	Non-Air Barrier Installations (water details only)	Air Barrier Installations
Tyvek® WRB	DuPont™ Tyvek® HomeWrap®, Tyvek® DrainWrap™, Tyvek® StuccoWrap®, Tyvek® CommercialWrap®, and Tyvek® CommercialWrap® D	
DuPont™ Tyvek® Tape	2" (3" required when using Tyvek® DrainWrap™, Tyvek® StuccoWrap®, or Tyvek® CommercialWrap® D)	
Typical Recommended Fasteners and Spacing¹	1" DuPont™ Tyvek® Wrap Cap Staples or Nails (or equivalent) fastened along stud lines spaced at 6"– 18" vertically	
Tyvek® WRB Top of Wall Termination	Skip-sealing along top of wall using a chemically-compatible sealant² or Tyvek® Tape	Full seal along top of wall using a chemically-compatible sealant² , Tyvek® Tape , or DuPont™ Flashing Tape
Tyvek® WRB Bottom of Wall Termination	Skip-sealing along bottom of wall using a chemically-compatible sealant² or Tyvek® Tape	Full seal along bottom of wall using a chemically-compatible sealant² , Tyvek® Tape , or DuPont™ Flashing Tape
Recommended Window/Door Head Flap Treatment	Skip-sealing along horizontal edge using Tyvek® Tape is acceptable	Full seal along horizontal edge and 45° cuts using Tyvek® Tape

¹For increased holding power and for higher air and water holdout performance, DuPont recommends fasteners of sufficient length to penetrate securely into the stud. Temporary Fastening methods can be used. For more information, refer to the applicable **Tyvek® WRB** Installation Guideline that can be found on building.dupont.com.

²For information regarding chemically-compatible sealants, see technical bulletin [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#).

Applicable Structures and Performance Criteria

DuPont Building Envelope Solutions Products Installation Considerations for Wood-Framed Multi-Family and Light Commercial Buildings

These Installation Guidelines should be used for buildings which meet the applicable structures definitions and performance criteria on the previous page. The following table provides a summary of typical installation information.

Installation Considerations	Total Building Height Above Grade Plane ¹	
	70 Feet and Under	70 – 85 Feet
Performance Criteria	Building air barrier performance not exceeding ASTM E1677, AND WRB and self-adhered flashing water infiltration resistance criteria not exceeding 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent.	
Tyvek® WRB	DuPont™ Tyvek® HomeWrap®, Tyvek® DrainWrap™, Tyvek® StuccoWrap®, Tyvek® CommercialWrap®, and Tyvek® CommercialWrap® D	Tyvek® CommercialWrap®, Tyvek® CommercialWrap® D (required on all above grade wood-framed exterior walls)
DuPont™ Tyvek® Tape	2" (3" required when using Tyvek® DrainWrap™, Tyvek® StuccoWrap®, or Tyvek® CommercialWrap® D)	3"
Typical Recommended Fasteners and Spacing²	1" DuPont™ Tyvek® Wrap Cap Staples or Nails (or equivalent) fastened along stud lines spaced at 6" – 18" vertically	2" DuPont™ Tyvek® Wrap Cap Screws or approved TRUFAST® Walls Fasteners (formerly Rodenhouse) 1" plastic cap fasteners are considered temporary fasteners
Air Barrier Details	Required when the designated building envelope performance requirements are equivalent to ASTM E1677	
Tyvek® WRB Terminations to Sheathing	DuPont Self-Adhered Flashing Products	
Self-Adhered Flashing Patches behind Cladding Fasteners	Required when water infiltration resistance criteria for the building envelope exceeds 0.56 psf (15 mph equivalent wind-driven rain), nominal test pressure per ASTM E1677.	
Recommended Window/Door Head Flap Treatment	DuPont™ Tyvek® Tape or DuPont Self-Adhered Flashing Products	DuPont Self-Adhered Flashing Products Install mechanical fasteners through flashing as needed for increased holding power

¹Height above grade plane based on the approved calculation method as defined in architectural plans/construction documents.

²For increased holding power and for higher air and water holdout performance, DuPont recommends fasteners of sufficient length to penetrate securely into the stud. Temporary Fastening methods can be used. For more information, refer to the applicable **Tyvek® WRB** Installation Guideline that can be found on building.dupont.com.

Flashing Products Code Requirements

The 2024 International Residential Code (Section R703.4 Flashing) requires that “approved corrosion-resistant flashing shall be applied shingle fashion in a manner to prevent entry of water into the wall cavity or penetration of water to the building structural framing components. Self-adhered membrane used as flashing shall comply with **AAMA 711**. Fluid-applied membranes used as flashing in exterior walls shall comply with **AAMA 714**.”

The 2024 International Building Code (Section 1404.4 Flashing) requires that “flashing shall be installed in such a manner so as to prevent moisture from entering the exterior wall or to redirect that moisture to the surface of the exterior wall covering or to a water-resistive barrier complying with Section 1403.2 and that is part of a means of drainage complying with Section 1402.2. Flashing shall be installed at the perimeters of exterior door and window assemblies in accordance with Section 1404.4.1, penetrations and terminations of exterior wall assemblies, exterior wall intersections with roofs, chimneys, porches, decks, balconies and similar projections and at built-in gutters and similar locations where moisture could enter the wall. Flashing with projecting flanges shall be installed on both sides and the ends of copings, under sills and continuously above projecting trim. Where self-adhered membranes are used as flashings of fenestration in wall assemblies, those self-adhered flashings shall comply with **AAMA 711**. Where fluid applied membranes are used as flashing for exterior wall openings, those fluid applied membrane flashings shall comply with **AAMA 714**.”

DuPont Self-Adhered Flashing Products comply with AAMA 711 (an FGIA Specification) *Specification for Self Adhering Flashing Used for Installation of Exterior Wall Fenestration Products*.

Water-Resistive Barrier (WRB) Code Requirements

The 2024 International Residential Code (Section R703.1.1 Water Resistance) requires that “the exterior wall envelope shall be designed and constructed in a manner that prevents the accumulation of water within the wall assembly by providing a water-resistant barrier behind the exterior cladding as required by Section R703.2 and a means of draining to the exterior water that penetrates the exterior cladding.” Section R703.2 (Water-resistive barrier) states that “not fewer than one layer of water-resistive barrier shall be applied over studs or sheathing of all exterior walls with flashing as indicated in Section R703.4, in such a manner as to provide a continuous water-resistive barrier behind the exterior wall veneer and behind deck ledgers. The water-resistive barrier material shall be continuous to the top of walls and terminated at penetrations and building appendages in a manner to meet the requirements of the exterior wall envelope as described in Section R703.1. Where the water resistive barrier also functions as a component of a continuous air barrier, the water-resistive barrier shall be installed as an air barrier in accordance with Section N1102.5.1.1. Water-resistive barrier materials shall comply with one of the following:

1. No. 15 felt complying with ASTM D226, Type 1.
2. ASTM E2556, Type 1 or 2.
3. Foam plastic insulating sheathing water-resistive barrier systems complying with Section R703.1.1 and installed in accordance with the manufacturer's installation instructions.
4. ASTM E331 in accordance with Section 703.1.1.
5. Other approved materials in accordance with the manufacturer's installation instructions.”

The 2024 International Building Code (Section 1402.2 Weather Protection) requires that “buildings shall be provided with a weather-resistant exterior wall assembly. The exterior wall assembly shall include flashing, as described in Section 1404.4.” The exterior wall assembly shall be designed and constructed in such a manner as to prevent the accumulation of water within the exterior wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1403.2, and a means for draining water that enters the assembly to the exterior. Section 1403.2 (Water-resistive barrier) states that “not fewer than one layer of water-resistive barrier material shall be attached to the studs or sheathing, with flashing as described in Section 1404.4 in such a manner as to provide a continuous water-resistive barrier behind the exterior wall veneer. Water-resistive barrier materials shall comply with one of the following:

1. No. 15 felt complying with ASTM D226, Type 1.
2. ASTM E2556, Type I or II.
3. Foam plastic insulating sheathing water-resistive barrier systems complying with Section 1402.2 and installed in accordance with the manufacturer's installation instructions.
4. ASTM E331 in accordance with Section 1402.2.
5. Other approved materials in accordance with the manufacturer's installation instructions.”

The **DuPont™ Tyvek® WRBs** listed below qualify as approved water-resistive barriers based on ICC-ES AC308 Acceptance Criteria according to the associated Evaluation Reports:

- ICC-ES Evaluation Report ESR 2375
 - **DuPont™ Tyvek® HomeWrap®**
 - **DuPont™ Tyvek® StuccoWrap®**
 - **DuPont™ Tyvek® DrainWrap™**
 - **DuPont™ Tyvek® CommercialWrap®**
 - **DuPont™ Tyvek® CommercialWrap® D**

All **DuPont™ Tyvek® WRBs** have been tested to the following standards:

- ASTM E2556 *Type II Standard Specification for Vapor Permeable Flexible Sheet Water-Resistive Barriers Intended for Mechanical Attachment*
- ASTM E1677 *Standard Specification for an Air Retarder (AR) Material or System for Low-Rise Framed Building Walls*
- ASTM E2178 *Standard Test Method for Air Permeance of Building Materials*
- ASTM E96 *Standard Test Methods for Water Vapor Transmission of Materials*
- AATCC 127 *Test Method for Water Resistance: Hydrostatic Pressure*
- ASTM E84 *Standard Test Method for Surface Burning Characteristics of Building Materials*
- ASTM E2273 *Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies*

The application of **DuPont™ Tyvek® WRBs** is governed by the code adopted and enforced by the local jurisdiction. Consult your jurisdiction to assure compliance with the local building code.

Additional Codes and Standards Information for DuPont™ Tyvek® Commercial Air and Water Barrier Systems

DuPont™ Tyvek® CommercialWrap®, Tyvek® CommercialWrap® D, DuPont™ StraightFlash™, and DuPont™ FlexWrap™ were designed for the rigors of heavy commercial construction. These commercial products have been tested to the following standards:

- ABAA Evaluated
- ASTM E2357 *Standard Test Method for Determining Air Leakage of Air Barrier Assemblies*
- ASTM E331 *Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Pressure*
- ASTM E1105 *Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Door, and Curtain Walls, by Uniform or Cyclic Static Air Pressure Difference*
- ASTM E283 *Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen*

- AAMA 501.5 *Test Method for Thermal Cycling of Exterior Walls*
- NFPA 285 *Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components*

Energy Conservation Codes for commercial buildings are being adopted in many regions across the U.S. **DuPont™ Tyvek® Water-Resistive and Air Barriers (WRBs)** currently meet the following codes and guidelines.

- ASHRAE 90.1 Model Energy Code air barrier requirements
- 2024 International Energy Conservation Code® (IECC)
- 2024 International Green Construction Code® (IgCC)

General Instructions

The best time to install **Tyvek® WRBs** is:

- **AFTER** the roof sheathing is installed
- **AFTER** the step flashings and kickout flashings have been installed

DuPont Self-Adhered Flashing Products are not intended for through-wall flashing applications.

Special Considerations

1. These Installation Guidelines, including the allowable use of DuPont Products, are based on building air barrier performance not exceeding ASTM E1677, and **Tyvek® WRBs** and self-adhered flashing water infiltration resistance criteria not exceeding 6.24 psf when tested in accordance with ASTM E331, ASTM E1105, or equivalent.
2. **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.
3. **DuPont Self-Adhered Flashing Products** perform best when installed at temperatures above 25°F (–4°C).
4. 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 a recommended primer.** Do not apply the recommended primer, to exterior continuous insulation due to potential sheathing degradation.
5. Remove all wrinkles and bubbles that may allow for water intrusion by smoothing surface and repositioning as necessary during installation of **DuPont Self-Adhered Flashing Products**. 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.
6. Building envelope design requirements exceeding 0.56 psf (15 mph equivalent wind-driven rain) water infiltration resistance per ASTM E1677 require **DuPont™ StraightFlash™, DuPont™ Flashing Tape** or recommended alternate patches behind fastening plates (brick tie base plates, metal fastening clips, metal channels, etc.). When used behind the cladding fasteners and/or fastening plates, the flashing patch must be adhered to the **Tyvek® WRB**.

7. **DuPont Self-Adhered Flashing Products** are not intended for through-wall flashing applications.
8. When using mechanically fastened through-wall flashing, DuPont recommends sealing top edge with **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™**.
9. 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 3/4" 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.
10. Use **DuPont Self-Adhered Flashing Products** with roll widths sufficient to achieve a minimum of 1" adhesion **BEYOND** where the back of the window or door frame will be located to allow for the creation of the interior perimeter seal.
11. **DO NOT STRETCH FlexWrap™** during the installation process along the length of the sill/head. **FlexWrap™** is only intended to be stretched when covering corners or curved sections.
12. When installing **DuPont™ FlexWrap™ EZ** and **FlexWrap™** on penetrations or other wall conditions, ensure the flashing will not be exposed after completion of cladding.
13. **DuPont Self-Adhered Flashing Products** can be used to bridge non-movement gaps up to 1" unsupported. Flashing must maintain a 2" adhesive lap on the wall substrate.
14. **DO NOT APPLY DuPont™ Tyvek® Tape** or **DuPont Self-Adhered Flashing Products** over **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners however, fasteners can be installed over the flashing.
15. When installing the **DuPont™ Tyvek® WRB**, **DO NOT INSTALL** fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings.
16. **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 1/2", apply using the plastic extension tip for the **Great Stuff™ Dispenser Gun** during installation.
17. For additional wind load resistance, the use of **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** with **Tyvek® Wrap Cap Fasteners**, or recommended fasteners can be installed to secure the head flap of the windows.
18. **DuPont™ Tyvek® Tape** is a seam tape primarily designed to seal **Tyvek® WRB** seams. **Tyvek® Tape** is **NOT** a flashing product, and should not be used in applications where a flashing product is required.
19. Before applying **Tyvek® Tape**, surfaces should be dry and clean. During installation apply firm, even pressure with hand or "J" roller.
20. In lieu of temporarily taping, **Tyvek® WRB** flaps at window head and jambs can be tucked under the installed **Tyvek® WRB**.
21. 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.
22. For window or door openings greater than 6 feet wide, **DuPont™ Flashing Tape** or **StraightFlash™** can be used with **FlexWrap™** in 3-piece sill applications. **DuPont™ Flashing Tape** or **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 **FlexWrap™** sill flashing. When applying the 3-piece flashing detail to the head of the opening, the **DuPont™ Flashing Tape** or **StraightFlash™** head piece should be applied prior to installing the **FlexWrap™** corner flashing. Minimum overlapping of the **FlexWrap™** head flashing and jamb flashing should be a minimum of 6".
23. **DuPont™ Tyvek® DrainWrap™**, **DuPont™ Tyvek® StuccoWrap®**, and **DuPont™ Tyvek® CommercialWrap® D** must be installed with the grooves going up and down.
24. **DuPont™ Tyvek® HomeWrap®** and **DuPont™ Tyvek® CommercialWrap®** provide >90% drainage efficiency, and **Tyvek® DrainWrap™**, **Tyvek® StuccoWrap®**, and **Tyvek® CommercialWrap® D** provide >98% drainage efficiency when tested in accordance with ASTM E2273.
25. No surface preparation is needed for the installation of **Tyvek® WRBs**.
26. **Tyvek® WRBs** 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.
27. DuPont requires **DuPont™ Tyvek® HomeWrap®**, **DuPont™ Tyvek® StuccoWrap®**, and **DuPont™ Tyvek® DrainWrap™** be covered within 4 months (120 days) of installation. DuPont requires **DuPont™ Tyvek® CommercialWrap®** and **DuPont™ Tyvek® CommercialWrap® D** be covered within 9 months (270 days) of installation.
28. DuPont requires that **FlexWrap™**, **FlexWrap™ EZ**, and **StraightFlash™** be covered within 9 months (270 days) of installation. DuPont requires that **DuPont™ Flashing Tape** be covered within four months (120 days) of installation.
29. The maximum in-service temperature for **Tyvek® WRBs** and **DuPont Self-Adhered Flashing Products** is 180°F.
30. Tower® Residential Sealant is designed for use with DuPont products and can be used where a chemically-compatible sealant is shown in this guide. Please see technical bulletin [Chemical Compatibility of Representative Building Sealants and Adhesives/Primers](#) for additional information.
31. For details regarding flashing garage door openings, refer to [Installation Instructions for Garage Doors Installed AFTER the DuPont™ Tyvek® Water-Resistive and Air Barrier \(WRB\) is Installed](#).
32. When applying Tower® Residential Sealant or a [chemically-compatible sealant](#) during window installation, DuPont recommends minimizing or removing excess sealant that may interfere with adhesion of **DuPont Self-Adhered Flashing Products**.

For additional guidance, please call 1-833-338-7668, visit our website at building.dupont.com, or consult your local DuPont Representative.

Key Installation Requirements for Drainable Window/Door Installation

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

- An **integral flanged window/door** is defined as a window/door unit with a nailing fin or flange that is continuous around the perimeter of the window and that is a direct extrusion of the window frame.
- A **non-integral flanged window/door** is defined as a window/door unit that has a nailing fin or flange that is **not continuous** around the perimeter of the entire frame or is **not a direct extrusion of the frame** (e.g. field-applied flanges).
- A **mulled window** is defined as two or more window units joined together by their frames for installation into a single opening.
- When installed properly, **DuPont™ StraightFlash™**, **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.
- 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**. **DuPont Self-Adhered Flashing Products** must be applied with a minimum 2" lap onto the WRB.
- When applying a [chemically-compatible sealant](#) during window installation, DuPont recommends minimizing or removing excess sealant that may interfere with adhesion of **DuPont Self-Adhered Flashing Products**.
- DuPont requires that **FlexWrap™**, **FlexWrap™ EZ**, and **StraightFlash™** be covered within 9 months (270 days) of installation. DuPont requires that **DuPont™ Flashing Tape** be covered within 4 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, bump-outs), 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 **DuPont™ Tyvek® WRBs** visit building.dupont.com.
- Field testing the window/door and wall installation as a complete system is a recommended best practice.
- DuPont recommends DuPont Building Envelope Solutions Products be installed by a DuPont Certified Installer. Contact your local Building Envelope Specialist for more information about the DuPont Certified Installer program.

Sealants and Adhesives/Primers

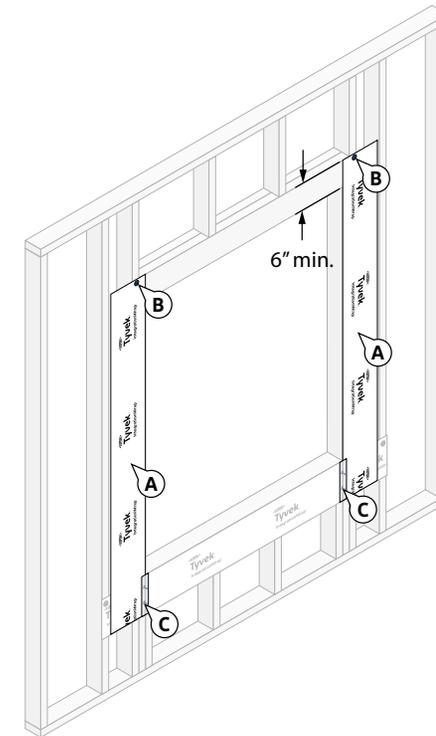
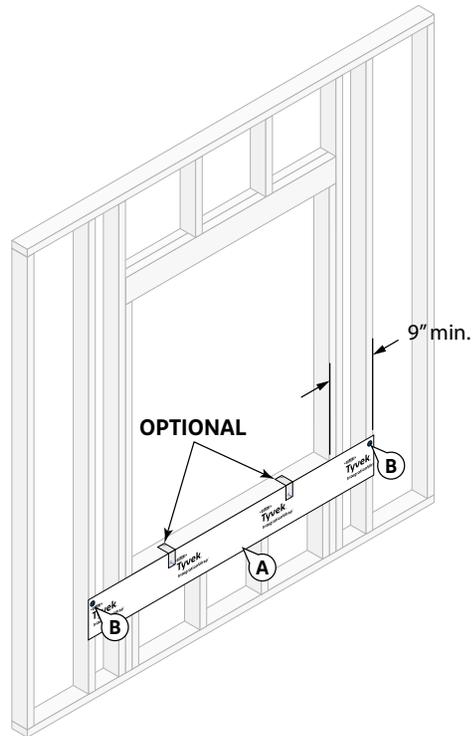
Review the manufacturers' literature or label to confirm that the product(s) used have the chemical and adhesive properties necessary for use with **Tyvek® WRBs** and **DuPont Self-Adhered Flashing Products**. Ensure the sealant materials meet the installation temperature requirements of the sealant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

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Open Stud Framing

This method applies to the following products: DuPont™ Tyvek® IntegrationWrap™, DuPont™ Flashing Tape, DuPont™ StraightFlash™, and DuPont™ FlexWrap™

An integral flanged window is defined as a window unit with a nailing fin or flange that is continuous around the perimeter of the window and that is a direct extrusion of the window frame. The general sequence captured in this installation method for an integral flanged window can also be used for an integral flanged door.

NOTE: Rough opening with open stud framing should be designed to meet structural requirements, construction tolerances and site conditions without the use of exterior sheathing. Install additional framing or blocking as needed to provide a solid backing which can assist with installation of **DuPont Self-Adhered Flashing Products** and **DuPont™ Tyvek® Tape**.



STEP 1

Install Tyvek® IntegrationWrap™ Under Sill

- Cut a piece of **Tyvek® IntegrationWrap™** long enough to extend at least 9" **BEYOND** the sides of the rough opening jambs and, if possible, to the next stud beyond the king stud.
- The top of the **Tyvek® IntegrationWrap™** should be temporarily fastened to the studs and the bottom should be left unsecured so it can overlap the **DuPont™ Tyvek® WRB** which will be installed after the window. If using **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners, avoid fastener placement where **DuPont Self-Adhered Flashing Products** will be installed.

OPTIONAL: To assist with sill flashing installation in [STEP 3](#), small pieces of **DuPont™ Tyvek® Tape** can be used to temporarily secure the **Tyvek® IntegrationWrap™** at the sill.

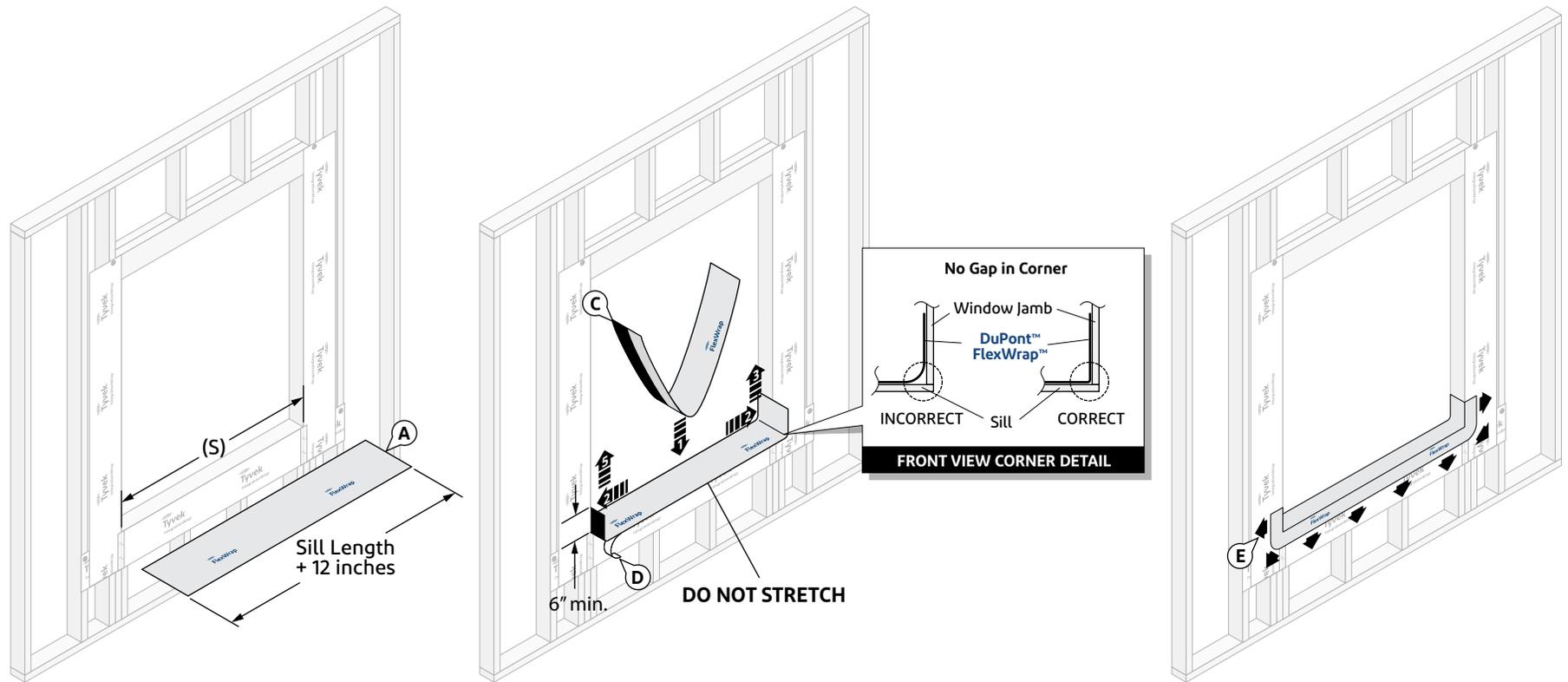
STEP 2

Install Tyvek® IntegrationWrap™ at Jambs

- Cut two pieces of **Tyvek® IntegrationWrap™** long enough to extend from the bottom edge of the sill piece of **Tyvek® IntegrationWrap™** to minimum 6" **ABOVE** the rough opening.
- Secure to the studs. If using **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners, avoid fastener placement where **DuPont Self-Adhered Flashing Products** will be installed.
- Seal inner vertical seams between the jamb pieces and sill piece with **DuPont™ Tyvek® Tape**.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™

Integral Flanged Window Installed Over Standard Open Stud Framing



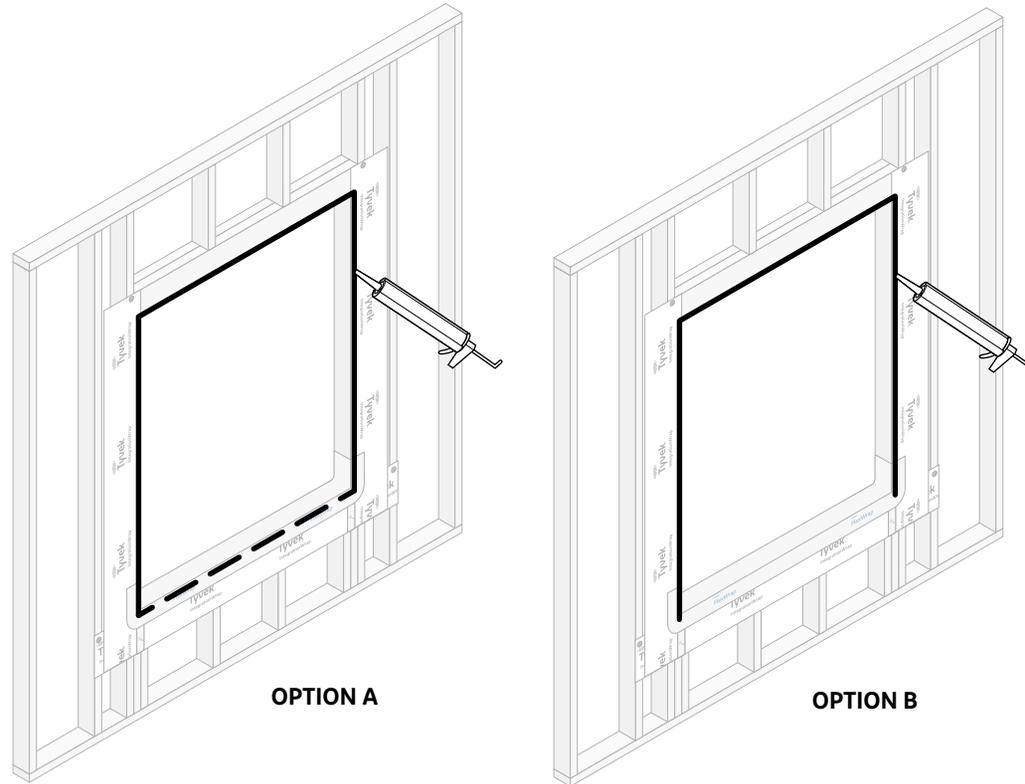
STEP 3

Install DuPont™ FlexWrap™ at Sill

- A. Cut **FlexWrap™** at least 12" **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1" adhesion to the sill framing **BEYOND** where the interior edge of window frame will be located, ensuring 2"– 3" adhesion onto the face of the wall.
- B. Fold the **FlexWrap™** along the perforations between the wide release paper and narrow release paper to help ensure clean removal of the papers. Unfold, and then fold the piece in half along the length to create a crease which will assist with installation in the next step.
- C. 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.
- D. Remove narrow release paper.
- E. Fan out the **FlexWrap™** at the corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Minimize wrinkles during the application by applying firm pressure in direction of the grooves of the **FlexWrap™**, as indicated by the arrows above.

NOTE: DuPont™ Tyvek® Certified Installers may install a 3-piece sill (and head) detail for window openings less than 6 ft. wide. For windows greater than 6 ft. wide, see the [Special Considerations](#) section for more information regarding the 3-piece sill/head detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Open Stud Framing



OPTION A

OPTION B

STEP 4

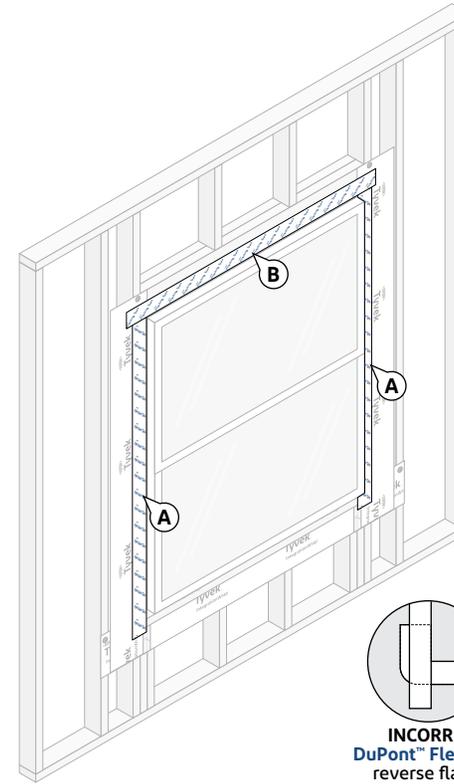
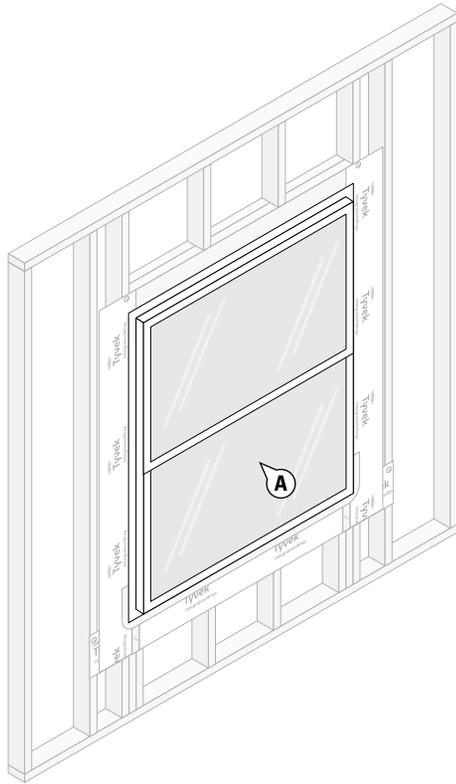
Apply Sealant

OPTION A: Apply a continuous bead of a [chemically-compatible sealant](#) at the window head and jambs to wall or back side of window mounting flange. **To allow for drainage, do not apply continuous sealant bead along sill.** Ensure a minimum 2" wide drainage gap in the sealant bead within 4" from **each corner** of the jamb-sill interface. Continue applying sealant along the sill with additional 2" wide (min.) drainage gaps for every 6"– 12" (on center) of sill width.

OPTION B: Apply a continuous bead of a [chemically-compatible sealant](#) at the window head and jambs to wall or back side of window mounting flange. **To allow for drainage, do not apply sealant bead along sill.**

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™

Integral Flanged Window Installed Over Standard Open Stud Framing



STEP 5

Install Window

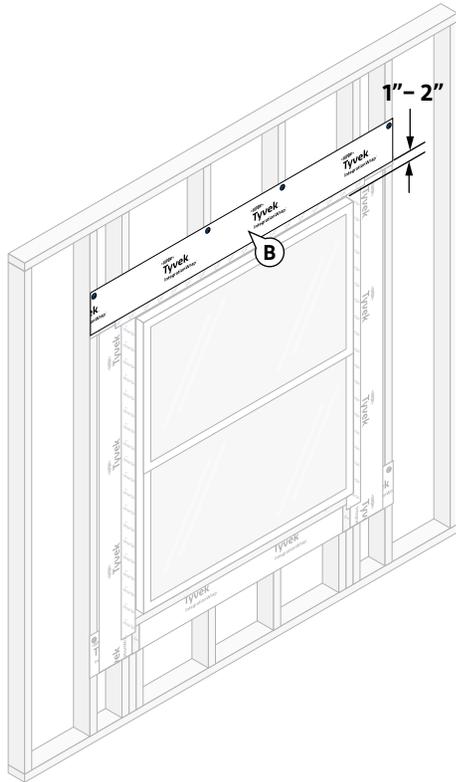
- A. Install window per manufacturer's instructions.

STEP 6

Install DuPont™ Flashing Tape or DuPont™ StraightFlash™ at Jamb and Head

- A. Cut two pieces of **DuPont™ Flashing Tape** or **StraightFlash™** for jamb flashing extending 1" **ABOVE** window head flange and **BELOW** bottom edge of sill flashing. Remove release paper and install completely covering flange, pressing tightly along sides of window frame. Jamb flashing should completely cover sill flashing as indicated in the diagram above.
- B. Cut a piece of **DuPont™ Flashing Tape** or **StraightFlash™** for head flashing long enough to extend **BEYOND** the outer edges of the jamb flashings. Remove release paper and install completely covering flange and adhering to framing members or exposed sheathing above.

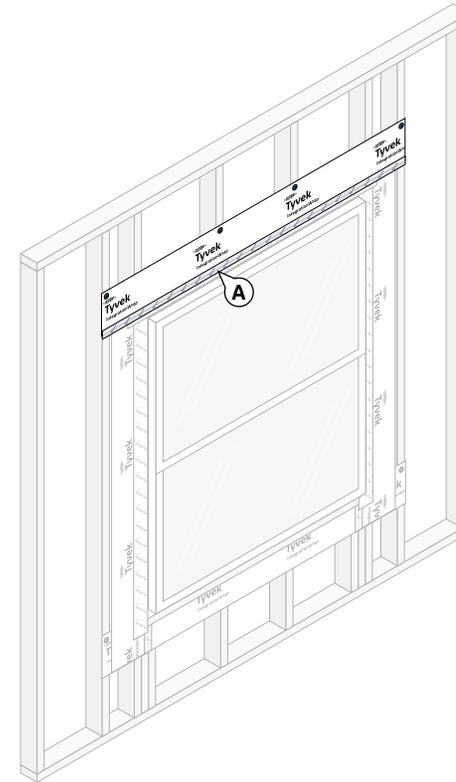
Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Open Stud Framing



STEP 7 – OPTIONAL

Install Tyvek® IntegrationWrap™ at Head

- A. Cut a piece of Tyvek® IntegrationWrap™ long enough to extend at a minimum to the outer edge of each jamb piece of Tyvek® IntegrationWrap™ and, if possible, to the next stud **BEYOND** the king stud.
- B. Install the piece of Tyvek® IntegrationWrap™ so that the bottom edge is 1"– 2" **ABOVE** the bottom edge of the head flashing. This creates space to properly seal the Tyvek® IntegrationWrap™ to the head flashing.



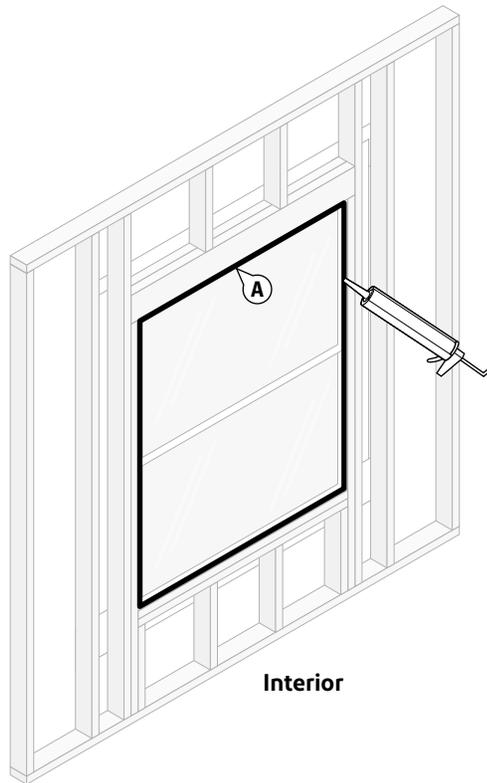
STEP 8 – OPTIONAL

Seal Head Piece of Tyvek® IntegrationWrap™

- A. Seal horizontal seam using DuPont™ Tyvek® Tape or DuPont Self-Adhered Flashing Product.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™

Integral Flanged Window Installed Over Standard Open Stud Framing

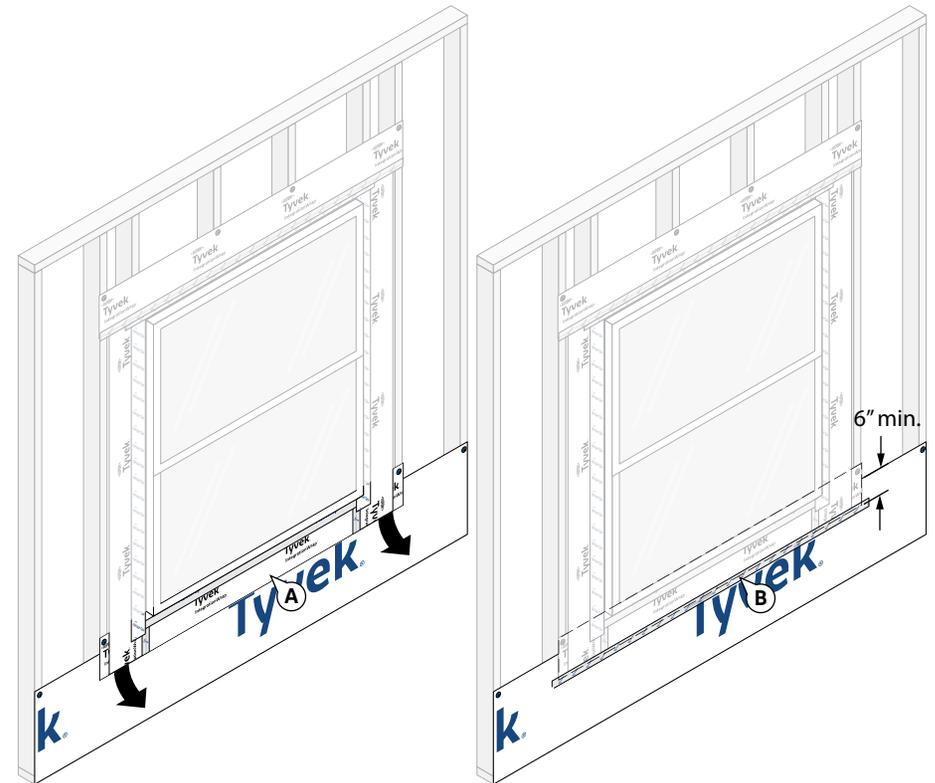


Interior

STEP 9

Interior Perimeter Seal

A. Apply a bead of a *chemically-compatible sealant* (and backer rod as necessary) around the window opening at the interior. Be sure that the sealant penetrates the grooves of the **DuPont™ FlexWrap™** around the sill. 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 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispensing Gun** during installation.



STEP 10

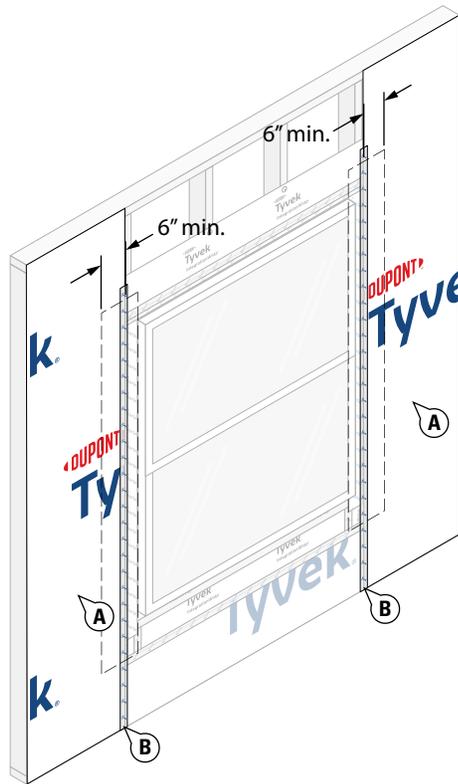
Install Tyvek® WRB Below Window

For STEPS 10 – 12, install the **Tyvek® WRB** with the proper fasteners, fastener spacing, overlaps, etc. as shown in the *DuPont™ Tyvek® WRB Installation Instructions* section in the applicable DuPont Installation Guideline that can be found at building.dupont.com.

OPTIONAL: Follow the **Tyvek® WRB** integration method shown in the *Integral Flanged Window Installed Over Standard Sheathing Wall Construction* section.

- A. Raise sill piece of **Tyvek® IntegrationWrap™** and install first course of **DuPont™ Tyvek® WRB** to extend far enough to overlap the sill plate, weep screed, base of wall flashing, or the **DuPont™ Tyvek® WRB** below. **Tyvek® IntegrationWrap™** must overlap **DuPont™ Tyvek® WRB** a minimum of 6".
- B. For air barrier installations, seal horizontal seam using **DuPont™ Tyvek® Tape**.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Open Stud Framing

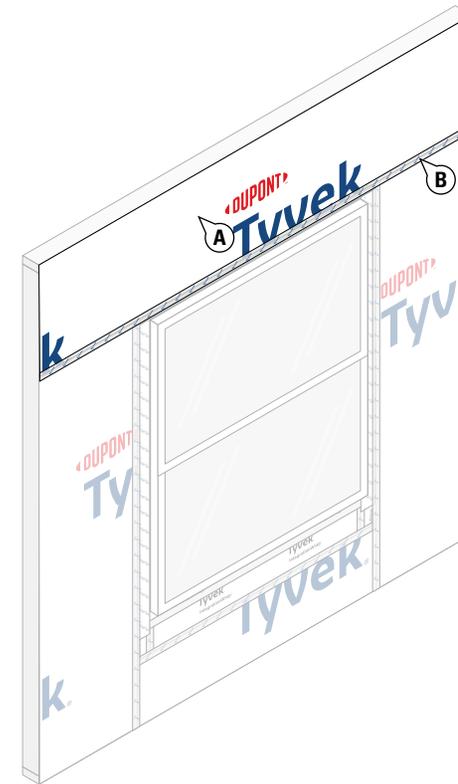


STEP 11

Install Tyvek® WRB at Jambes

- Install **Tyvek® WRB** on both sides of window, with 6" minimum overlap of **Tyvek® IntegrationWrap™**.
- Seal vertical overlaps using **Tyvek® Tape**.

NOTE: For a more robust termination at the window, seal with **DuPont™ Flashing Tape** or **StraightFlash™**. Install mechanical fasteners along stud lines through flashing or to studs in close proximity of the termination as needed for increased holding power; however, do not install fasteners through **Tyvek® Tape**. See the table in the [Applicable Structures and Performance Criteria](#) section for more information on air barrier requirements and head flap terminations.



STEP 12

Install Tyvek® WRB Above Window

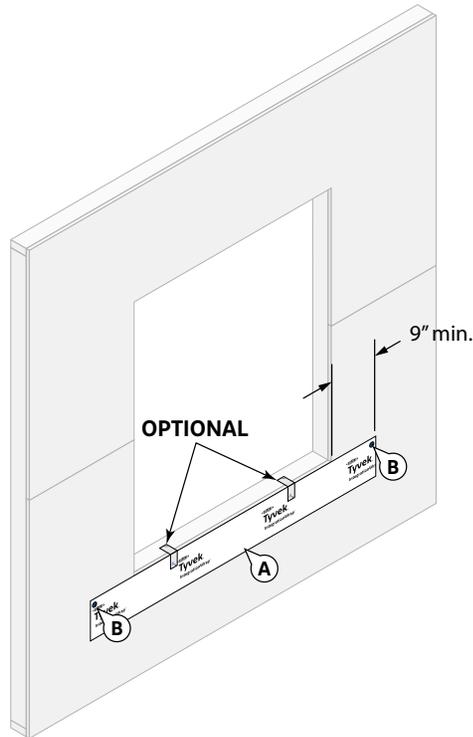
- Install **Tyvek® WRB** above window with the bottom edge aligned 1"– 2" above window frame to allow space to seal to the head flashing in STEP 3B. Maintain a 6" minimum overlap of side pieces of **Tyvek® WRB** that were previously installed.
- Seal horizontal seam using **DuPont™ Tyvek® Tape**.

NOTE: For a more robust termination above the window, seal with **DuPont™ Flashing Tape** or **StraightFlash™**. Install mechanical fasteners along stud lines through flashing or to head framing in close proximity of the termination as needed for increased holding power; however, do not install fasteners through **Tyvek® Tape**. See the table in the [Applicable Structures and Performance Criteria](#) section for more information on air barrier requirements and head flap terminations.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Sheathing Wall Construction

This method applies to the following products: DuPont™ Tyvek® IntegrationWrap™, DuPont™ Flashing Tape, DuPont™ StraightFlash™, DuPont™ VersaFlange™, and DuPont™ FlexWrap™

An integral flanged window is defined as a window unit with a nailing fin or flange that is continuous around the perimeter of the window and that is a direct extrusion of the window frame. The general sequence captured in this installation method for an integral flanged window can also be used for an integral flanged door.

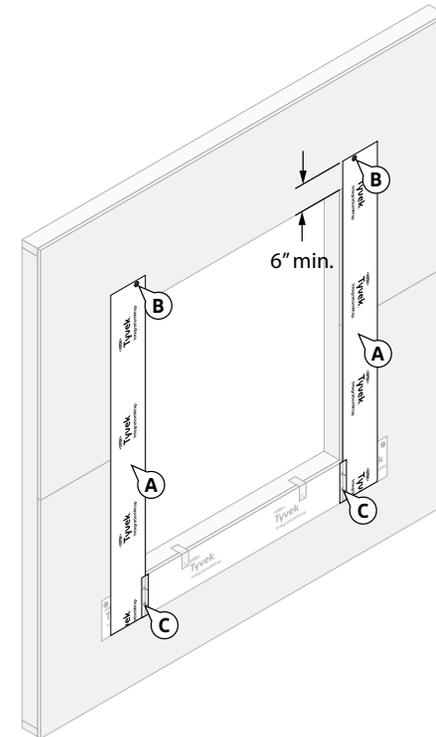


STEP 1

Install Tyvek® IntegrationWrap™ Under Sill

- Cut a piece of **Tyvek® IntegrationWrap™** long enough to extend at least 9" **BEYOND** the sides of the rough opening jambs.
- The top of the **Tyvek® IntegrationWrap™** should be temporarily fastened to the sheathing and the bottom should be left unsecured so it can overlap the **DuPont™ Tyvek® WRB** which will be installed after the window. If using **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners, avoid fastener placement where **DuPont Self-Adhered Flashing Products** will be installed.

OPTIONAL: To assist with sill flashing installation in [STEP 3](#), small pieces of **DuPont™ Tyvek® Tape** can be used to temporarily secure the **Tyvek® IntegrationWrap™** at the sill.

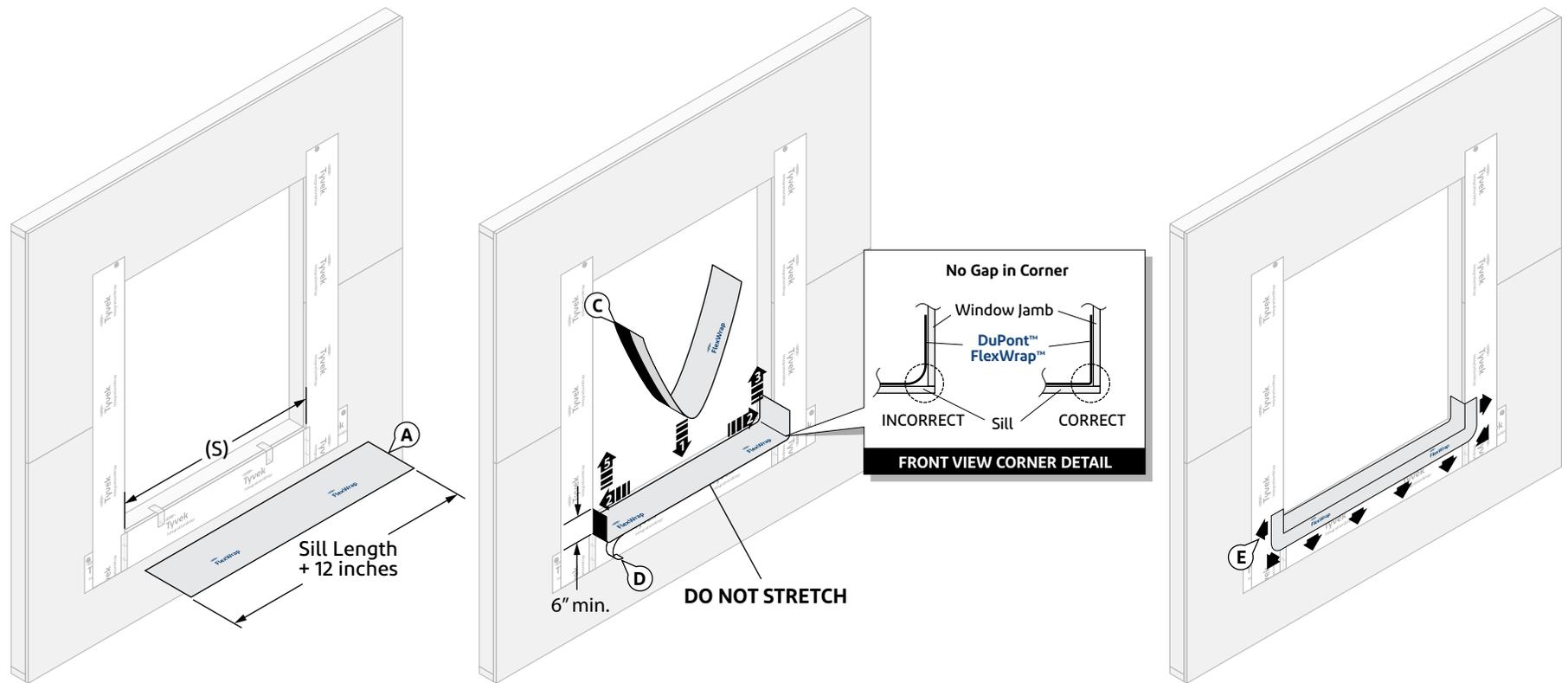


STEP 2

Install Tyvek® IntegrationWrap™ at Jambs

- Cut two pieces of **Tyvek® IntegrationWrap™** long enough to extend from the bottom edge of the sill piece of **Tyvek® IntegrationWrap™** to minimum 6" **ABOVE** the rough opening.
- Secure to the wall. If using **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners, avoid fastener placement where **DuPont Self-Adhered Flashing Products** will be installed.
- Seal inner vertical seams between the jamb pieces and sill piece with **DuPont™ Tyvek® Tape**.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Sheathing Wall Construction



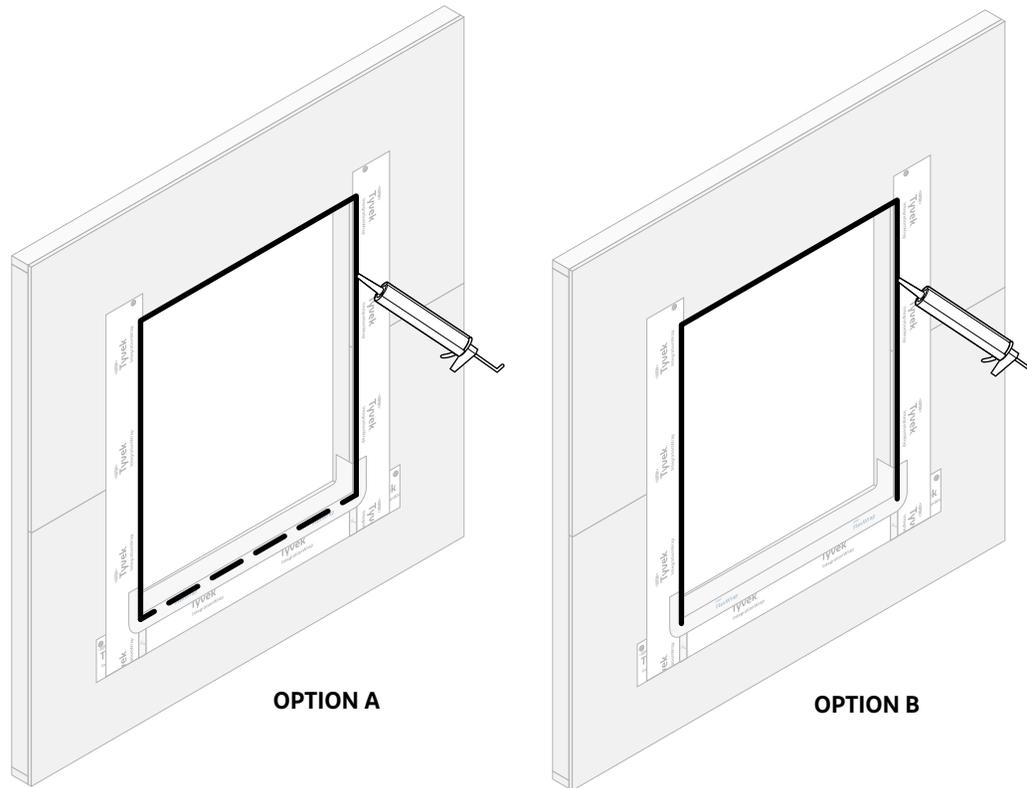
STEP 3

Install DuPont™ FlexWrap™ at Sill

- A. Cut **FlexWrap™** at least 12" **LONGER** than width of rough opening sill (S). Use roll widths sufficient to achieve a minimum of 1" adhesion to the sill framing **BEYOND** where the interior edge of window frame will be located, ensuring 2"– 3" adhesion onto the face of the wall.
- B. Fold the **FlexWrap™** along the perforations between the wide release paper and narrow release paper to help ensure clean removal of the papers. Unfold, and then fold the piece in half along the length to create a crease which will assist with installation in the next step.
- C. 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.
- D. Remove narrow release paper.
- E. Fan out the **FlexWrap™** at the corners and adhere onto face of wall. Continue adhering onto face of wall along sill. Minimize wrinkles during the application by applying firm pressure in direction of the grooves of the **FlexWrap™**, as indicated by the arrows above.

NOTE: DuPont™ Tyvek® Certified Installers may install a 3-piece sill (and head) detail for window openings less than 6 ft. wide. For windows greater than 6 ft. wide, see the [Special Considerations](#) section for more information regarding the 3-piece sill/head detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Sheathing Wall Construction



STEP 4

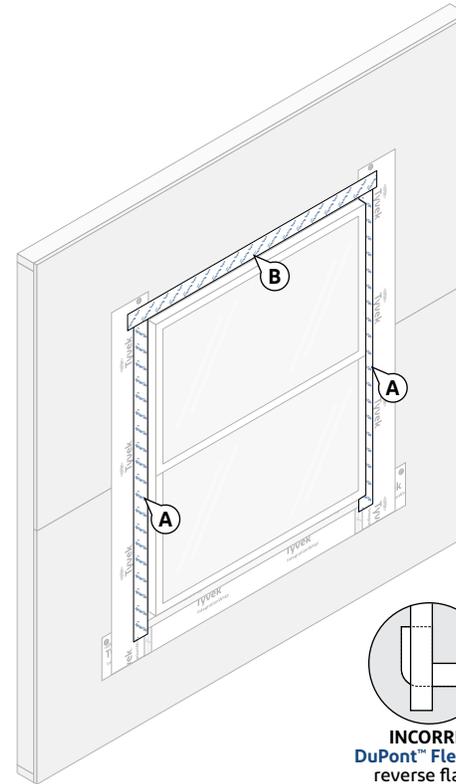
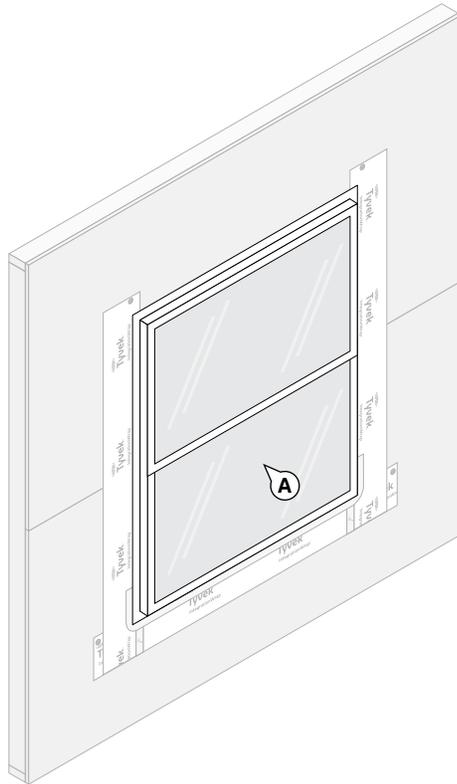
Apply Sealant

OPTION A: Apply a continuous bead of a [chemically-compatible sealant](#) at the window head and jambs to wall or back side of window mounting flange. **To allow for drainage, do not apply continuous sealant bead along sill.** Ensure a minimum 2" wide drainage gap in the sealant bead within 4" from **each corner** of the jamb-sill interface. Continue applying sealant along the sill with additional 2" wide (min.) drainage gaps for every 6"– 12" (on center) of sill width.

OPTION B: Apply a continuous bead of a [chemically-compatible sealant](#) at the window head and jambs to wall or back side of window mounting flange. **To allow for drainage, do not apply sealant bead along sill.**

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™

Integral Flanged Window Installed Over Standard Sheathing Wall Construction



STEP 5

Install Window

- A. Install window per manufacturer's instructions.

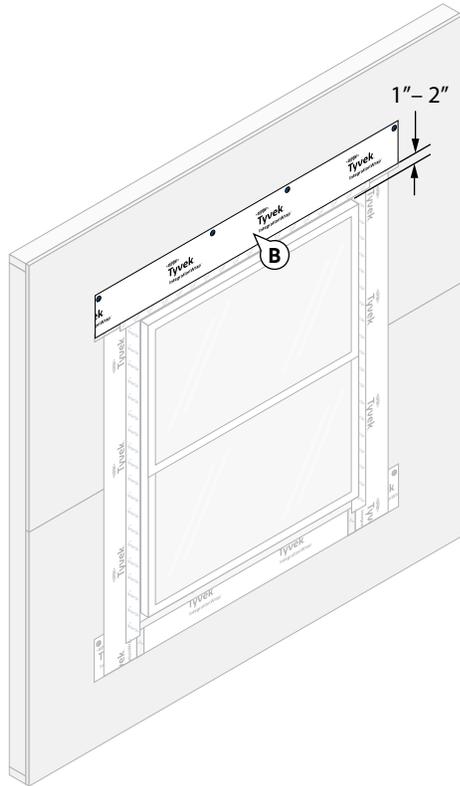
STEP 6

Install DuPont™ Flashing Tape or DuPont™ StraightFlash™ at Jambs and Head

- A. Cut two pieces of **DuPont™ Flashing Tape** or **StraightFlash™** for jamb flashing extending **1" ABOVE** window head flange and **BELOW** bottom edge of sill flashing. Remove release paper and install completely covering flange, pressing tightly along sides of window frame. Jamb flashing should completely cover sill flashing as indicated in the diagram above.
- B. Cut a piece of **DuPont™ Flashing Tape** or **StraightFlash™** for head flashing long enough to extend **BEYOND** the outer edges of the jamb flashings. Remove release paper and install completely covering flange and exposed sheathing above.

NOTE: For exterior gypsum sheathing, apply a chemically-compatible adhesive/primer to the exposed sheathing. An adhesive/primer is not required for wood-based sheathing, except when applying flashing during adverse weather conditions.

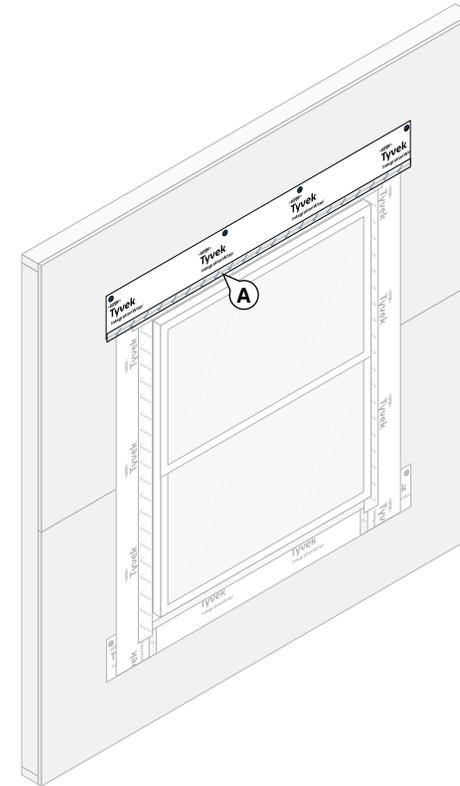
Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Sheathing Wall Construction



STEP 7 – OPTIONAL

Install Tyvek® IntegrationWrap™ at Head

- Cut a piece of Tyvek® IntegrationWrap™ long enough to extend at a minimum to the outer edge of each jamb piece of Tyvek® IntegrationWrap™.
- Install the piece of Tyvek® IntegrationWrap™ so that the bottom edge is 1"– 2" **ABOVE** the bottom edge of the head flashing. This creates space to properly seal the Tyvek® IntegrationWrap™ to the head flashing.

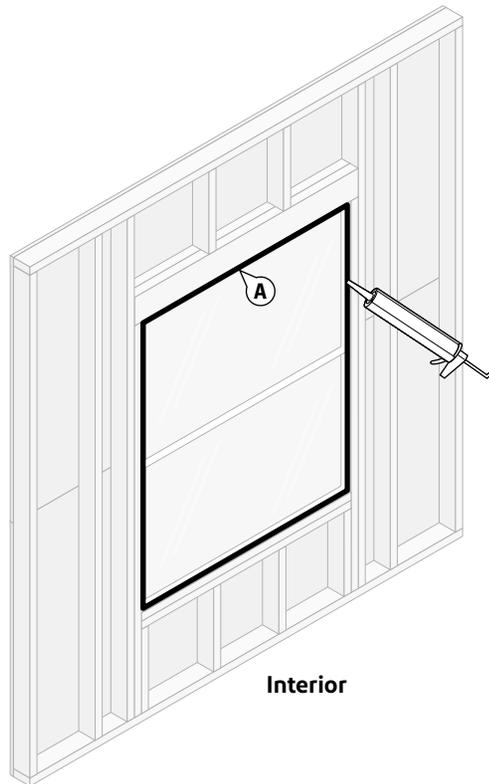


STEP 8 – OPTIONAL

Seal Head Piece of Tyvek® IntegrationWrap™

- Seal horizontal seam using DuPont™ Tyvek® Tape or DuPont Self-Adhered Flashing Product.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Sheathing Wall Construction

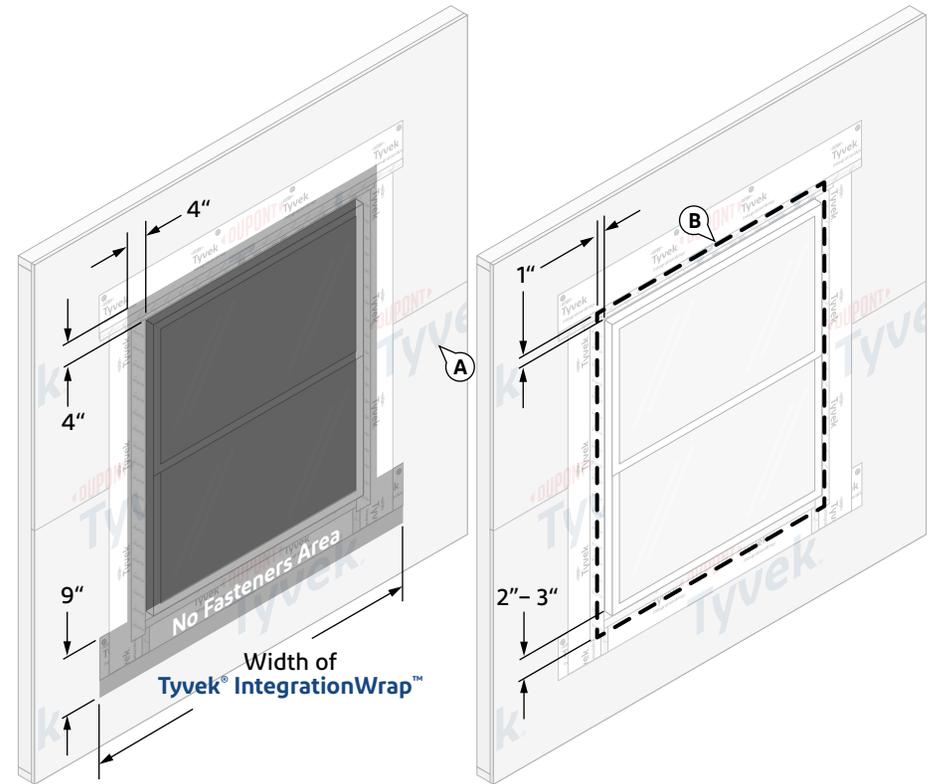


Interior

STEP 9

Interior Perimeter Seal

- A. Apply a bead of a *chemically-compatible sealant* (and backer rod as necessary) around the window opening at the interior. Be sure that the sealant penetrates the grooves of the **DuPont™ FlexWrap™** around the sill. 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 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispensing Gun** during installation.



STEP 10

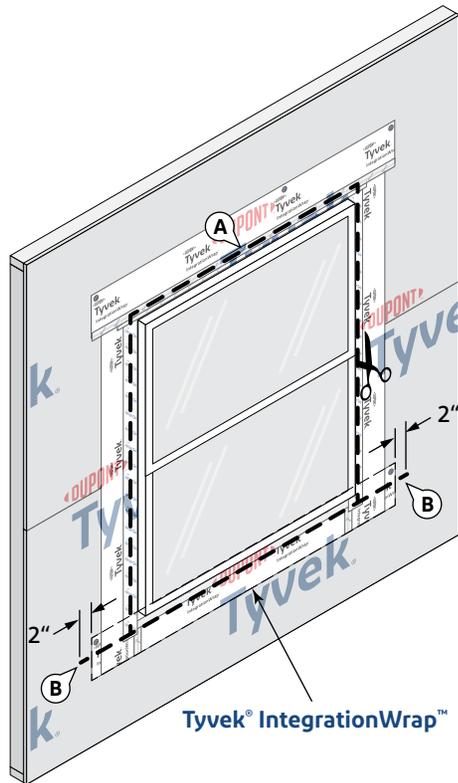
Install and Integrate the Tyvek® WRB

For STEPS 10 – 12, install the **Tyvek® WRB** with the proper fasteners, fastener spacing, overlaps, etc. as shown in the *DuPont™ Tyvek® WRB Installation Instructions* section in the applicable DuPont Installation Guideline that can be found at building.dupont.com.

OPTIONAL: Follow the **Tyvek® WRB** integration method shown in the *Integral Flanged Window Installed Over Standard Open Stud Framing* section.

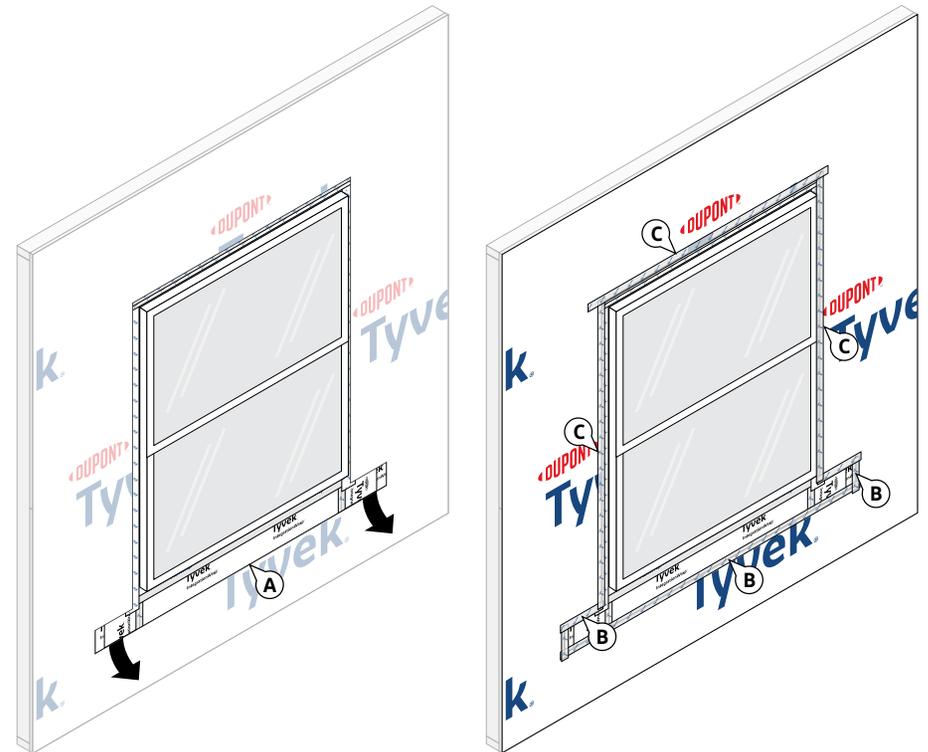
- A. Install the **Tyvek® WRB** as shown in the applicable **Tyvek® WRB** Installation Guideline that can be found at building.dupont.com. Do not install fasteners within 4" of the window frame at jambs and head and within 9" of the window frame at sill. Do not fasten through the **Tyvek® IntegrationWrap™**.
- B. Mark a perimeter on the **Tyvek® WRB** around the rough opening a minimum of 1" from the jambs and head of the window frame, and 2"– 3" below the sill of the window frame.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window Installed Over Standard Sheathing Wall Construction



STEP 11

- Cut the **Tyvek® WRB** along perimeter marking to expose window. Do not cut through the **DuPont Self-Adhered Flashing Products** or **Tyvek® IntegrationWrap™** underneath.
- Create horizontal slits in the **Tyvek® WRB** at each lower corner of the perimeter cut that extend 1"– 2" **BEYOND** the **Tyvek® IntegrationWrap™**.



STEP 12

Final Step

- Bring the bottom portion of the **Tyvek® IntegrationWrap™** through the sill perimeter cut and horizontal slits so it laps over the top layer of **Tyvek® WRB**.
- Working from bottom to top, install **DuPont™ Tyvek® Tape** to secure horizontal and vertical seams of the **Tyvek® IntegrationWrap™**.
- Install **Tyvek® Tape** along jambs and head to seal **Tyvek® WRB** around window. For a more robust termination, **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** can be used.

NOTE: When installing **Tyvek® Tape**, a solid backing is recommended to help ensure wrinkles or "fish mouths" are not created during application.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Field Preparation of Recessed Window Corners Using DuPont™ FlexWrap™



STEP 1. **Cut Four 12" Pieces of FlexWrap™ Per Window.**



STEP 2. **Create Horizontal CREASE A.** Fold FlexWrap™ at release paper to break perforations and create crease.

NOTE: The narrow release paper will be used to guide corner fold in Step 5.



STEP 3. **Create Vertical CREASE B.** Fold FlexWrap™ in half, lengthwise, and create sharp crease at the fold.

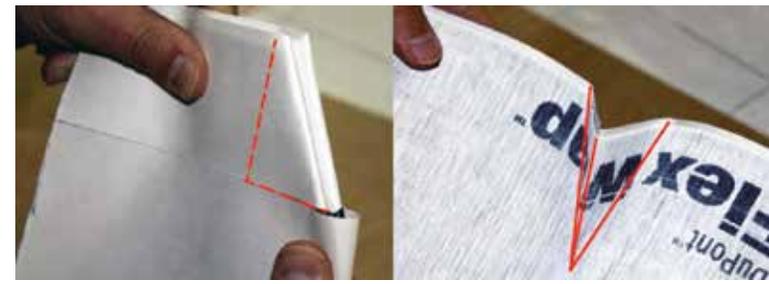


STEP 4. **Set Corner Fold Width.** Place index finger on the top side of the FlexWrap™ at the intersection of CREASE A and CREASE B.

NOTE: This will put pressure on the opposite side of release paper at the crease, and set the corner fold width.



STEP 5. **Create Corner Fold.** On the reverse side of the FlexWrap™, starting at the intersection of CREASE A and CREASE B, fold along CREASE B going out towards edge of narrow release paper.

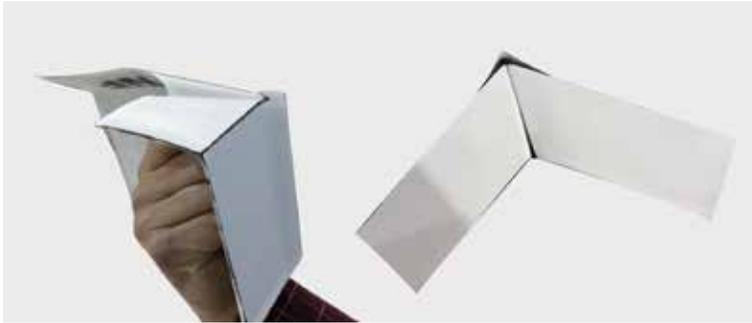


STEP 6. **Crease Center Fold.** Press firmly to create sharp crease in center and edges of fold. Sharp creases are necessary so the folds remain in the top sheet of the FlexWrap™ after release paper is removed.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™

Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Field Preparation of Recessed Window Corners Using DuPont™ FlexWrap™



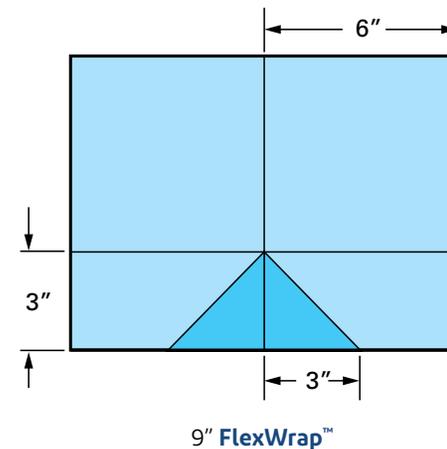
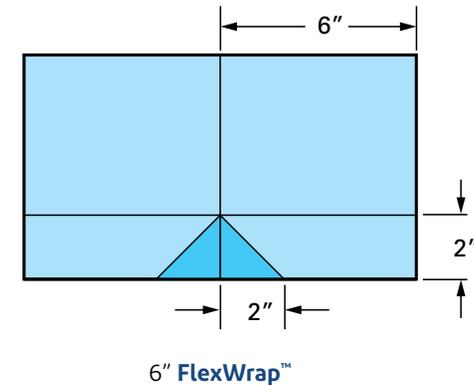
NOTE: Center crease should be sharp enough to assist in creating a ~90° fold between the two release papers at a right angle with vertical crease (Crease B), as shown below:



STEP 1. Form Recessed Window Corner. Remove narrow-width release paper and, using the creases made in Step 6, carefully press together the exposed butyl within the corner fold to create a recessed window corner. Repeat with the 3 remaining 12"-long pieces of FlexWrap™.

Alternative Method: Use the guide on [page 28](#) of this document to create a reusable template using a piece of hard/rigid plastic. Once created, the template can be used to aid in removal of the release paper from the corner section only as indicated below. The template will be placed over the 12"-long piece of FlexWrap™ (release paper facing up) and aligned according to the applicable marks on the template. The release paper can then be torn along the edge of the template to expose the butyl. Alternatively, the template can be used to mark the release paper for removal. In this case a straight edge can be used to assist in tearing the release paper. **DO NOT CUT the release paper with a knife or other sharp object** as this could result in damage to the butyl and compromise protection provided by the FlexWrap™ recessed window corners.

Once the release paper is removed to create a triangular area of expose butyl, fold the FlexWrap™ according to [STEP 6](#) to create the 90° corner and press exposed butyl together. Once the remaining narrow release paper is removed, the recessed window corner is ready to install.



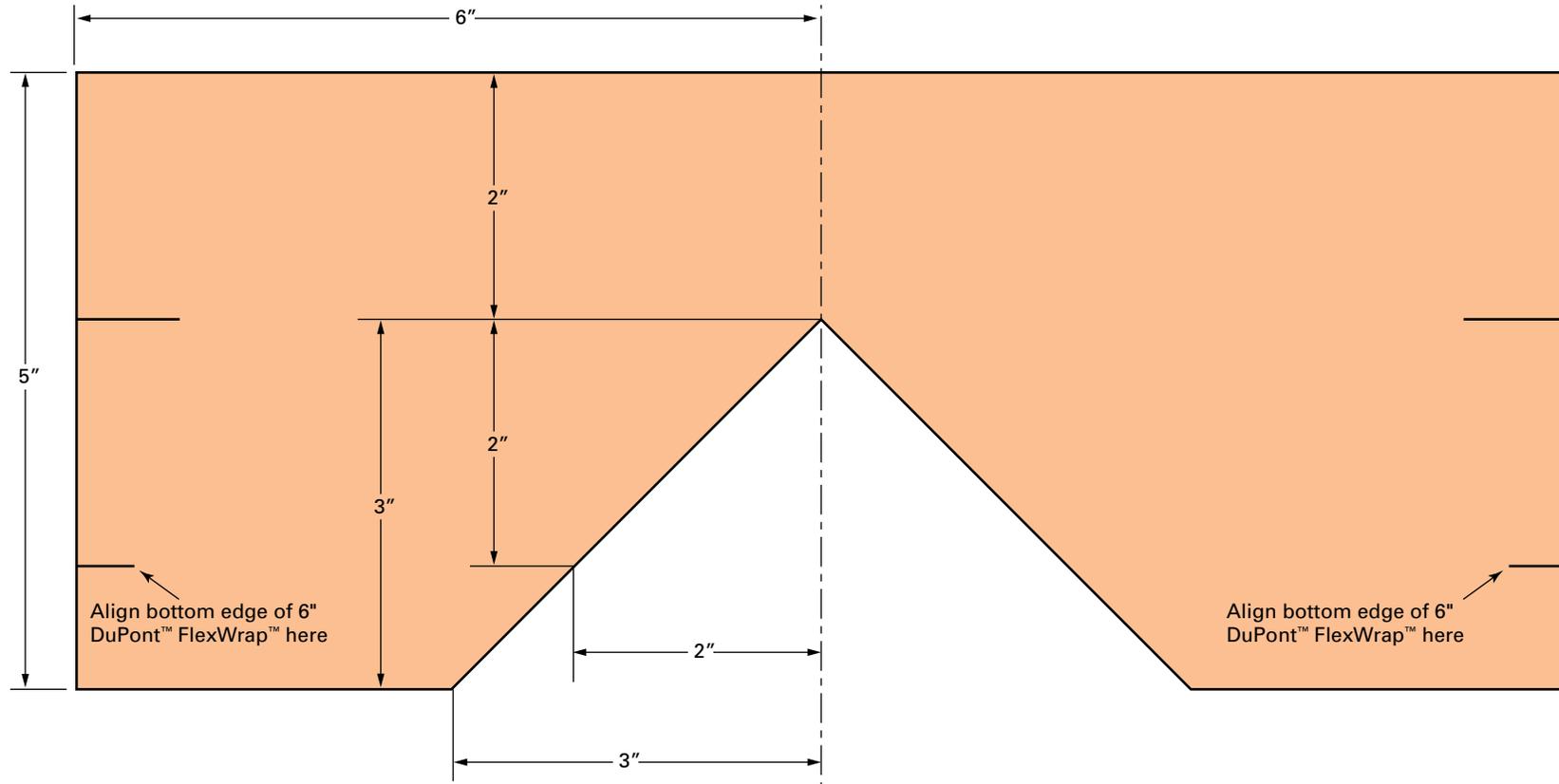
Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™

Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Field Preparation of Recessed Window Corners Using DuPont™ FlexWrap™

Corner Release Paper Removal Guide for Alternative Method Described on [Page 27](#)

When [Fabricating Recessed Window Corners](#), use the following guide to create a template to aid in removal of the release paper from the corner section only. This will assist in creating the 90° fold between the two release papers.



Align the bottom edge of 6" **FlexWrap™** with the the 2" marks (for up to 2" recess). Align the bottom edge of 9" **FlexWrap™** with the lower edge of the template (for recesses greater than 2").

For best results, create a reusable template using a piece of heavy/rigid plastic. The template can also be used as a guide when tearing the release paper. Otherwise, use the template to mark the release paper and then use a metal straight edge to assist in

tearing the release paper. **DO NOT CUT the release paper with a knife or other sharp object** as this could result in damage to the butyl and compromise protection provided by the **FlexWrap™** recessed window corners.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™

Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Field Preparation of Recessed Window Corners Using DuPont™ FlexWrap™

The method illustrated below uses a 12"-long piece of FlexWrap™ to fabricate a recessed window corner.

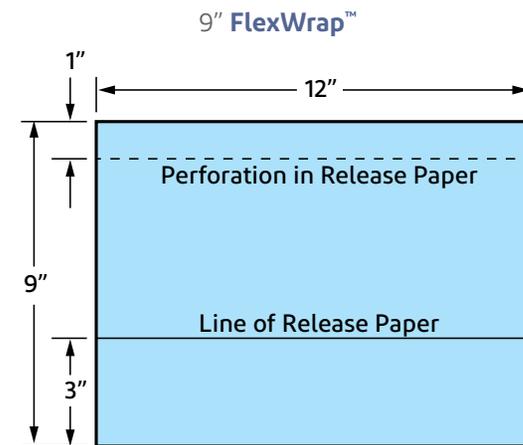
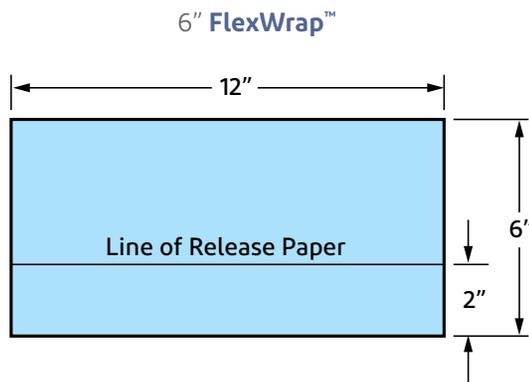
Single Stud Framing

The pictures below show the 6" FlexWrap™ recessed window corner installed on a single stud window. Note that the FlexWrap™ recessed window corner extending slightly beyond the face of the stud (left) can be fully adhered into framing (right). See [STEP 4](#) for additional information.



Double Stud Framing

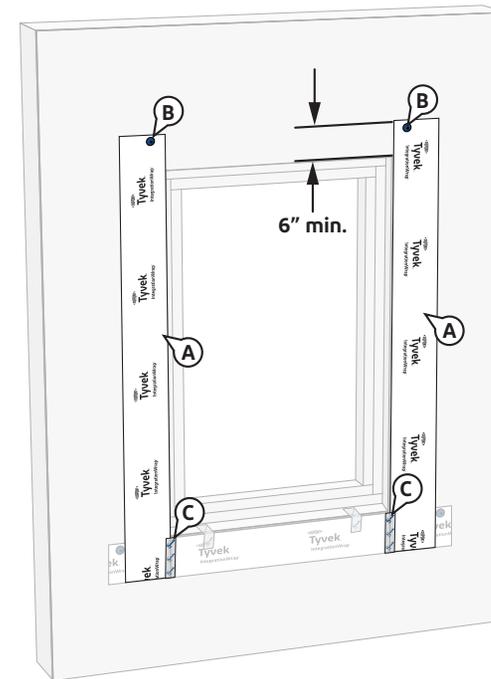
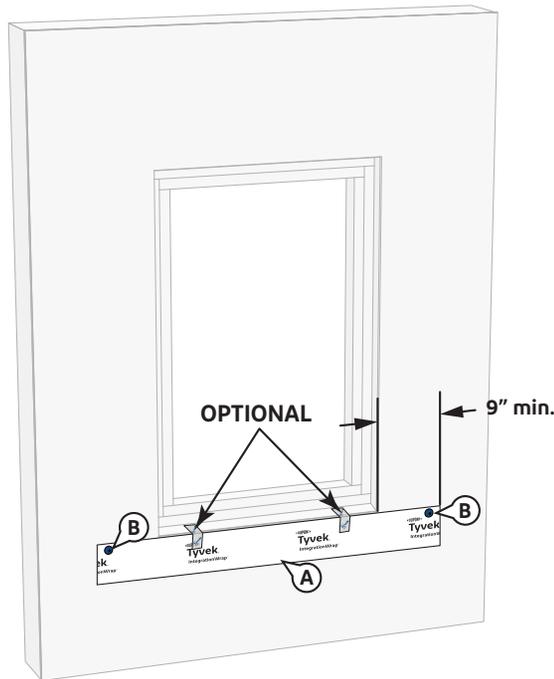
The pictures below show the fabricated recessed window corner for a recess that is up to 2" deep with double stud window framing using 6" FlexWrap™ (left) and a recess that is 4" deep with double stud window framing using 9" FlexWrap™ (right).



Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 1: Using DuPont™ FlexWrap™ Recessed Window Corners

This method applies to the following products: DuPont™ Flashing Tape, DuPont™ StraightFlash™, and DuPont™ FlexWrap™



STEP 1

Install Tyvek® IntegrationWrap™ Under Sill

- Cut a piece of **Tyvek® IntegrationWrap™** long enough to extend at least 9" **BEYOND** the sides of the rough opening jambs.
- The top of the **Tyvek® IntegrationWrap™** should be temporarily fastened to the sheathing and the bottom should be left unsecured so it can overlap the **Tyvek® WRB** which will be installed after the window. If using **DuPont™ Tyvek® Wrap Cap Fasteners**, or recommended fasteners, avoid fastener placement where **DuPont Self-Adhered Flashing Products** will be installed

OPTIONAL: To assist with sill flashing installation, small pieces of **DuPont™ Tyvek® Tape** can be used to temporarily secure the **Tyvek® IntegrationWrap™** at the sill.

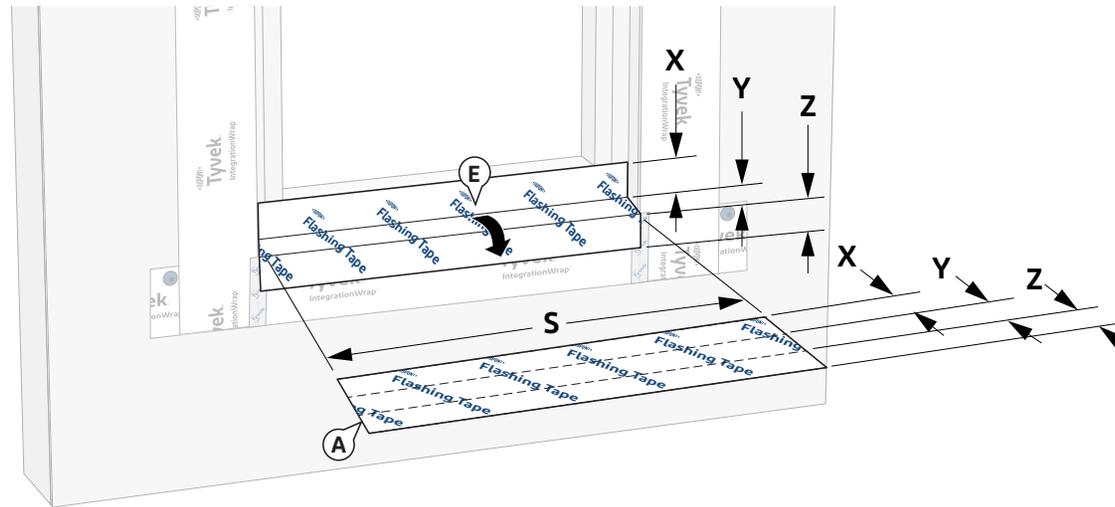
STEP 2

Install Tyvek® IntegrationWrap™ at Jamb

- Cut two pieces of **Tyvek® IntegrationWrap™** long enough to extend from the bottom edge of the sill piece of **Tyvek® IntegrationWrap™** to minimum 6" **ABOVE** the rough opening.
- Secure to the wall. If using **Tyvek® Wrap Cap Fasteners**, or recommended fasteners, avoid fastener placement where **DuPont Self-Adhered Flashing Products** will be installed.
- Seal inner vertical seams between the jamb pieces and sill piece with **Tyvek® Tape**.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 1: Using DuPont™ FlexWrap™ Recessed Window Corners



STEP 3

Install DuPont™ Flashing Tape or DuPont™ StraightFlash™ at Sill

A. Cut the **DuPont™ Flashing Tape** or **StraightFlash™** the length of the outer sill (S). Refer to Table 1 below to determine which width of flashing to use.

Table 1: Sill/Head Flashing for Shallow Recessed Flanged Window Condition

	X	Y	Z
6" DuPont™ Flashing Tape (single stud)	1.5"	2"	2.5"
9" DuPont™ Flashing Tape * (double stud)	3"	3"	3"
9" DuPont™ Flashing Tape * (double stud)	3"	4"	2"

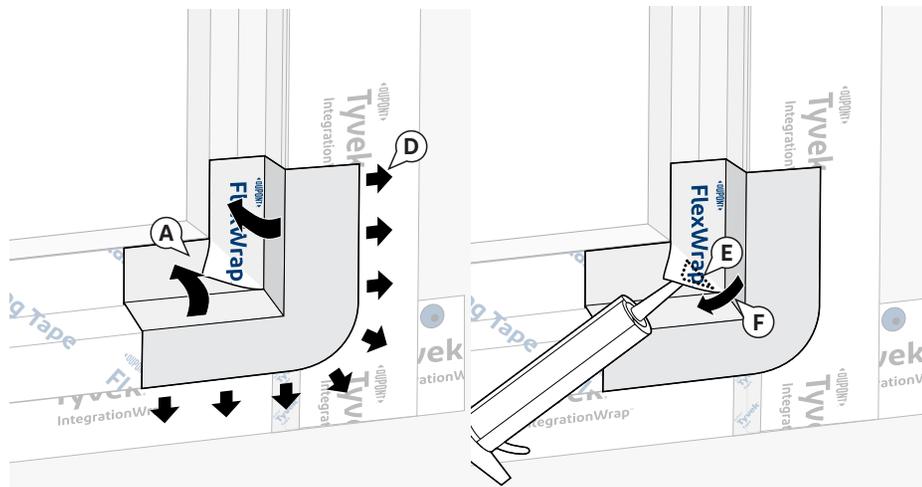
* or 9" **DuPont™ StraightFlash™**

B. Fold the **DuPont™ Flashing Tape** or **StraightFlash™** lengthwise using the measurements (X, Y, and Z) shown in Table 1, creating sharp creases to help achieve sharp corners when release paper is removed.

- C. Remove the center piece of release paper by carefully tearing along the creases. Do not cut release paper with sharp object as this could result in damage to butyl and compromise protection provided by the **DuPont™ Flashing Tape** or **StraightFlash™**.
- D. Adhere exposed butyl to sill.
- E. Unfold unadhered flashing, remove remaining pieces of release paper and adhere butyl adhesive onto the face of the recessed window frame and onto the **Tyvek® IntegrationWrap™**.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 1: Using DuPont™ FlexWrap™ Recessed Window Corners



STEP 4

Install DuPont™ FlexWrap™ Recessed Window Corner at Sill

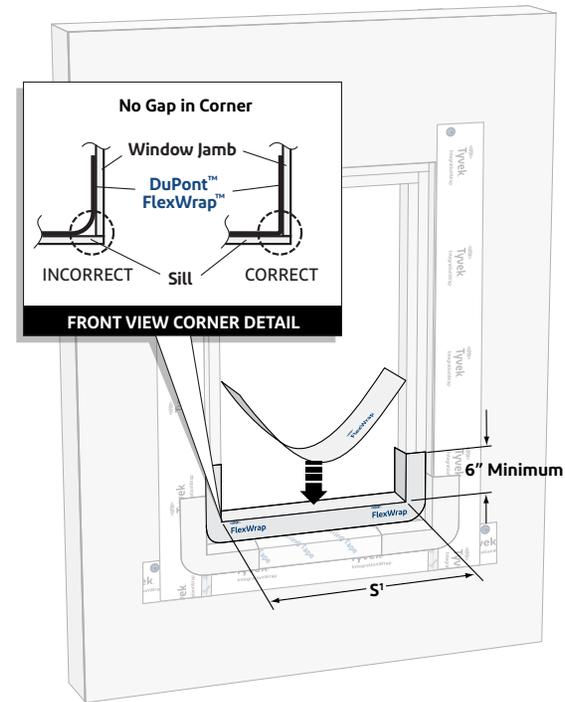
- A. Place **FlexWrap™** recessed window corner into corner of recess so exposed butyl is against face of recessed window frame and adhere. Refer to Table 2 below to determine which width of **FlexWrap™** to use.

Table 2: FlexWrap™ Recessed Window Corner Measurements

	X	Y	Z
6" DuPont™ FlexWrap™ (single stud)	2"	2"	2"
9" DuPont™ FlexWrap™ (double stud)	3"	3"	3"
9" DuPont™ FlexWrap™ (double stud)	3"	4"	2"

NOTE: For double stud window frames, the **FlexWrap™** recessed window corner should extend a minimum of 2" onto the face of the recessed stud frame and cover the seams between the studs. For single stud window frames, the **FlexWrap™** recessed window corner extending slightly beyond the face of the stud can be fully adhered into framing.

- B. Remove remaining release paper.
- C. Adhere exposed butyl to sill and jamb surfaces of recess.
- D. Fan **FlexWrap™** at bottom corners onto the **Tyvek® IntegrationWrap™** frame on face of wall. Coverage of **FlexWrap™** should be 2" to 3" onto the face of the wall.
- E. **OPTIONAL:** Apply a bead of a [chemically-compatible sealant](#) inside the corner flap behind the loose triangular flap of the corner piece. Press the loose triangular flap onto the sealant in the corner piece.
- F. Repeat Steps A – E for opposite corner.



STEP 5

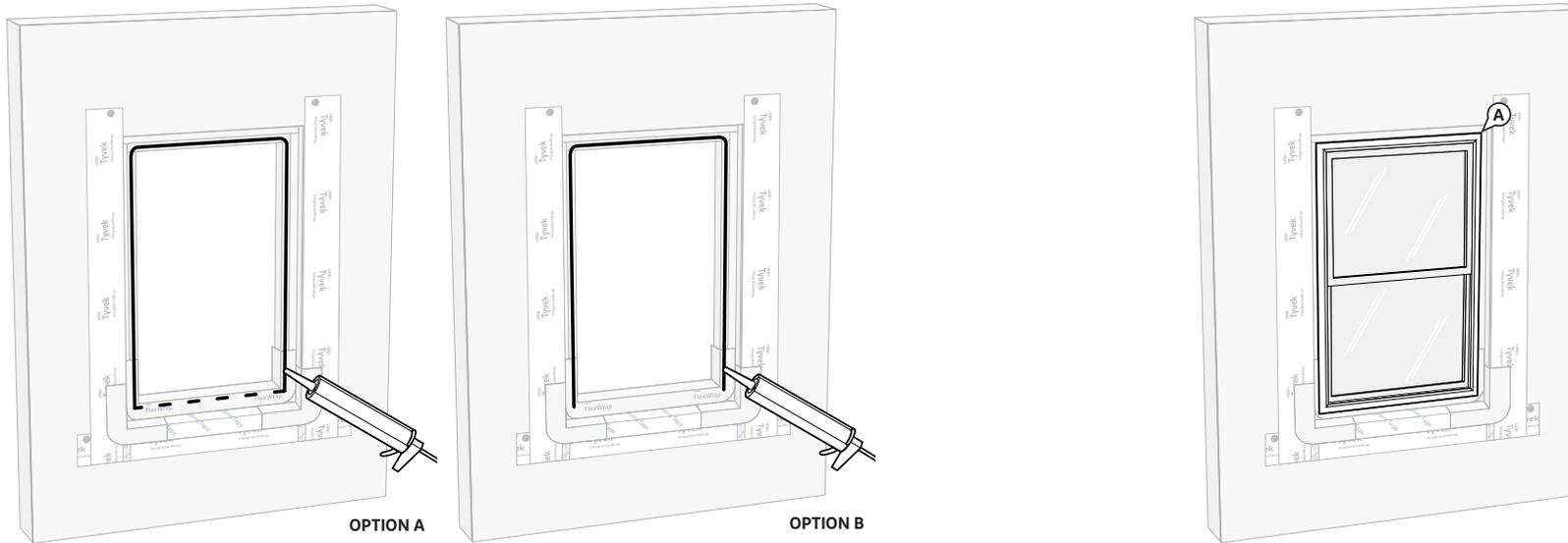
Install FlexWrap™ in Rough Opening at Sill

- A. Cut **FlexWrap™** at least 12" **LONGER** than width of inner/recessed sill (S₁). 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 framing.
- B. Remove wide piece of release paper. Position on horizontal surface of inner/recessed sill by aligning the inside edge of the narrow release paper with the face of the framing to ensure 2" – 3" of the **FlexWrap™** will be adhered to the face of the framing and a minimum of 6" up each jamb. Adhere onto horizontal surfaces.
- C. Remove narrow release paper.
- D. Fan out **FlexWrap™** at bottom corners onto face of recessed window framing. Coverage of **FlexWrap™** should be 2" – 3" onto the face of the recessed window frame, extending beyond into the recess if necessary.

NOTE: DuPont™ Tyvek® Certified Installers may install a 3-piece sill (and head) detail for window openings less than 6 ft. wide. For windows greater than 6 ft. wide, see the [Special Considerations](#) section for more information regarding the 3-piece sill/head detail. Contact your local DuPont Building Envelope Specialist for more information about the Certified Installer program.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 1: Using DuPont™ FlexWrap™ Recessed Window Corners



STEP 6

OPTION A: Apply a continuous bead of a [chemically-compatible sealant](#) at the window head and jambs to wall or back side of window mounting flange. To allow for drainage, do not apply continuous sealant bead along sill. Ensure a minimum 2"-wide drainage gap in the sealant bead within 4" from each corner of the jamb/sill interface. Continue applying sealant along the sill with additional 2" wide (min.) drainage gaps for every 6"-12" (on center) of sill width.

OPTION B: Apply a continuous bead of a [chemically-compatible sealant](#) at the window head and jambs to wall or back side of window mounting flange. To allow for drainage, do not apply sealant bead along sill.

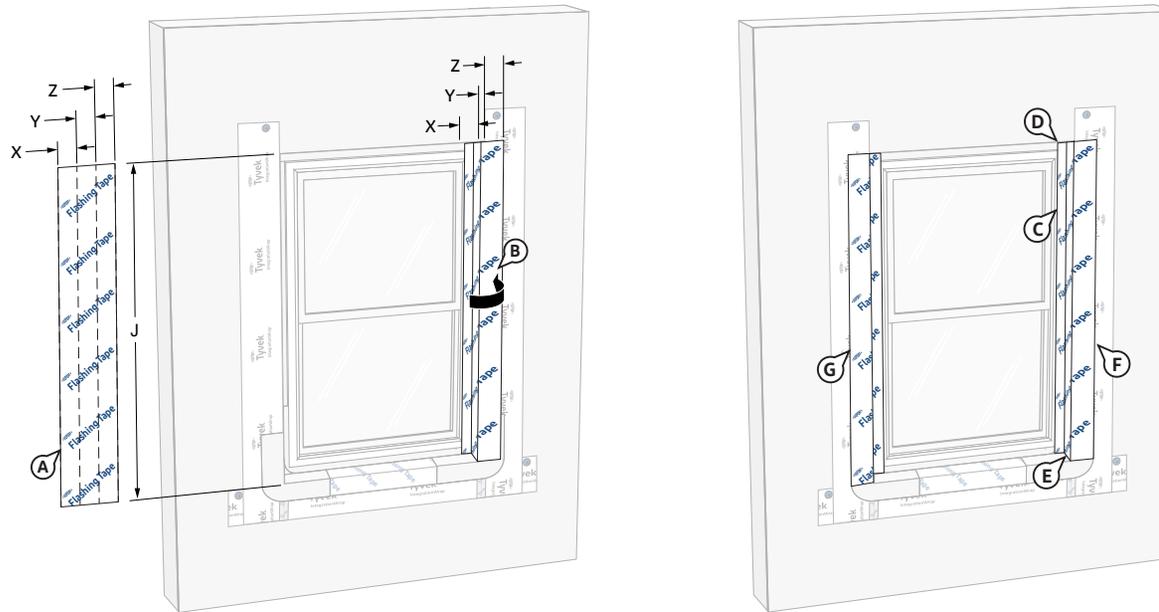
STEP 7

Install Window

A. Install window per window manufacturer's instructions.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 1: Using DuPont™ FlexWrap™ Recessed Window Corners



STEP 8

Install DuPont™ Flashing Tape or DuPont™ StraightFlash™ at Jambs

- A. Cut a piece of **DuPont™ Flashing Tape** or **StraightFlash™** the length of the outer jamb (J). Refer to Table 3 below to determine which width of flashing to use.

NOTE: This dimension (J) will need to be adjusted accordingly to accommodate the slope in the sill. Use appropriate width of flashing to overlap window flange, adhere onto face of stud frame, and extend a minimum of 2" onto jamb wall of recess.

Table 3: Jamb Flashing Measurements

	X	Y	Z
6" DuPont™ Flashing Tape (single stud)	1.5"	2"	2.5"
9" DuPont™ Flashing Tape* (double stud)	3"	3"	3"
9" DuPont™ Flashing Tape* (double stud)	3"	4"	2"

* or 9" **DuPont™ StraightFlash™**

- B. Fold the **DuPont™ Flashing Tape** or **StraightFlash™** lengthwise using the measurements (X, Y, and Z) shown in Table 3, creating sharp creases to help achieve sharp corners when release paper is removed.

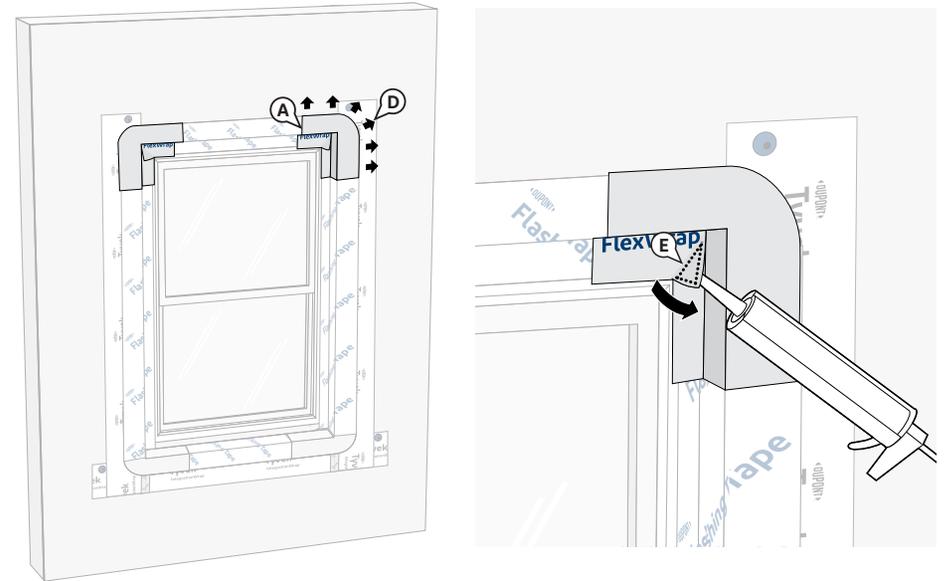
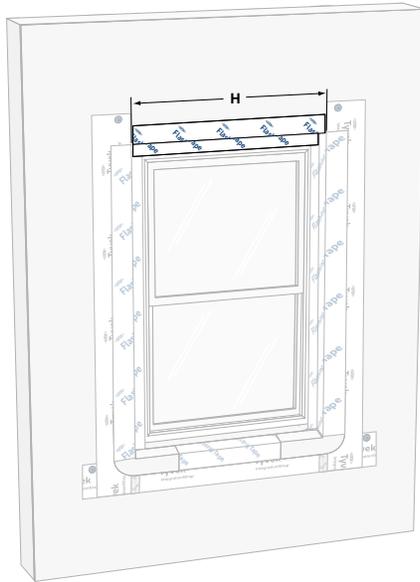
- C. Remove the first piece of release paper to expose the butyl that will be installed onto the window flange by tearing along the crease. **DO NOT CUT** release paper with sharp object as this could result in damage to butyl and compromise protection provided by the **DuPont™ Flashing Tape** or **StraightFlash™**.

NOTE: Keeping the remaining release papers intact will make the flashing more rigid to help maneuver the flashing into the corners.

- D. Starting at top of window, adhere exposed butyl adhesive onto window flange.
 E. Once the butyl is adhered to the window flange, remove additional release paper to adhere flashing along inside edge of the rough opening and recessed wall plane.
 F. Remove the remaining release paper and adhere the **DuPont™ Flashing Tape** or **StraightFlash™** onto the face of the wall and onto the **Tyvek® IntegrationWrap™**.
 G. Repeat Steps A – F for opposite jamb.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 1: Using DuPont™ FlexWrap™ Recessed Window Corners



STEP 9

Install* DuPont™ Flashing Tape at Head

- Cut a piece of **DuPont™ Flashing Tape** the length of the head rough opening "H".
- Fold the **DuPont™ Flashing Tape** lengthwise using the measurements (X, Y, and Z) determined in [STEP 3](#), creating sharp creases to help achieve sharp corners when release paper is removed.
- Remove the center release paper. The center piece of the release paper can be carefully removed by tearing along the creases, but do not cut release paper with sharp object as this could result in damage to butyl and compromise protection provided by the **DuPont™ Flashing Tape**.
- Adhere exposed butyl to recessed surface above window.
- Remove the outer pieces of release paper.
- Adhere exposed butyl over window head flange.
- Adhere last section of exposed butyl onto exterior sheathing.

STEP 10

Install DuPont™ FlexWrap™ Recessed Window Corners at Head

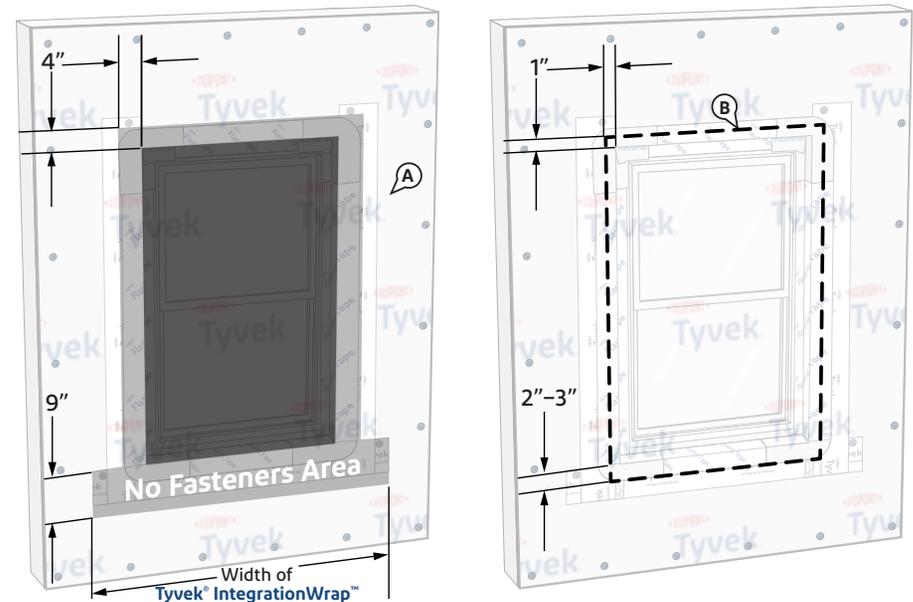
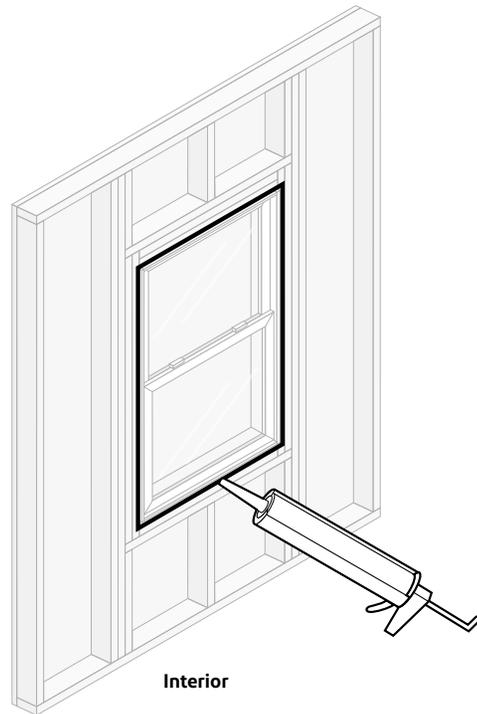
- Install **FlexWrap™** recessed window corner into the upper corner of the window rough opening with exposed butyl adhered onto the window flanges in a similar manner used for lower corner pieces ([STEP 4](#)).
- Remove remaining release paper.
- Adhere exposed butyl to head and jamb surfaces of recess.
- Fan **FlexWrap™** recessed window corner at the upper corner onto the face of the wall and the **Tyvek® IntegrationWrap™**. Coverage of **FlexWrap™** recessed window corners should be 2" to 3" onto the face of the wall.
- OPTIONAL:** Apply a bead of a [chemically-compatible sealant](#) inside the corner flap behind the loose triangular flap of the corner piece. Press the loose triangular flap onto the sealant in the corner piece.
- Repeat Steps A – E for opposite corner.

*Use **DuPont Self-Adhered Flashing Products** with a [chemically-compatible adhesive/primer](#) as applicable to seal directly to exterior gypsum sheathing, concrete, masonry, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing except when applying flashing during adverse weather conditions.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™

Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 1: Using DuPont™ FlexWrap™ Recessed Window Corners



STEP 11

Install Interior Perimeter Seal

Apply a continuous bead of a [chemically-compatible sealant](#) (and backer rod as necessary) around the window opening at the interior. Be sure that the sealant penetrates the grooves of the **DuPont™ FlexWrap™** around the sill. 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 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispensing Gun** during installation.

STEP 12

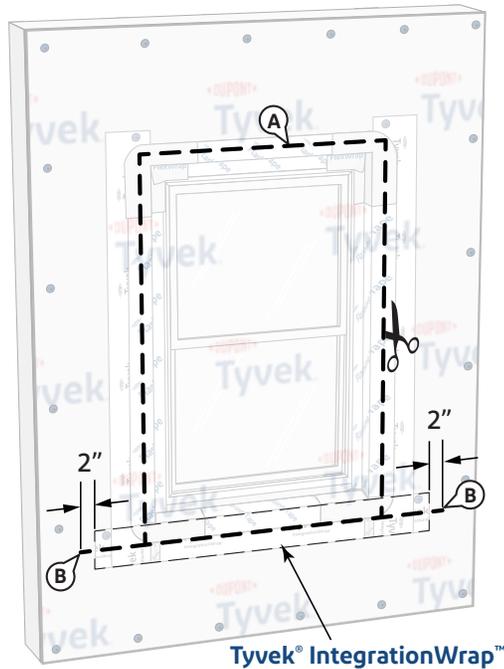
Install and Integrate the Tyvek® WRB

- Install the **Tyvek® WRB** according to the applicable Tyvek® WRB Installation Guideline that can be found at building.dupont.com. **Do not install fasteners within 9" of the window frame at sill.** Do not fasten through the **Tyvek® IntegrationWrap™**.
- Mark a perimeter on the **Tyvek® WRB** around the rough opening a minimum of 1" from the edge of rough opening along the jambs and head, and 2"-3" below the sill of the rough opening.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™

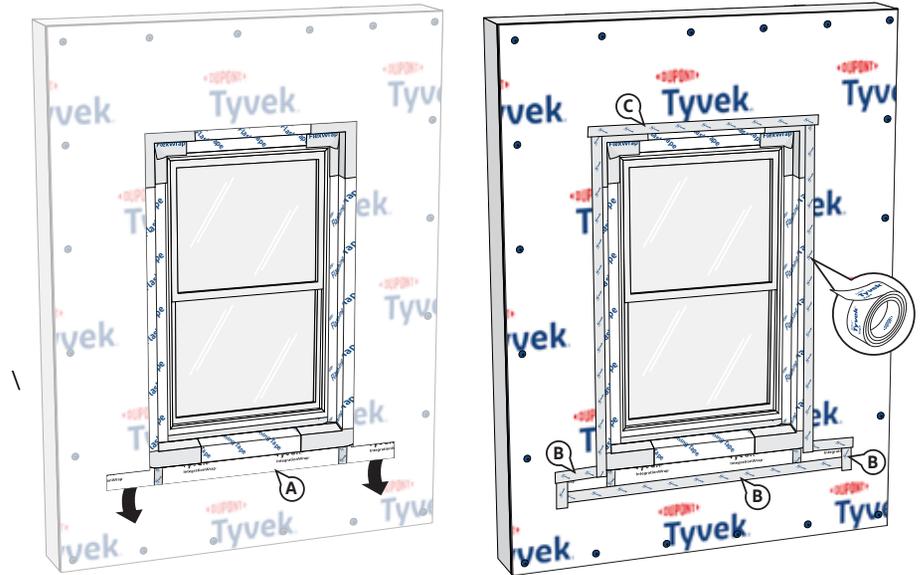
Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 1: Using DuPont™ FlexWrap™ Recessed Window Corners



STEP 13

- Cut the **Tyvek® WRB** along perimeter marking to expose window. Do not cut through the **DuPont Self-Adhered Flashing Products** or **Tyvek® IntegrationWrap™** underneath.
- Create horizontal slits in the **Tyvek® WRB** at each lower corner of the perimeter cut that extend 1"– 2" **BEYOND** the **Tyvek® IntegrationWrap™**.



STEP 14

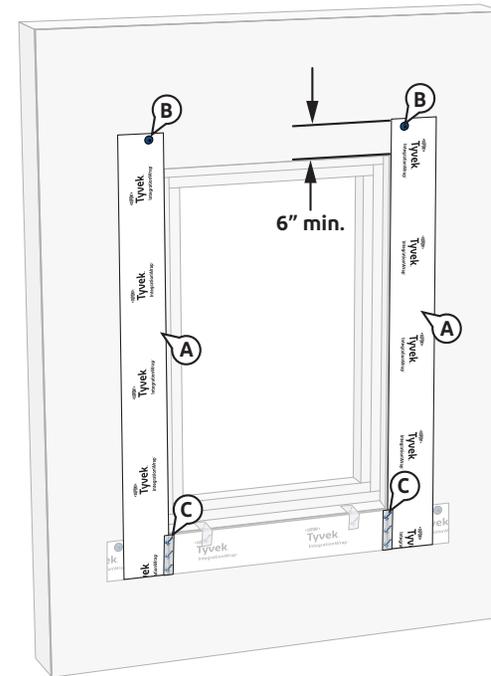
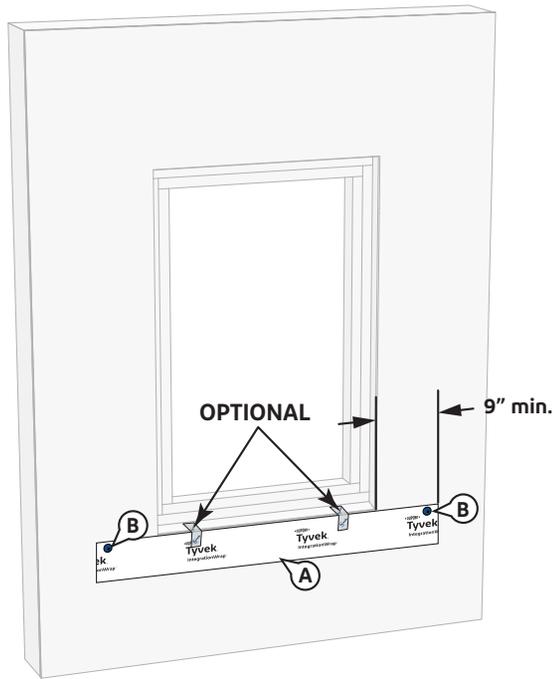
Final Step

- Bring the bottom portion of the **Tyvek® IntegrationWrap™** through the sill perimeter cut and horizontal slits so it laps over the top layer of **Tyvek® WRB**.
- Working from bottom to top, install **DuPont™ Tyvek® Tape** to secure horizontal and vertical seams of the **Tyvek® IntegrationWrap™**.
- Install **Tyvek® Tape** along jambs and head to seal **Tyvek® WRB** around window. For a more robust termination, **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** can be used.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head

This method applies to the following products: DuPont™ Flashing Tape, DuPont™ StraightFlash™, and DuPont™ FlexWrap™



STEP 1

Install Tyvek® IntegrationWrap™ Under Sill

- Cut a piece of Tyvek® IntegrationWrap™ long enough to extend at least 9" **BEYOND** the sides of the rough opening jambs.
- The top of the Tyvek® IntegrationWrap™ should be temporarily fastened to the sheathing and the bottom should be left unsecured so it can overlap the Tyvek® WRB which will be installed after the window. If using DuPont™ Tyvek® Wrap Cap Fasteners, or recommended fasteners, avoid fastener placement where DuPont Self-Adhered Flashing Products will be installed

OPTIONAL: To assist with sill flashing installation, small pieces of DuPont™ Tyvek® Tape can be used to temporarily secure the Tyvek® IntegrationWrap™ at the sill.

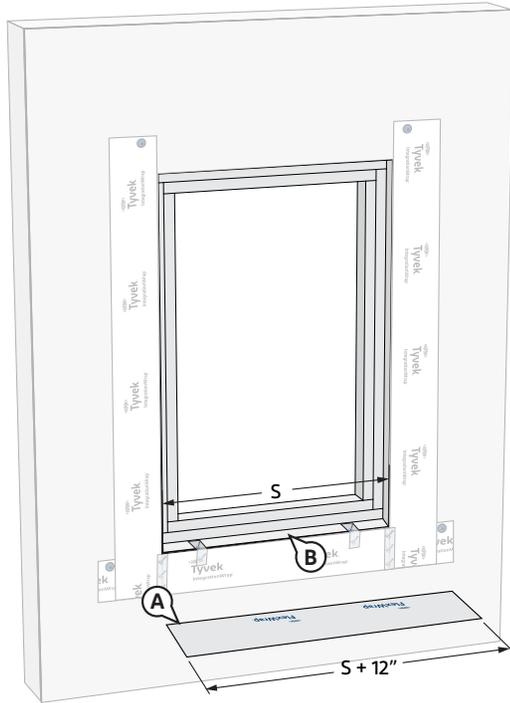
STEP 2

Install Tyvek® IntegrationWrap™ at Jamb

- Cut two pieces of Tyvek® IntegrationWrap™ long enough to extend from the bottom edge of the sill piece of Tyvek® IntegrationWrap™ to minimum 6" **ABOVE** the rough opening.
- Secure to the wall. If using Tyvek® Wrap Cap Fasteners, or recommended fasteners, avoid fastener placement where DuPont Self-Adhered Flashing Products will be installed.
- Seal inner vertical seams between the jamb pieces and sill piece with Tyvek® Tape.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head



STEP 3

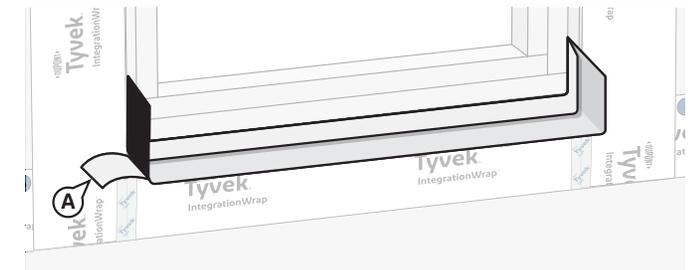
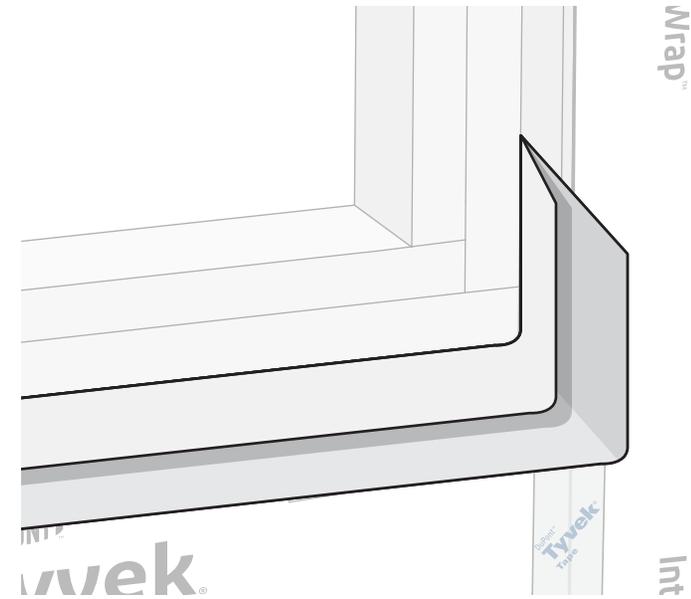
Prepare FlexWrap™ for Installation

- A. Cut **FlexWrap™** at least 12" **LONGER** than width of recessed sill (S) plane. Use roll widths sufficient to achieve adhesion to the face of stud framing, ensuring 2"– 3" adhesion onto the face of the wall. Refer to Table 1 below to determine which width of **FlexWrap™** to use.

Table 1: Sill/Head Flashing Measurements

	X	Y	Z
6" DuPont™ FlexWrap™ (single stud)	2"	2"	2"
9" DuPont™ FlexWrap™ (double stud)	3"	3"	3"
9" DuPont™ FlexWrap™ (double stud)	3"	4"	2"

- B. Inspect installation surface to ensure surface is free of dirt or substances that could interfere with adhesion as well as any sharp protrusions.



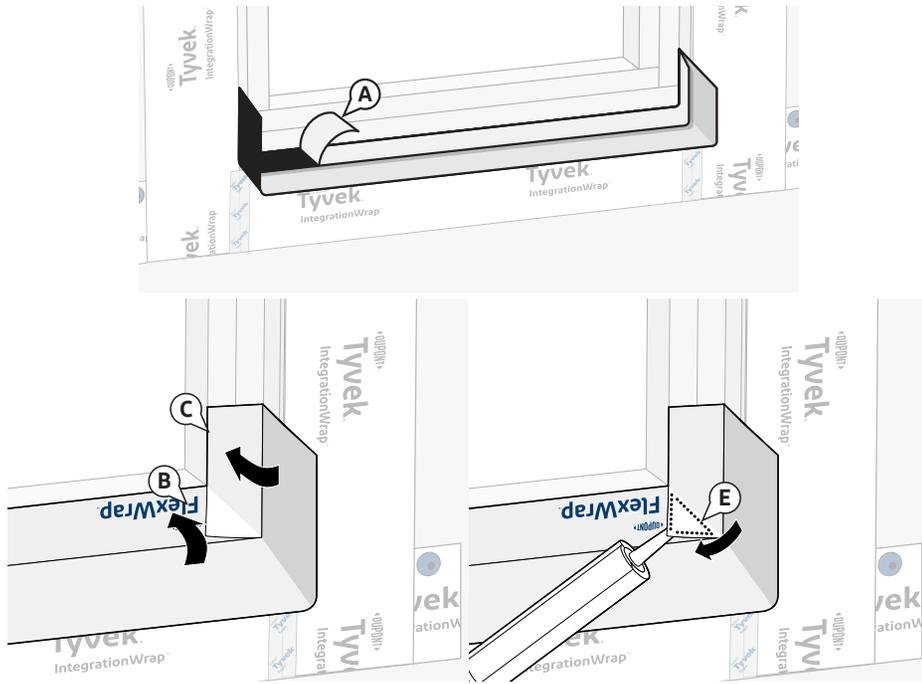
STEP 4

Install FlexWrap™ at Sill and Jambs

- A. Remove widest piece of release paper. Position **FlexWrap™** on horizontal sill at the inside corner with a 6" minimum up each jamb. Adhere to recessed plane.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head

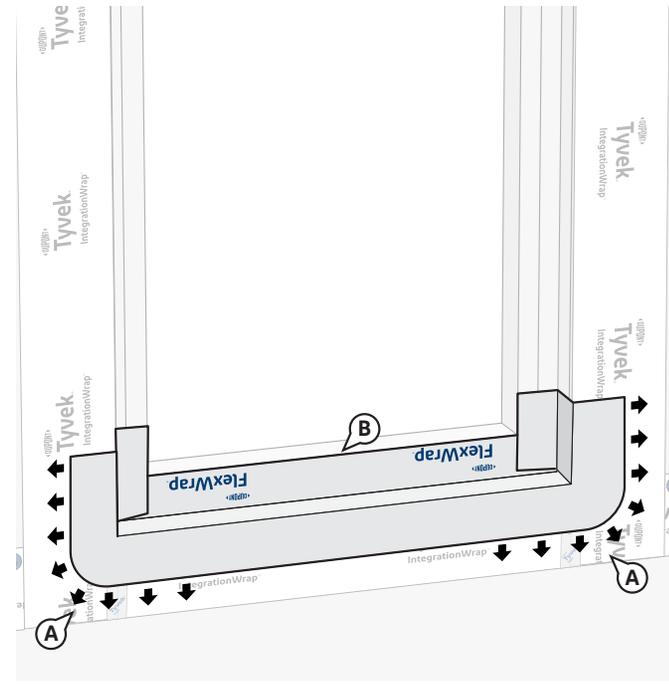


STEP 5

Install FlexWrap™ on the Face of the Rough Opening at Sill

- Remove remaining release paper and create FlexWrap™ recessed window corner.
- Adhere exposed butyl to the face of the stud framing and DuPont Self-Adhered Flashing Products. Fold the exposed butyl along the horizontal portion onto the stud framing towards sill of rough opening.
- Fold the jamb portion of the exposed butyl onto the stud framing and create a butyl-to-butyl seal, resulting in a triangular flap at the corner.
- Repeat Step C for opposite corner.
- OPTIONAL:** Apply a bead of a [chemically-compatible sealant](#) inside the corner flap behind the loose triangular flap of the corner piece. Press the loose triangular onto the sealant in the corner piece.

NOTE: For double stud window frames, the FlexWrap™ recessed window corners should extend a minimum of 3" onto the face of the recessed window frame and cover the seams between the studs. For single stud window frames, the FlexWrap™ recessed window corner should extend and cover face of the stud framing.



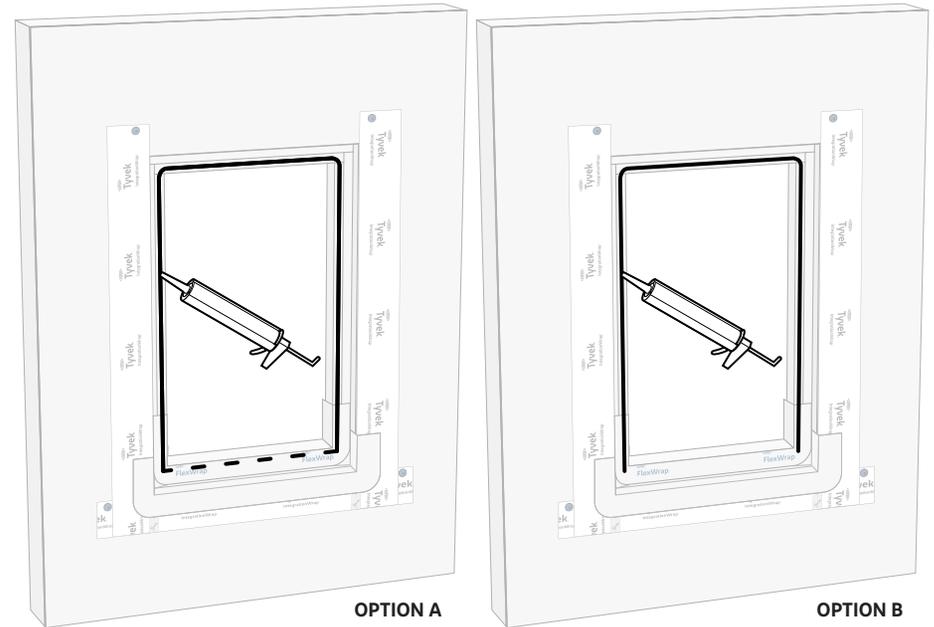
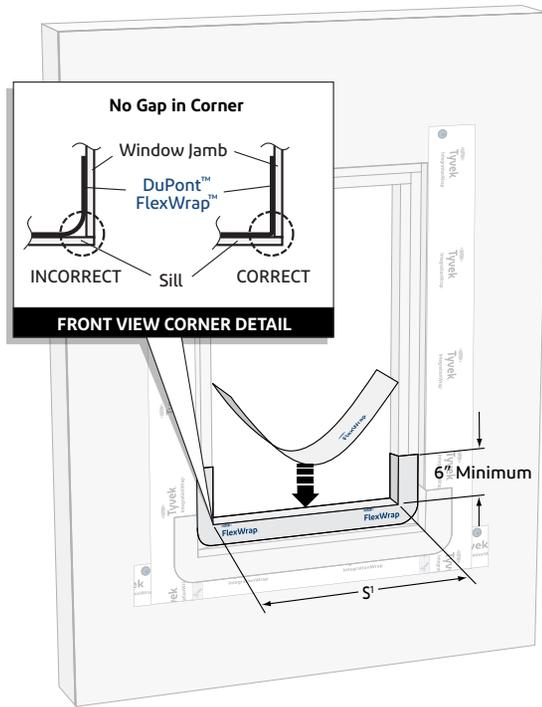
STEP 6

Install FlexWrap™ on Face of Wall

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

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head



STEP 7

Install FlexWrap™ in Rough Opening at Sill

- Cut **FlexWrap™** at least 12" **LONGER** than width of inner/recessed 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 framing.
- Remove wide piece of release paper. Position on horizontal surface of inner/recessed sill by aligning the inside edge of the narrow release paper with the face of the framing to ensure 2"– 3" of the **FlexWrap™** will be adhered to the face of the framing. Adhere into rough opening along sill and a minimum of 6" up each jamb.
- Remove narrow release paper.
- Fan out **FlexWrap™** at bottom corners onto face of recessed stud framing. Coverage of **FlexWrap™** should be a minimum of 2"– 3" onto the face of the recessed stud framing, extending into the recess if necessary.

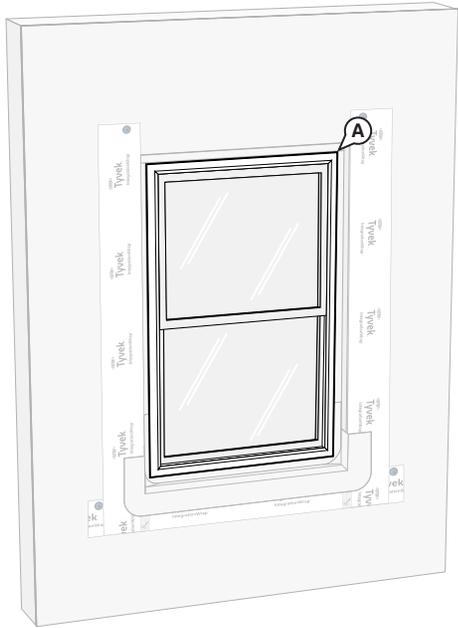
STEP 8

OPTION A: Apply a continuous bead of a [chemically-compatible sealant](#) at the window head and jambs to wall or back side of window mounting flange. To allow for drainage, do not apply continuous sealant bead along sill. Ensure a minimum 2" wide drainage gap in the sealant bead within 4" from each corner of the jamb-sill interface. Continue applying sealant along the sill with additional 2" wide (min.) drainage gaps for every 6"– 12" (on center) of sill width.

OPTION B: Apply a continuous bead of a [chemically-compatible sealant](#) at the window head and jambs to wall or back side of window mounting flange. To allow for drainage, do not apply sealant bead along sill.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head



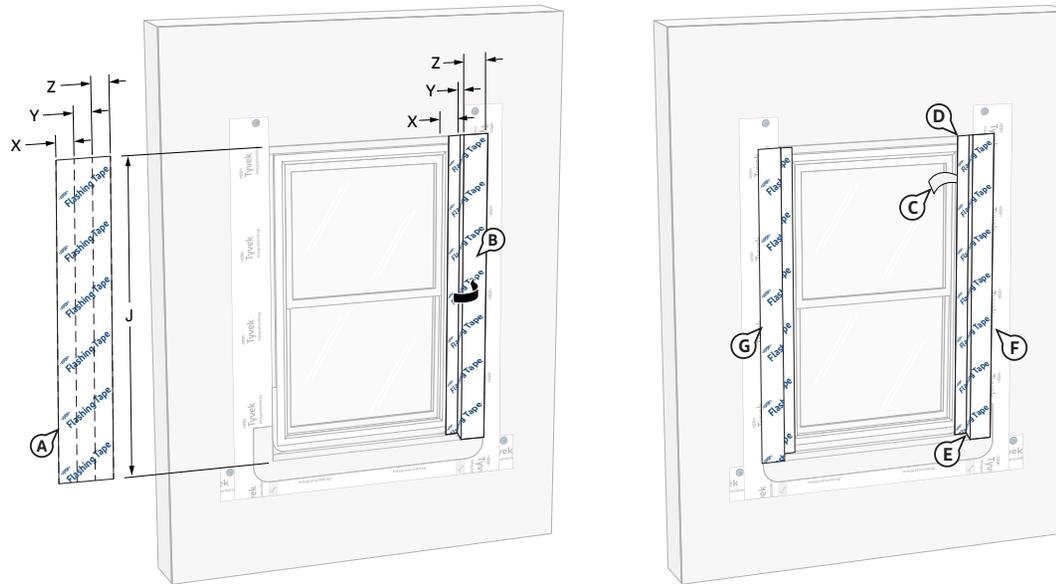
STEP 9

Install Window

A. Install integral flanged window per manufacturer's instructions.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head



STEP 10

Install DuPont™ Flashing Tape or DuPont™ StraightFlash™ at Jamb

A. Cut a piece of DuPont™ Flashing Tape or StraightFlash™ that is the length of the outer jamb (J). Refer to Table 2 below to determine which width of flashing to use.

Table 2: Jamb Flashing Measurements

	X	Y	Z
6" DuPont™ Flashing Tape (single stud)	1.5"	2"	2.5"
9" DuPont™ Flashing Tape* (double stud)	3"	3"	3"
9" DuPont™ Flashing Tape* (double stud)	3"	4"	2"

* or 9" DuPont™ StraightFlash™

B. Fold the DuPont™ Flashing Tape or StraightFlash™ lengthwise using the measurements (X, Y, and Z) shown in Table 2, creating sharp creases to help achieve sharp corners when release paper is removed.

C. Remove the first piece of release paper to expose the butyl that will be installed onto the window flange by tearing along the crease. **DO NOT CUT** release paper with sharp object as this could result in damage to butyl and compromise protection provided by the DuPont™ Flashing Tape or StraightFlash™.

NOTE: Keeping the remaining release papers intact will make the flashing more rigid to help maneuver the flashing into the corners.

D. Starting at top of window, adhere exposed butyl adhesive onto window flange.

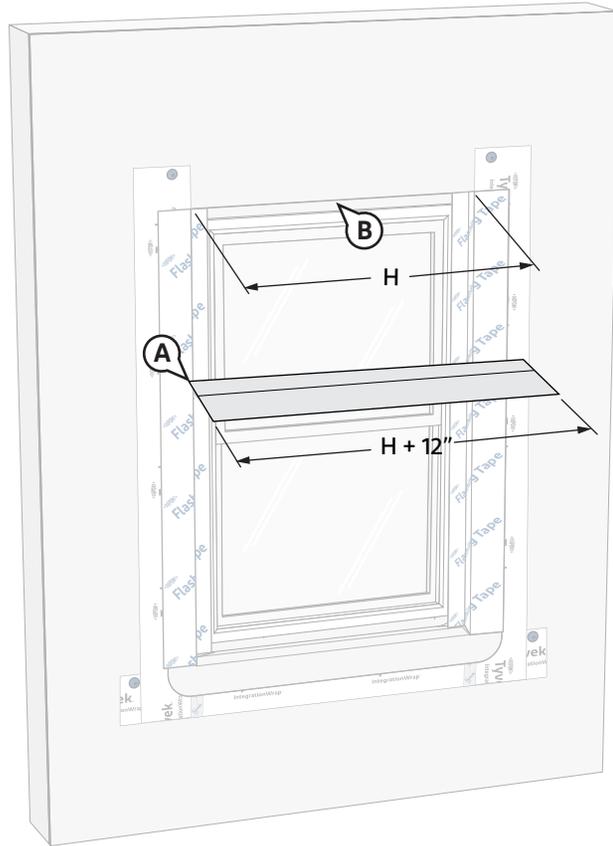
E. Once the butyl is adhered to the window flange, remove additional release paper to adhere flashing along inside edge of the rough opening and recessed wall plane.

F. Remove the remaining release paper and adhere the DuPont™ Flashing Tape or StraightFlash™ onto the face of the wall and onto the Tyvek® IntegrationWrap™.

G. Repeat Steps A – F for opposite jamb.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head



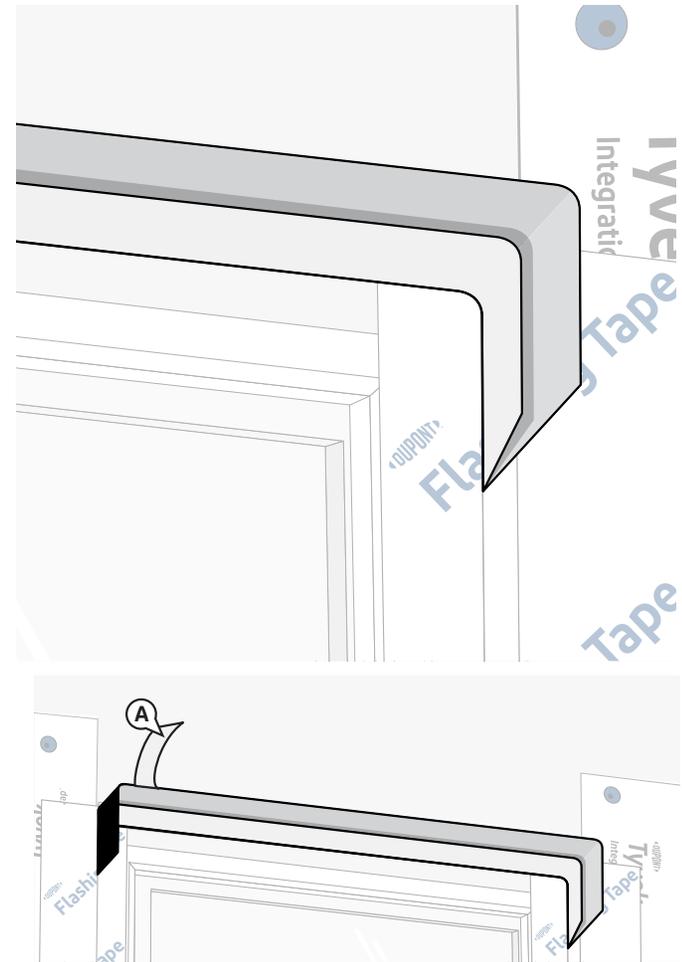
STEP 11

Prepare FlexWrap™ for Installation

A. Cut **FlexWrap™** at least 12" **LONGER** than width of recessed head (H) plane. Use roll widths sufficient to achieve adhesion to the face of stud framing, ensuring 2"-3" adhesion onto the face of the wall.

NOTE: FlexWrap™ width should be aligned with X-Y-Z Measurements in [Table 1](#).

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 12

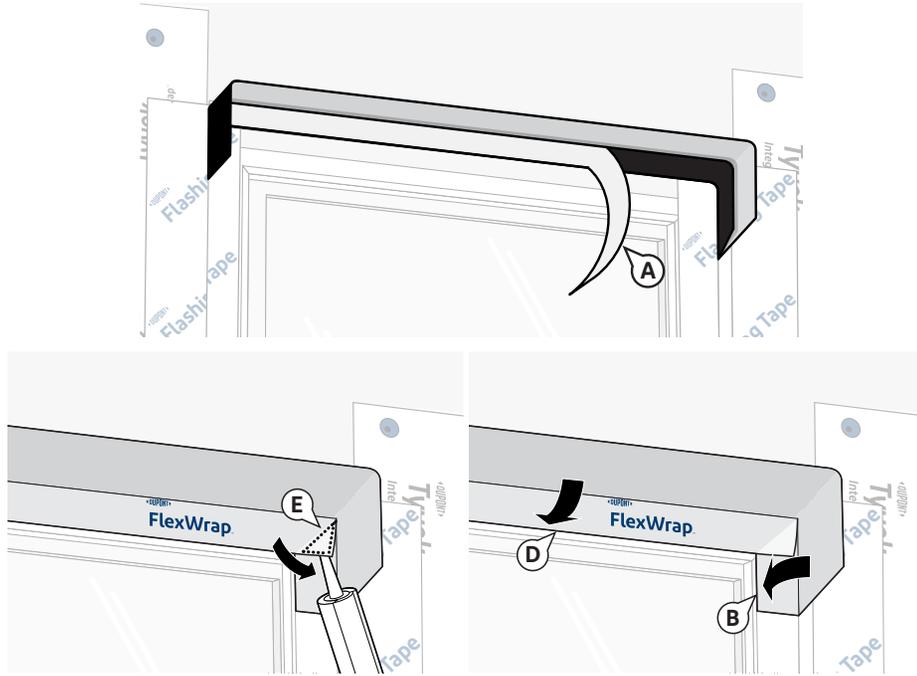
Install* FlexWrap™ at Head and Jamb

A. Remove widest piece of release paper. Position on horizontal head at the inside corner with a 6" minimum down each jamb. Adhere to recessed plane.

*Use **DuPont Self-Adhered Flashing Products** with a [chemically-compatible adhesive/primer](#) as applicable to seal directly to exterior gypsum sheathing, concrete, masonry, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing except when applying flashing during adverse weather conditions.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head



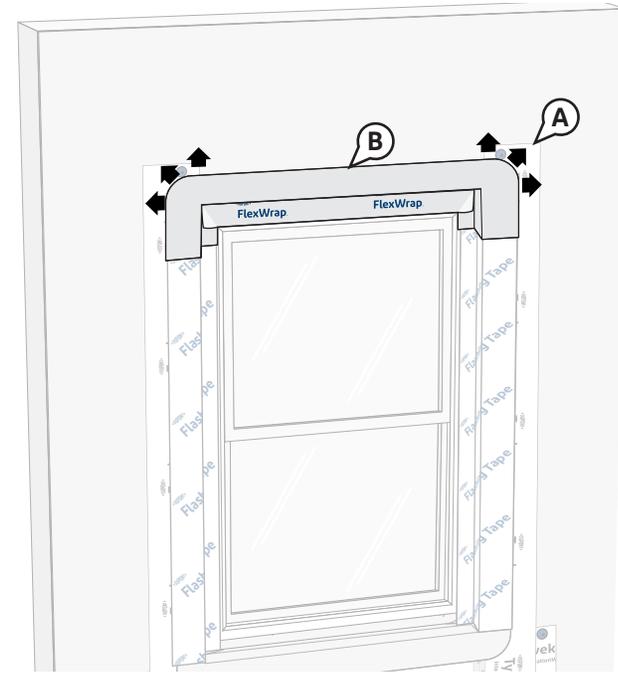
STEP 13

Install* FlexWrap™ on the Face of the Rough Opening at Head

- Remove remaining release paper and create **FlexWrap™** recessed window corner.
- Adhere exposed butyl to the face of the stud framing and **DuPont Self-Adhered Flashing Products**. Fold the exposed butyl along the jamb portion onto the stud framing.
- Fold the exposed butyl along the head portion onto the stud framing and create a butyl-to-butyl seal, resulting in a triangular flap at the corner.
- Repeat Step C for opposite corner.
- OPTIONAL:** Apply a bead of a [chemically-compatible sealant](#) inside the corner flap behind the loose triangular flap of the corner piece. Press the loose triangular onto the sealant in the corner piece.

NOTE: For double stud window frames, the **FlexWrap™** recessed window corners should extend a minimum of 3" onto the face of the recessed window frame and cover the seams between the studs. For single stud window frames, the **FlexWrap™** recessed window corner should extend and cover face of the stud framing.

*Use **DuPont Self-Adhered Flashing Products** with a [chemically-compatible adhesive/primer](#) as applicable to seal directly to exterior gypsum sheathing, concrete, masonry, or other rough surfaces. An adhesive/primer is not required for wood-based sheathing except when applying flashing during adverse weather conditions.



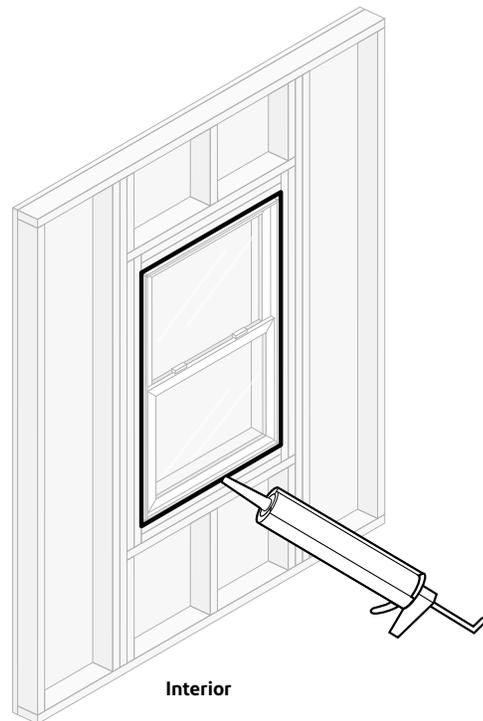
STEP 14

Install* FlexWrap™ at Window Head

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

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

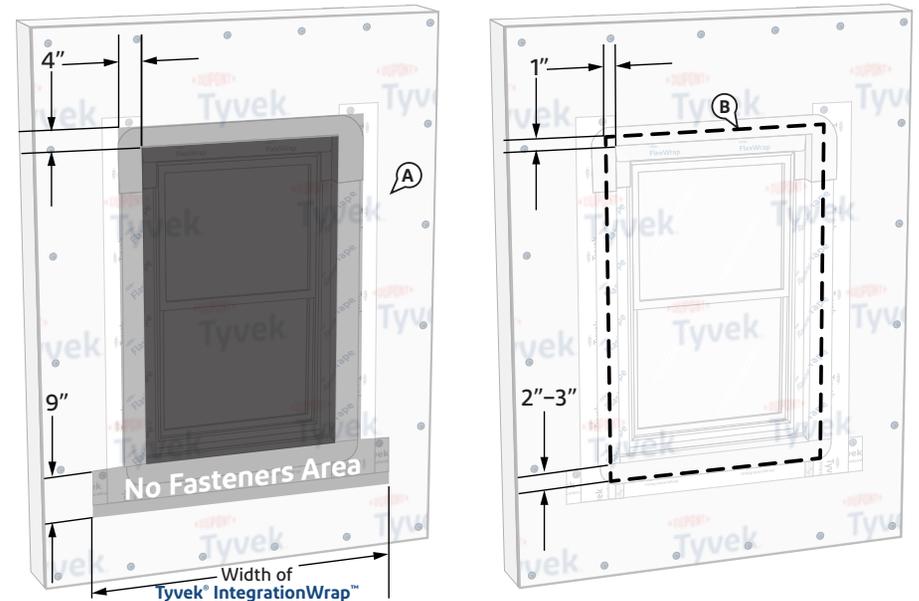
Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head



STEP 15

Install Interior Perimeter Seal

Apply a continuous bead of a [chemically-compatible sealant](#) (and backer rod as necessary) around the window opening at the interior. Be sure that the sealant penetrates the grooves of the **DuPont™ FlexWrap™** around the sill. 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 1/2", apply using the plastic extension tip for the **Great Stuff Pro™ Dispensing Gun** during installation.



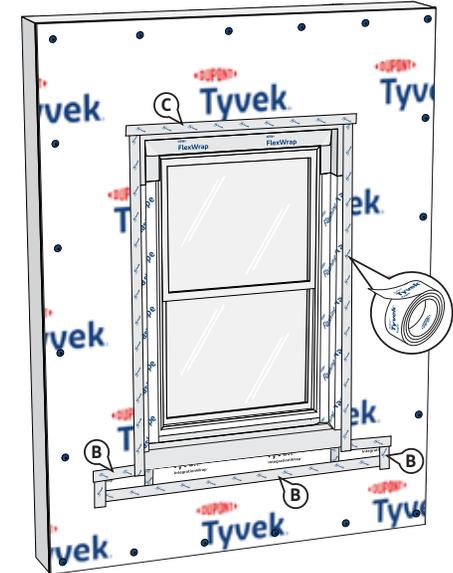
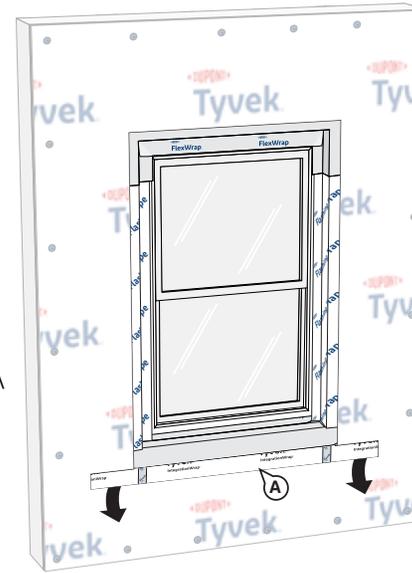
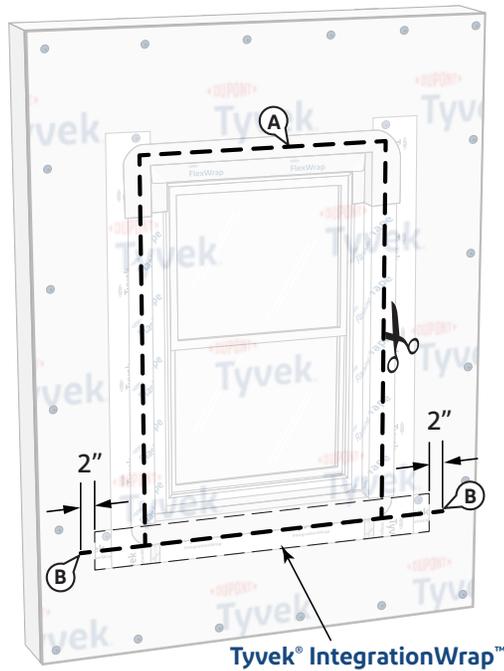
STEP 16

Install and Integrate the Tyvek® WRB

- Install the **Tyvek® WRB** according to the applicable Tyvek® WRB Installation Guideline that can be found at building.dupont.com. **Do not install fasteners within 9" of the window frame at sill.** Do not fasten through the **Tyvek® IntegrationWrap™**.
- Mark a perimeter on the **Tyvek® WRB** around the rough opening a minimum of 1" from the edge of rough opening along the jambs and head, and 2"- 3" below the sill of the rough opening.

Installation Methods for Windows Installed BEFORE the DuPont™ Tyvek® WRB using DuPont™ Tyvek® IntegrationWrap™ Integral Flanged Window with Shallow (Up to 4") Recessed Opening

Method 2: Using Single Pieces of DuPont™ FlexWrap™ at the Sill and Head



STEP 17

- Cut the **Tyvek® WRB** along perimeter marking to expose window. Do not cut through the **DuPont Self-Adhered Flashing Products** or **Tyvek® IntegrationWrap™** underneath.
- Create horizontal slits in the **Tyvek® WRB** at each lower corner of the perimeter cut that extend 1"– 2" **BEYOND** the **Tyvek® IntegrationWrap™**.

STEP 18

Final Step

- Bring the bottom portion of the **Tyvek® IntegrationWrap™** through the sill perimeter cut and horizontal slits so it laps over the top layer of **Tyvek® WRB**.
- Working from bottom to top, install **DuPont™ Tyvek® Tape** to secure horizontal and vertical seams of the **Tyvek® IntegrationWrap™**.
- Install **Tyvek® Tape** along jambs and head to seal **Tyvek® WRB** around window. For a more robust termination, **DuPont™ Flashing Tape** or **DuPont™ StraightFlash™** can be used

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® HomeWrap®**, **Tyvek® DrainWrap™**, and **Tyvek® StuccoWrap®** be covered within 4 months (120 days) of installation. DuPont requires that **DuPont™ Tyvek® CommercialWrap®** and **Tyvek® CommercialWrap® D** be covered within 9 months (270 days) of installation.

DuPont™ Tyvek® IntegrationWrap™ is made from a coated, woven polypropylene membrane to provide for a highly durable flashing integration membrane during window and door installation. Additives have been incorporated into the material to provide ultraviolet light resistance. DuPont requires that **Tyvek® IntegrationWrap™** be covered within 4 months (120 days) of installation.

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

Design Considerations

When installed in conjunction with other building materials, **Tyvek® WRBs**, **Tyvek® IntegrationWrap™**, and **DuPont Self-Adhered Flashing Products**, must be properly shingled with these materials such that water is diverted to the exterior of the wall system. **Tyvek® WRBs** 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**. 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.

Use of additives, coatings or cleaners on or in the facade system may impact the performance of **Tyvek® WRBs**. DuPont Building Envelope Solutions Products are to be used as outlined in this installation guideline. **DuPont Self-Adhered Flashing Products** should only be used to seal penetrations and flash openings in buildings. **Tyvek® WRBs** 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.

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.

Tyvek® IntegrationWrap™ is slippery and should not be used in any application where it will be walked on. **Tyvek® IntegrationWrap™** is combustible and should be protected from flames and other high heat sources. **Tyvek® IntegrationWrap™** will melt at 320°F (160°C). 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.

Tower® Residential Sealant (formerly DuPont™ Residential Sealant) is irritating to skin, eyes, and respiratory tract. For proper usage, follow directions stated on the product label. For health information, refer to the Safety Data Sheet (SDS) or call Chemtrec at 1-800-262-8200.

Caution

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 the Safety Data Sheet (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: <https://www.nrel.gov/docs/fy14osti/61326.pdf>.

In Canada visit: <https://nrc-publications.canada.ca/eng/view/ft?id=96acba7c-afd4-4ea1-94b0-1f8f3500c582>.

Safety and Handling (continued)

Great Stuff Pro™ polyurethane foam sealant and adhesive products contain isocyanate and a flammable blowing agent. Read all instructions and the Safety Data Sheet (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 the Safety Data Sheet (SDS) carefully before use.

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

For More Information

Visit the *Quick Links* section of our website (<https://www.dupont.com/building/resources.html>) where you'll find links to essential documents and resources to help you get the job done right:

- Installation Guidelines
- Safety Data Sheets (SDS)
- CAD Drawings
- DuPont Performance Building Solutions Document Library

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

NOTICE: No freedom from any patent owned by DuPont or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where DuPont is represented. The claims made may not have been approved for use in all countries or regions. DuPont assumes no obligation or liability for the information in this document. References to "DuPont" or the "Company" mean the DuPont legal entity selling the products to Customer unless otherwise expressly noted. NO EXPRESS WARRANTIES ARE GIVEN EXCEPT FOR ANY APPLICABLE WRITTEN WARRANTIES SPECIFICALLY PROVIDED BY DUPONT. ALL IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. The buyer assumes all risks as to the use of the material. Buyer's exclusive remedy or any claim (including without limitations, negligence, strict liability, or tort) shall be limited to the refund of the purchase price of the material. Failure to strictly adhere to any recommended procedures shall release DuPont de Nemours, Inc., and its affiliates, of all liability with respect to the materials or the use thereof. The information herein is not intended for use by non-professional designers, applicators or other persons who do not purchase or utilize this product in the normal course of their business.

© 2024 DuPont. DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, ® or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted. Stinger® is a registered trademark of National Nail Corp. Grip-Deck®, Grip-Lok®, and Thermal-Grip FastCap® are trademarks or registered trademarks of TRUFASST. Tower® is a registered trademark of Tower Sealants.

43-D101093-enNA-1124



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