DuPont™ Tyvek® ThermaWrap™ R5.0 Installation Guidelines for New Residential Single Family Houses Using Vinyl, Brick and Stone Claddings

VERSION 10/13

DuPont™
Tyvek®
ThermaWrap™ R5.0

Table of Contents

Applicable Products

Insulating Air and Water-Resistive Barrier

PRODUCT	DIMENSIONS	AREA
DuPont™ Tyvek® ThermaWrap™ R5.0	4 ft x 40 ft	160 sq ft

Flashing Products

PRODUCT	DIMENSIONS	AREA
DuPont™ FlexWrap™ NF	6 in x 75 ft 9 in x 75 ft	37.50 sq ft 56.20 sq ft
DuPont™ StraightFlash™	4 in x 150 ft 9 in x 125 ft	50 sq ft 93.75 sq ft
DuPont™ StraightFlash™ VF	6 in x 125 ft	62.5 sq ft
DuPont™ Flashing Tape	4 in x 75 ft 6 in x 75 ft 9 in x 75 ft	18.75 sq ft 37.50 sq ft 56.25 sq ft

Recommended Installation Accessories

PRODUCT	TYPE/DIMENSIONS	QUANTITY
DuPont™ Tyvek® Tape	2 in Bulk Pack 3 in Bulk Pack	36 rolls/case 24 rolls/case
DuPont™ Tyvek® Wrap Caps for Crossfire® Cap Stapler	16 gauge; available in 7/8", 1-1/4", and 1-1/2" lengths	2000 per box
DuPont™ Wrap Cap Nails		
DuPont™ Adhesive/Primer		
3M Hi-Strength 90*		
Denso Butyl Primer* (spray or can)		
DuPont™ Window and Door Foam		
DuPont™ Residential Sealant		

DuPont™ Recommended Shears or Cutting Tools*

– KAI 7000 Series shears

– Olfa 60mm rotary cutter

– Standard carpet knife

– WrapShear by Maimin.

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

Warranty

Please see warranty requirements for DuPont™ Tyvek® ThermaWrap™ R5.0 at www.weatherization.tyvek.com.

Code Requirements

Tyvek® ThermaWrap™ R5.0 meets ICC-ES AC-38 Water-Resistive and Air-Barrier Requirements. Code Evaluation Report is pending.

Tyvek® ThermaWrap™ R5.0 provides continuous exterior insulation when installed as directed.

See Tyvek® ThermaWrap™ R5.0 Physical Properties Data Sheet for additional information.

General Instructions

DuPont™ Tyvek® ThermaWrap® 5.0 is not intended for open stud construction. The best time to install DuPont™ Tyvek® ThermaWrap™ R5.0 is:

- After the roof sheathing is installed
- After the step flashing and kick out flashings have been installed
- **BEFORE** the windows are installed

When installing DuPont™ Tyvek® ThermaWrap® 5.0:

- A larger brick /stone ledge may be required to accommodate the 1-1/2" thickness of the Tyvek® ThermaWrap® 5.0
- Extension jambs may be required around the interior of the windows. This product may also affect the appearance of the window sill corners.
- All insulation edges must butt tightly against one another to help maintain continuous insulation.

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

When cutting the DuPont™ Tyvek® ThermaWrap™ R5.0 to prepare the opening, remove an additional 1" strip of the WRB head flap to allow more room for the tape adhesive to seal the head flashing.

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

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

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

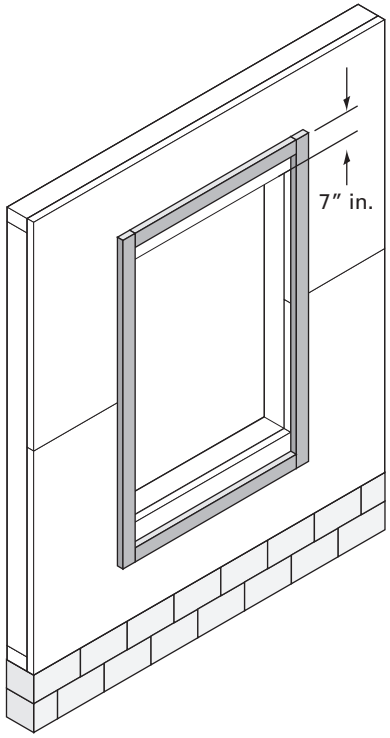
Door and window rough sill framing must be level or slightly sloped to the exterior to ensure proper drainage to the exterior. This best practice ensures continuous support with positive slope to the exterior.

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

Wall Preparation

STEP 1

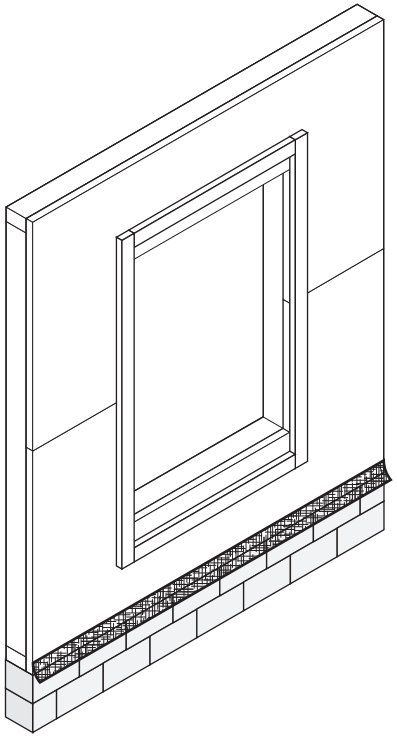
Install bump out frame around all window and door openings before installing Tyvek® ThermaWrap™ R5.0 . Bump out frame must be 1-1/2" thick. Standard 2 x 4's are acceptable. Cut the sill and head pieces the width of the window opening and the jamb pieces 7" longer than the window opening . For round top windows, use wood sheathing totaling 1-1/2" thick to create an arch. Additional 2 x 4's may be required along the top of the gables to bump out the rake board and along the top of wall to accommodate soffit material.



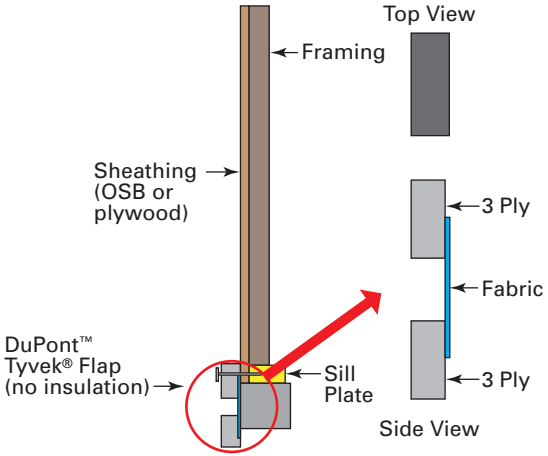
STEP 2

For the best protection against insects and rodents and to provide added support for a cladding starter strip, DuPont recommends the installation of termination accessories along sill plate. Options include termination strip or termination ledge. Fasteners must penetrate sill plate min. 1". If a termination accessory is not used, proceed to step 3.

- Termination Strip – Attach upper half to sill plate. Leave other half hang freely. Termination Strip will provide support for cladding starter strip



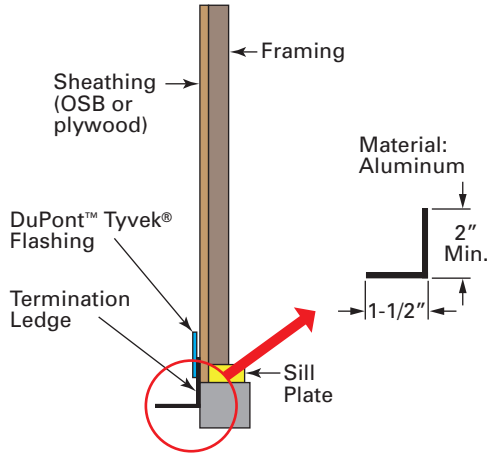
Termination Strip



STEP 2 (CONTINUED)

- Termination Ledge – Must be wide enough to protect bottom edge of Tyvek® ThermaWrap™ R5.0. Termination Ledge will not provide support for cladding starter strip.

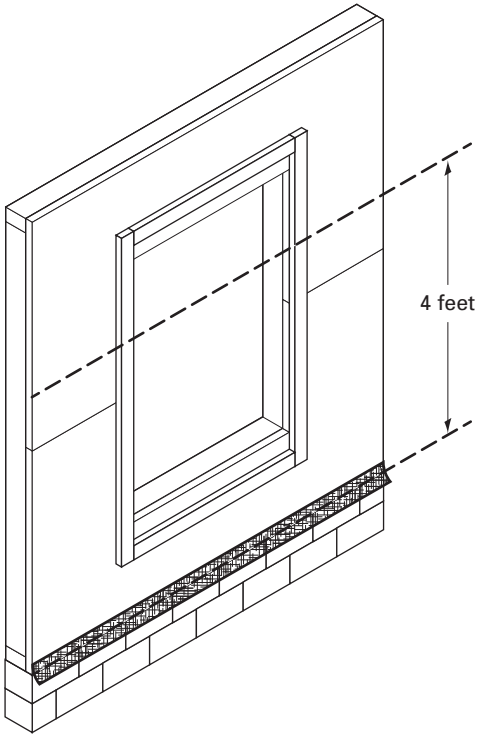
Termination Ledge



STEP 3

Using a chalk line, create a guide for installing the first course of Tyvek® ThermaWrap™ R5.0.

- If using the termination strip, create a line around the building 4 ft. above the top edge of the strip.
- If using the termination ledge, create a line around the building 4 ft. above the bottom edge of the strip.
- If a bottom detail is not used, line should be 47″ above the bottom of the sill plate.



Installation

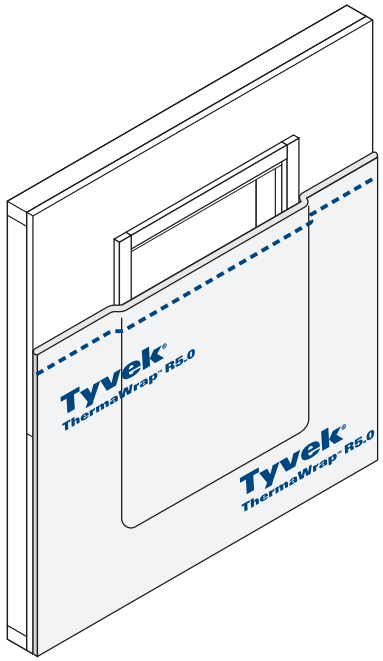
These guidelines cover the installation of Tyvek® ThermaWrap™ R5.0 installed on Conventional Framed structures and Tilt Wall Framed structures. See page 10 for installation over Tilt Wall Framed structures.

Conventional Framed

Start at the bottom of the structure to ensure proper shingling throughout the installation. Proper shingling is required to shed water and to prevent water from entering the wall system.

STEP 1

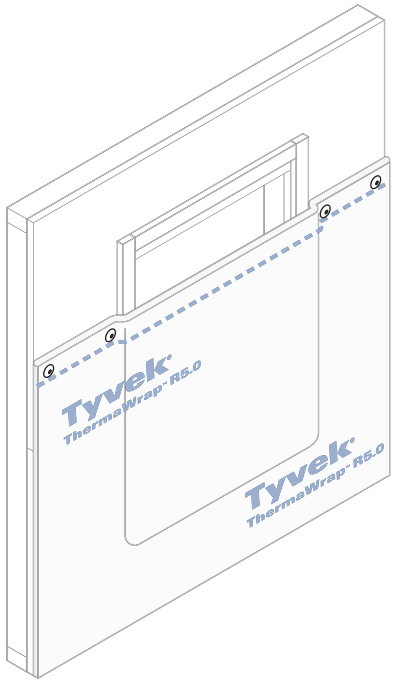
Starting at a corner of the building, align the vertical edge of insulation with the edge of the building and begin unrolling Tyvek® ThermaWrap™ R5.0 from right to left. Ensure insulation material is against the wall sheathing. Do not secure the 6" Tyvek® flap at the beginning of the roll. Use the chalk line on the wall as a guide for the top edge. Unroll directly over window and door openings. **DO NOT INSTALL INSULATION UPSIDE DOWN. DO NOT STRETCH OR PULL MATERIAL TIGHT AGAINST WALL SHEATHING INCLUDING INSIDE AND OUTSIDE CORNERS.** Tension on the Tyvek® ThermaWrap™ R5.0 will reduce the thickness and R-value.



STEP 2

Along the top edge of the roll, there is an area for fastening. In the "fasten here" area, attach the DuPont™ Tyvek® ThermaWrap™ R5.0 to each stud using

- DuPont™ Tyvek® Wrap Cap Staples for Crossfire
- DuPont™ Tyvek® Wrap Cap nails or DuPont recommended cap fastener



STEP 3

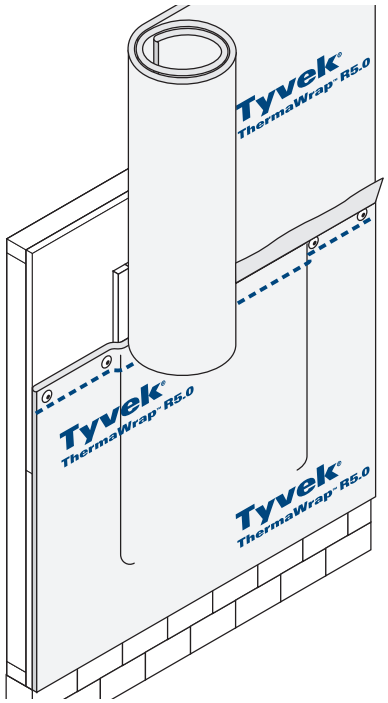
Install first roll. Continue around the structure installing the next roll making sure the vertical edge of the insulation butts against the vertical edge of the previous roll.

STEP 4

Continue to unroll the product around the structure until the first course is complete. Cut the Tyvek® ThermaWrap™ R5.0 1-1/2″ beyond corner of the structure.

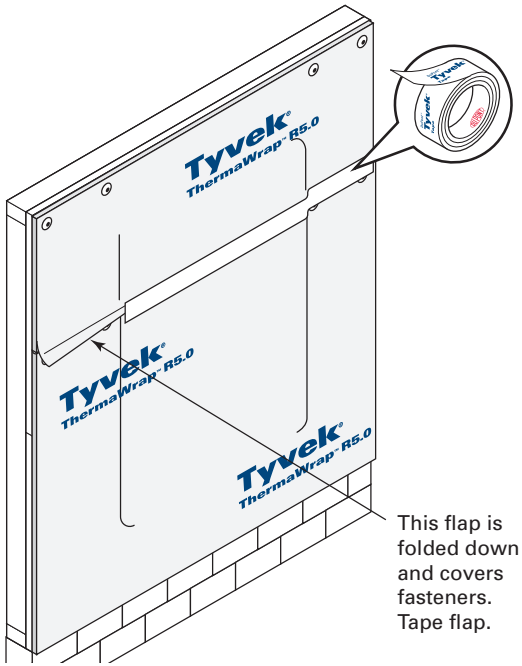
STEP 5

Install the next and subsequent courses the same as the first. Ensure the bottom edge of the insulation butts against the top edge of the prior course.



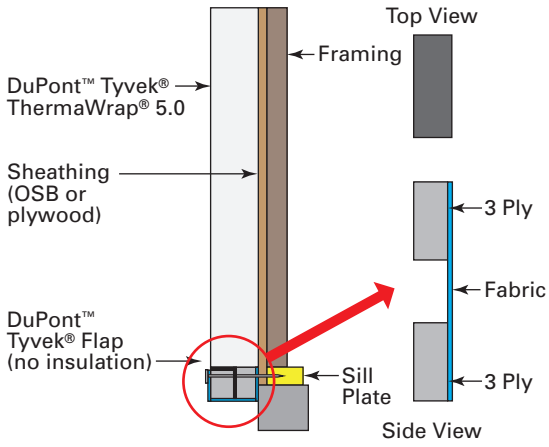
STEP 6

Fold horizontal and vertical flaps and tape all seams with 2" DuPont™ Tyvek® Tape. Seal the bottom edge.



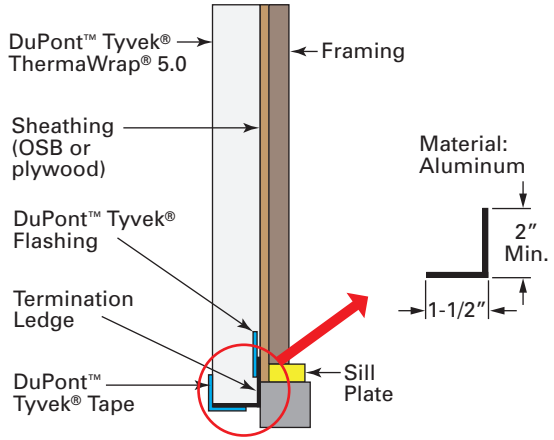
- If using the Termination Strip secure the bottom Tyvek® flap to termination strip by folding up the bottom half of the strip and securing with staple or nail.

Termination Strip



- If using the termination ledge, secure the bottom Tyvek® flap to termination strip with DuPont™Tyvek® Tape.

Termination Ledge



- If a termination accessory is not used, seal the wrap at the bottom of the wall with DuPont™ Residential sealant, DuPont™ recommended sealant DuPont™ Tyvek® Tape, DuPont™ StraightFlash™ or DuPont™ Flashing Tape.

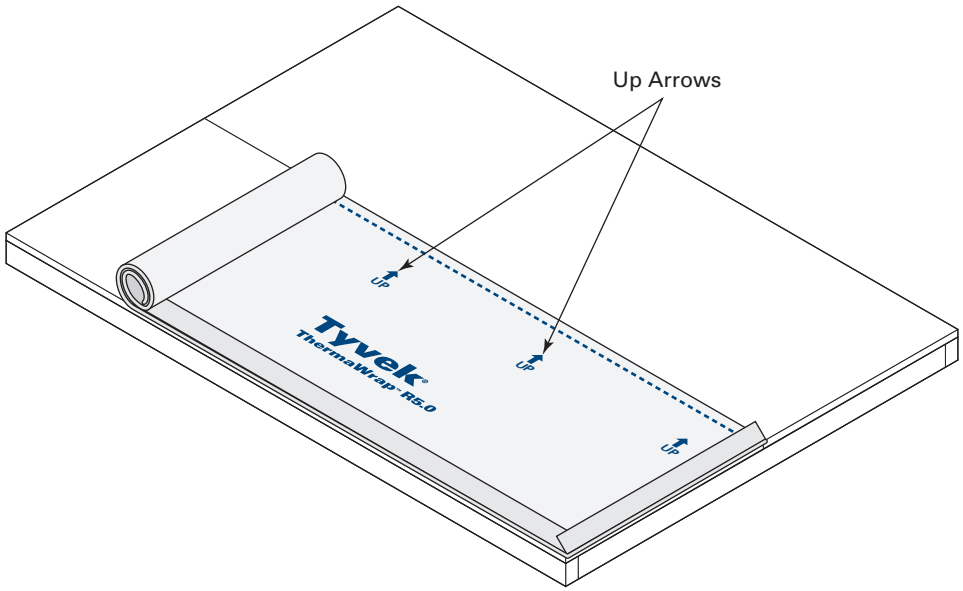
Tilt Wall

First Floor

STEP 1

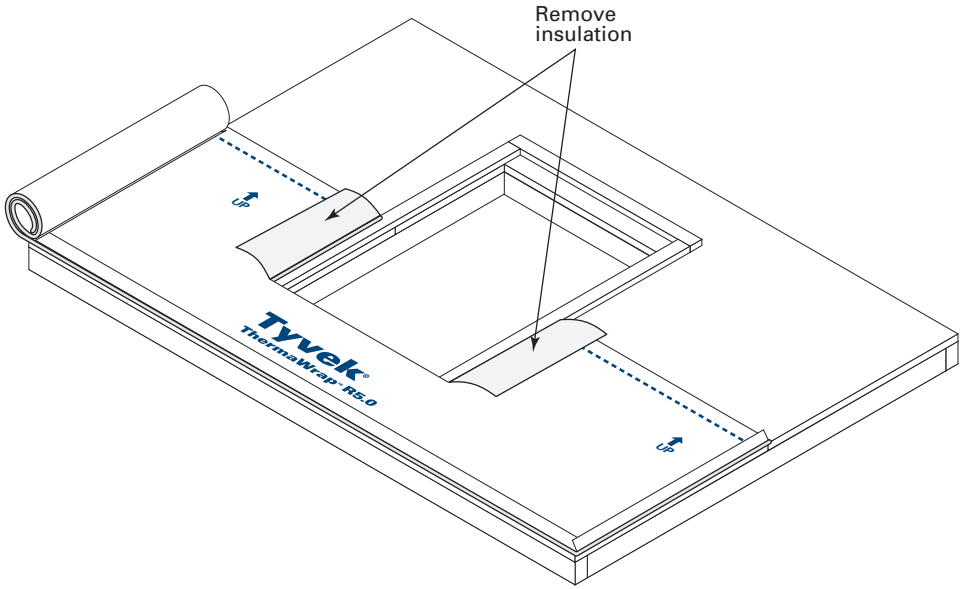
Provide enough insulation overhanging the bottom edge of the wall so that when the wall is tilted upright the bottom of the wall termination can be completed. Be sure to include material for rim board.

Determine the amount of material overhanging and subtract this distance from the width of a roll of Tyvek® ThermaWrap™ R5.0 (4 ft.). Strike a chalk line this distance above the bottom edge of the wall. There are "UP" arrows printed on the Tyvek. Starting at the edge of the wall unroll the Tyvek® ThermaWrap™ R5.0 so the "UP" arrows will point upwards to the top of the wall after the wall is tilted. Leave a minimum of 6" flap at the beginning. This may require the creation of a flap (See Continuity on page 13).



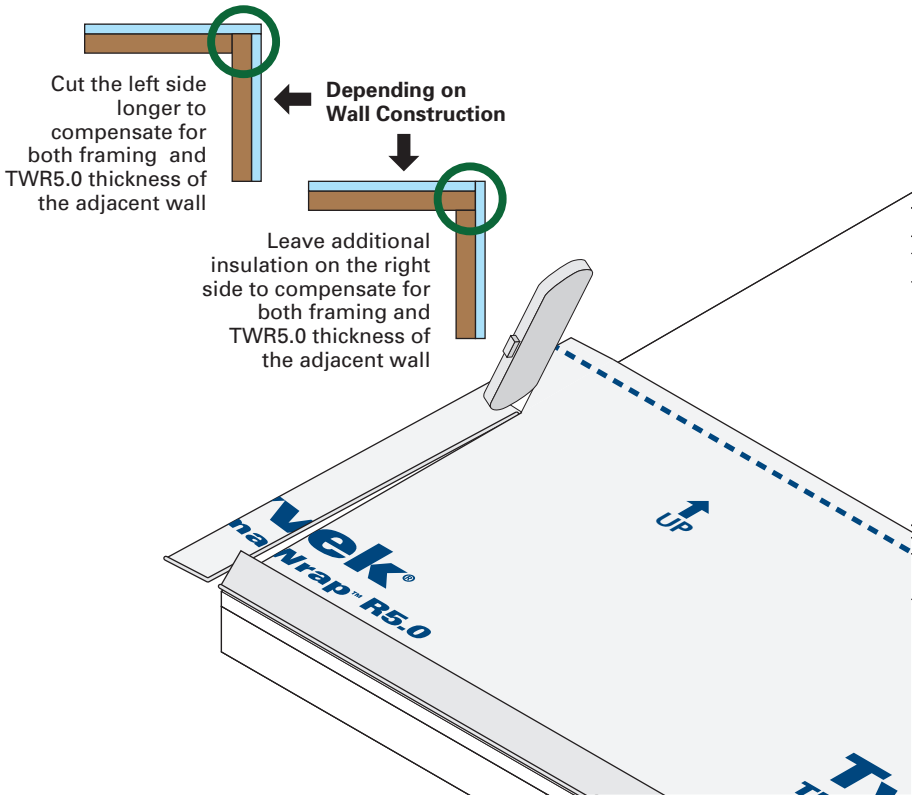
STEP 2

At window and door openings, cut the TWR5.0 on the first side long enough to extend to the back of the window opening. Separate insulation from Tyvek® back to the outside edge of the bump out frame. Cut and remove insulation along outside edge of bump out frame. Fold Tyvek® flap into window opening. Do the same for the other side of the opening.



STEP 3

At the end of the panel, cut the Tyvek® ThermaWrap ™ R5.0 flush with the edge of the wall. At all corners, leave additional ThermaWrap™ R5.0 to accommodate thickness of framing and Tyvek® ThermaWrap™ R5.0 on adjacent wall. Secure along the top edge into every stud.



STEP 4

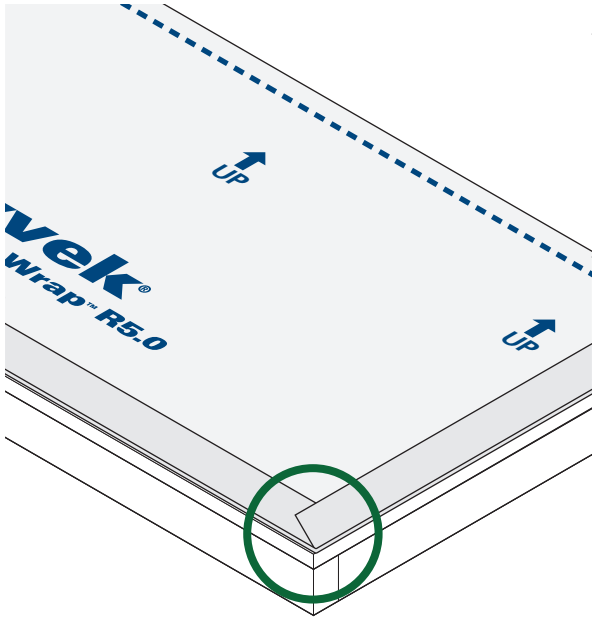
Install the 2nd course the same as the first course.

STEP 5

For single story structures, unroll 3rd course, fasten along top edge and cut off excess. For multiple story structures, it's not necessary to install a 3rd course at this time.

STEP 6

Fold back any material hanging over the bottom edge of the wall. This will prevent the material from getting pinched when the wall is raised.



STEP 7

As each wall section is raised, ensure the bottom of the insulation butts against the termination accessory or overlaps the sill plate.

Second Floor and above

STEP 8

For multiple story structures or sides with gables, the exposed sheathing can be covered when the DuPont™ Tyvek® ThermaWrap™ R5.0 is installed on the second and successive stories or gables. When installing the DuPont™ Tyvek® ThermaWrap™ R5.0 on the story above the exposed sheathing, measure the amount of exposed sheathing below. Be sure to include the rim board. Subtract this amount from 4 ft. and strike a chalk line this distance from the bottom of the second story wall. Install the top edge of DuPont™Tyvek® ThermaWrap™ R5.0 along this line.

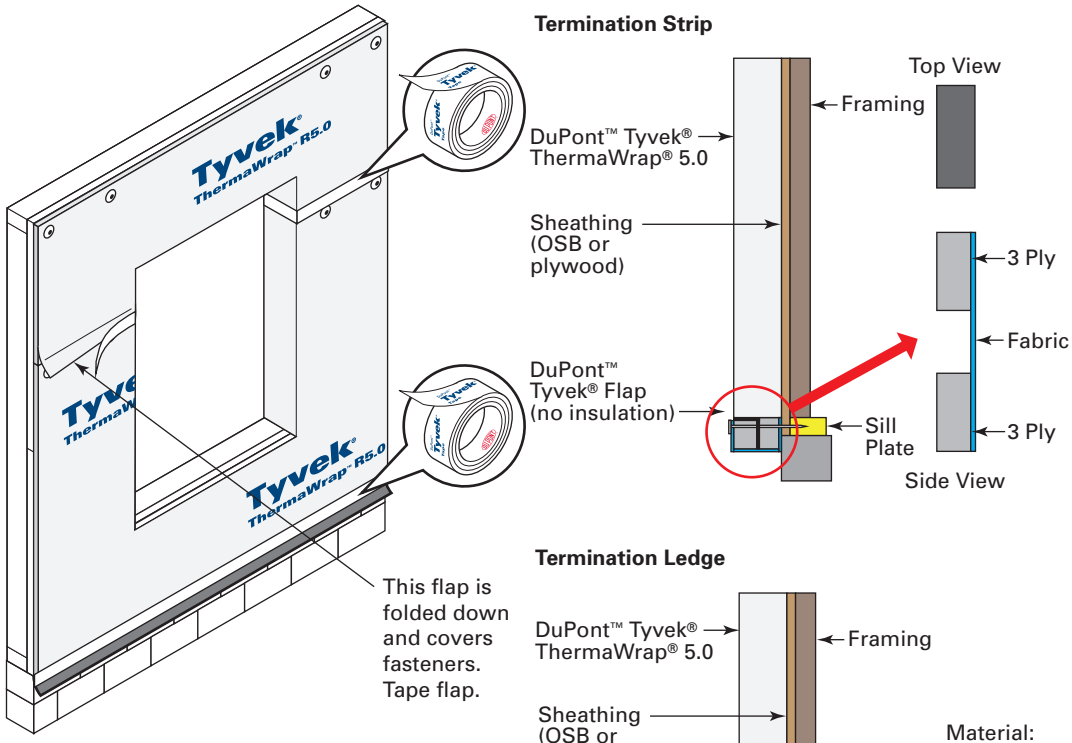
STEP 9

Fold back the material hanging over the wall. This will prevent the material from getting pinched when the wall is tilted.

STEP 10

Fold horizontal and vertical flaps and tape all seams with 2" DuPont™ Tyvek® Tape. Seal the bottom edge.

- If using the Termination Strip secure the bottom Tyvek® flap to termination strip by folding up the bottom half of the strip and securing with staple or nail.

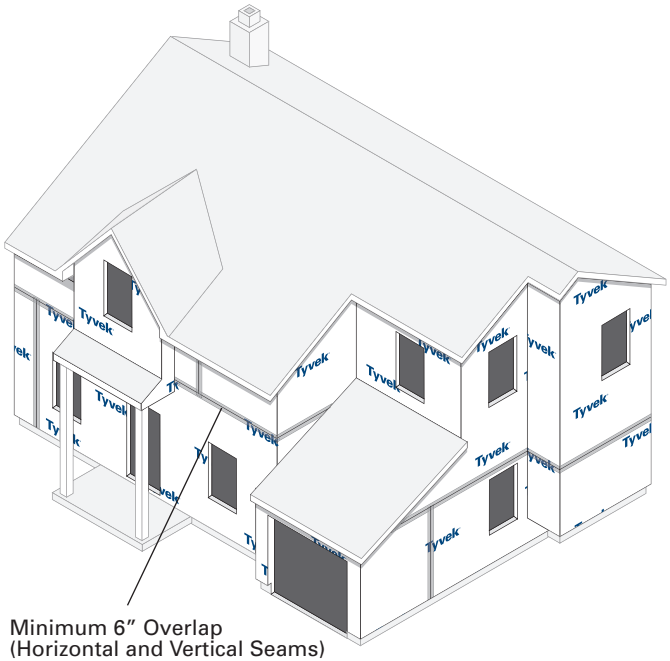


- If using the termination ledge, secure the bottom Tyvek® flap to termination strip with DuPont™ Tyvek® Tape.
- If a termination accessory is not used, seal the wrap at the bottom of the wall or with DuPont™ Residential sealant, DuPont™ recommended sealant DuPont™ Tyvek® Tape, DuPont™ StraightFlash™ or DuPont™ Flashing Tape

Continuity

It is essential to maintain the continuity of the water-resistive barrier from top to bottom including proper shingling with sufficient mechanical lapping. Continue wrapping all the way up the structure, overlapping the previous layer of DuPont™ Tyvek® WRB by a minimum of 6".

During installation of Tyvek® ThermaWrap™ R5.0, an uninsulated Tyvek® flap may be required to ensure shingling for proper water management. To create a flap, separate the insulation from the Tyvek® membrane a minimum of 6". Fold back the Tyvek® layer. Cut and remove the insulation without damaging the Tyvek® layer.

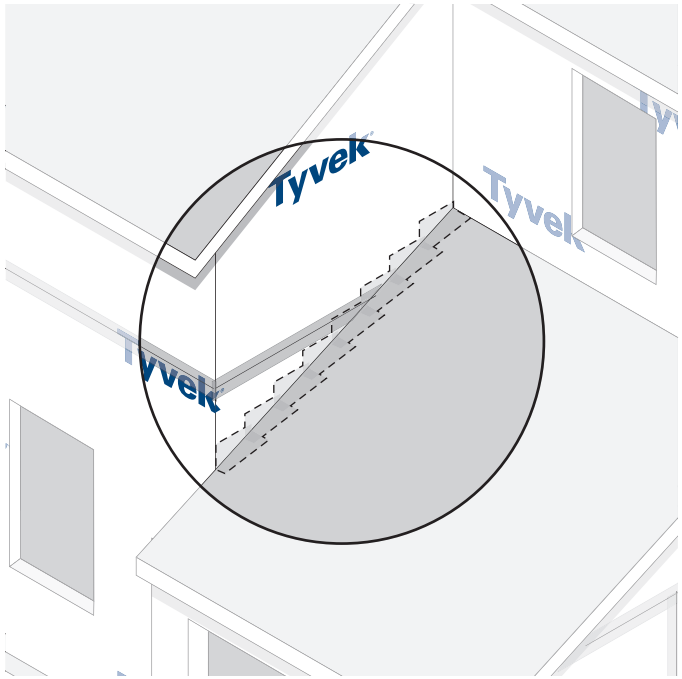


Terminations

Lap DuPont™ Tyvek® WRB over all flashing (e.g. step flashing, wall to roof intersections and thru-wall flashings).

Weep screeds and expansion joints need to be integrated with flashings and the water-resistive barrier.

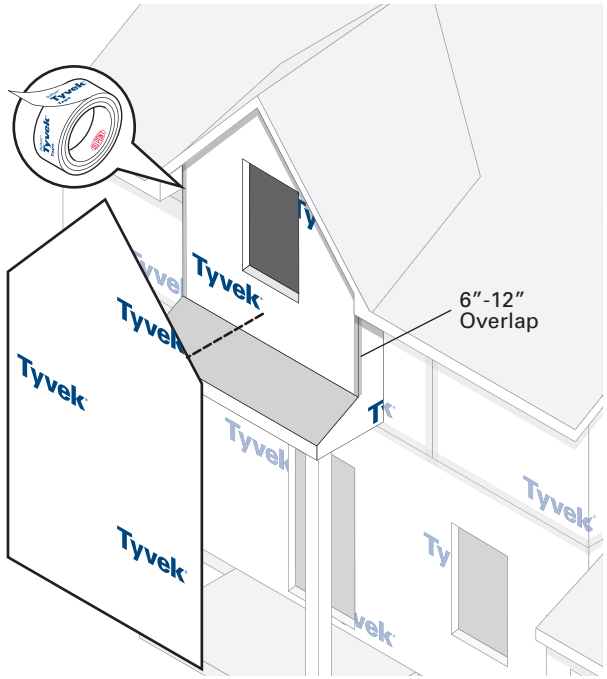
Tyvek® ThermaWrap™ R5.0 can be installed in in non rectangular areas. Continuity principles still apply.



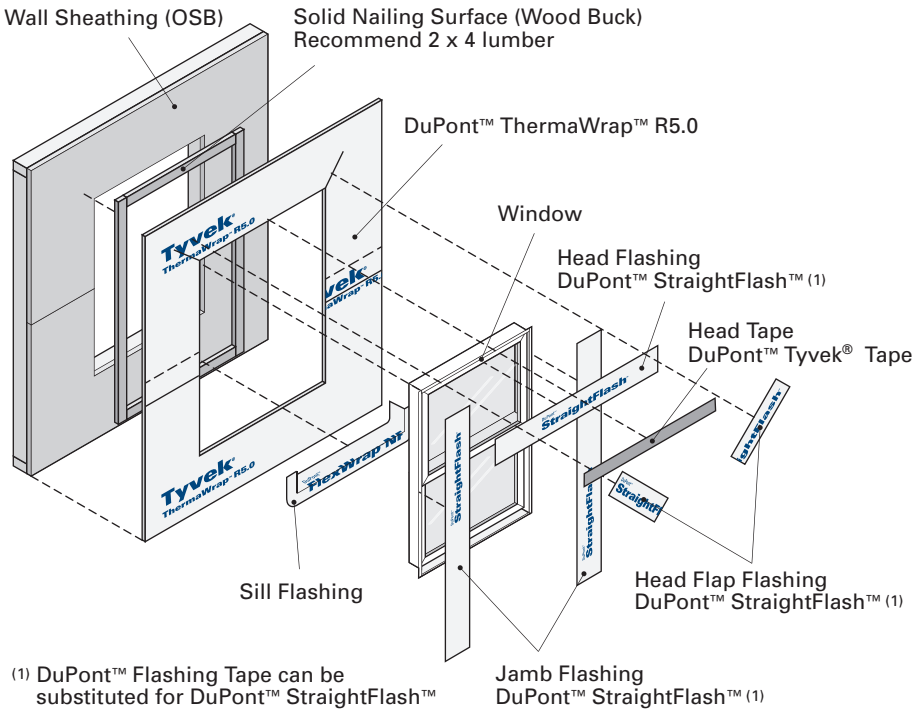
Gable Ends

It may not be necessary to install Tyvek® ThermaWrap™ R5.0 on gable ends to meet energy codes. If DuPont™ Tyvek® ThermaWrap™ R5.0 is not installed on the gables, use a Tyvek® water-resistive barrier. Additional furring may be required in order for all cladding to be on the same plane. Check local building codes for additional information.

Additional 2x4's may be required along the top of the gables to bump out the rake or to accommodate soffit material.



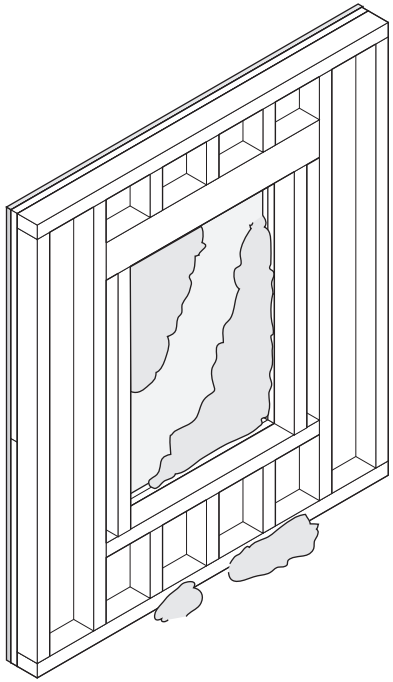
Window and Door Flashing (Window Installed After WRB)



(1) DuPont™ Flashing Tape can be substituted for DuPont™ StraightFlash™

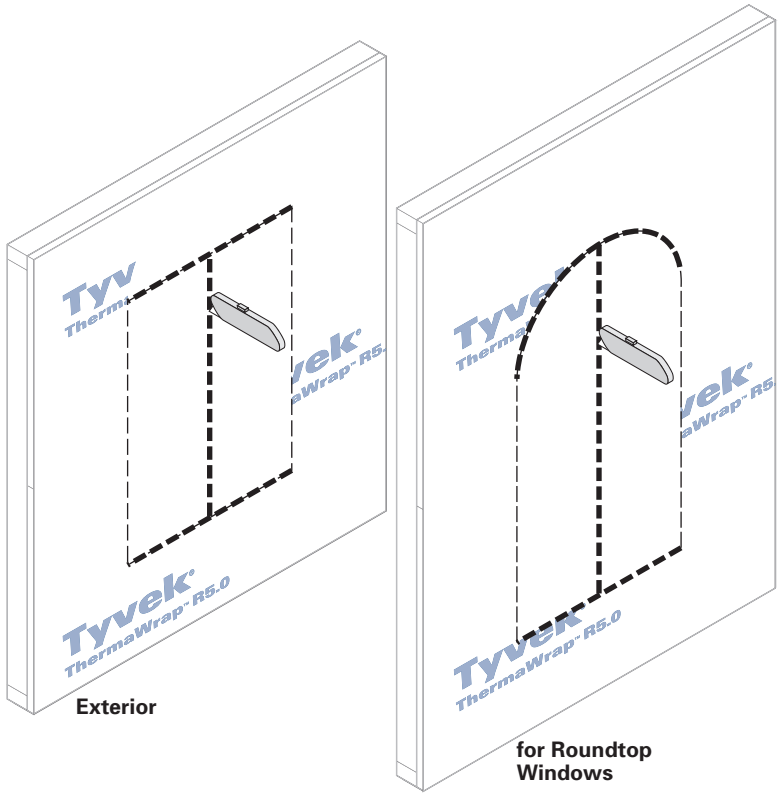
STEP 1

From the inside, remove the insulation from the window and door openings by separating it from the Tyvek® layer. Be careful not to damage the Tyvek® layer.



STEP 2

Make an "I-Cut " in the DuPont™ Tyvek® layer. Begin with a horizontal cut along the bottom and the top of the window frame (for round top windows, the cut should begin above the mull joint). From the center, cut straight down to the sill.

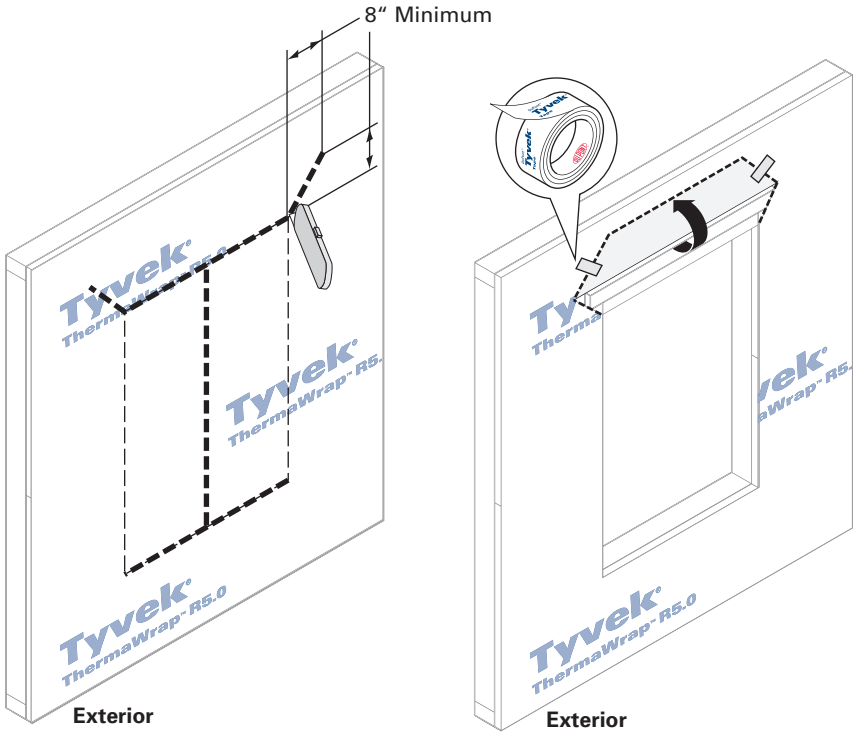


Exterior

for Roundtop Windows

STEP 3

Cut two 45 degree slits at a minimum of 8" extending from the corner of the window head up and away from the window opening. This will create a flap above the rough opening and expose the bump out frame. Remove the insulation fro m this flap by separating it from the DuPont™ Tyvek® layer and cutting along the horizontal. **Do not cut or damage the DuPont™ Tyvek®**. Fold back DuPont™ Tyvek® flap and temporarily secure with DuPont™ Tyvek® Seam Tape.



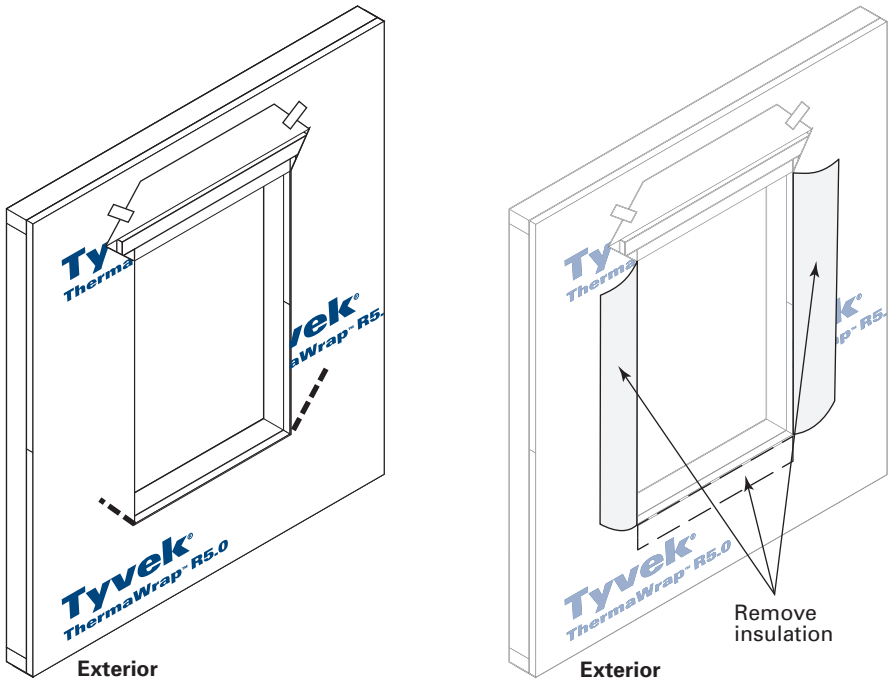
STEP 4

Carefully separate insulation from the Tyvek® layer along the sill and jambs.

Cut two 45° slits not to exceed 3" extending from the bottom corner up and away from the window opening. This will create a flap at each jamb and expose the bump out frame. Separate insulation from Tyvek® that sits on top of the bump out frame along both jambs. Cut and remove insulation along jamb. Do not damage the Tyvek®

Separate insulation from Tyvek® that sits on top of the bump out frame along the sill. Cut and remove insulation along jamb. Do not damage the Tyvek®. It is also acceptable to tuck this insulation along the edge of the bump out frame.

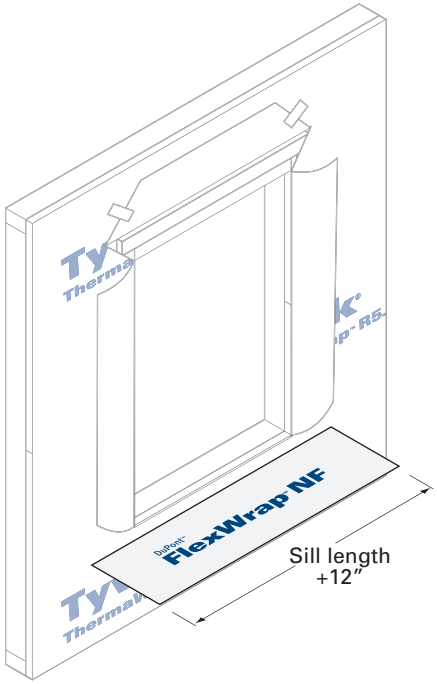
Ensure there is no insulation on top of the bump out frame. This can cause the cladding and trim to appear uneven around windows and doors.

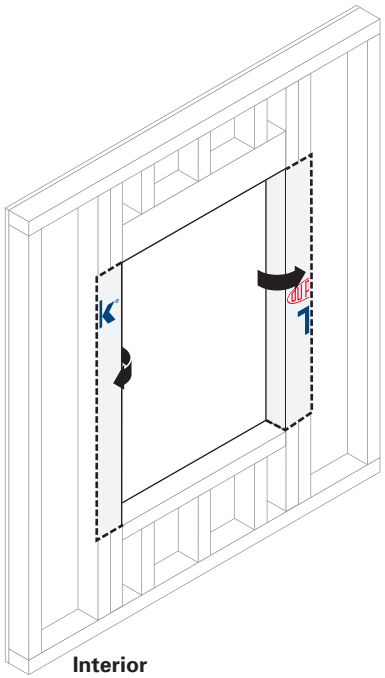


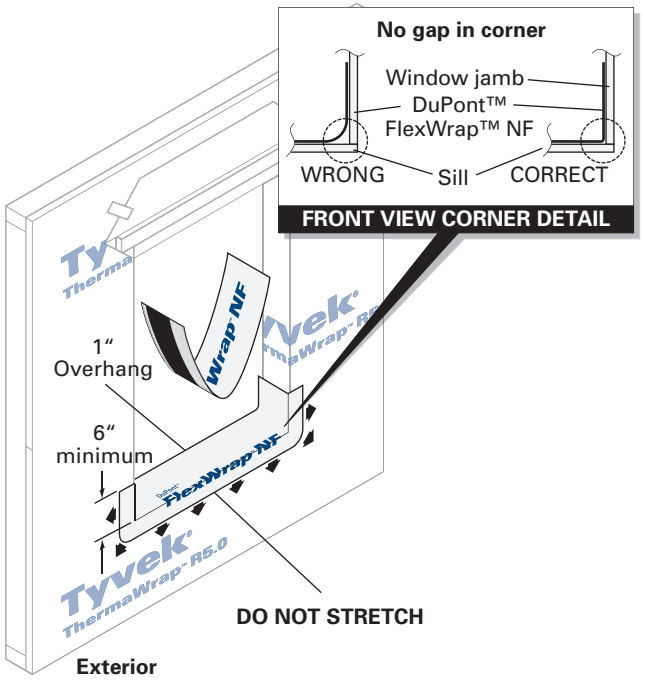
STEP 5

Cut DuPont™ FlexWrap™ NF at least 12" longer than the width of the rough opening sill. The FlexWrap™ NF must extend as far into the opening as the window and still maintain 2-3" on the face of the wall. Remove the first piece of the release paper, cover horizontal sill and adhere into rough opening along sill and up jambs (min. 6" on each side). Remove second release paper. Fan out DuPont™ FlexWrap™ NF at bottom corners onto face of wall. Coverage of DuPont™ FlexWrap™ NF should be 2"-3" onto the face of the wall.

Fold Tyvek® flaps to the inside and secure.

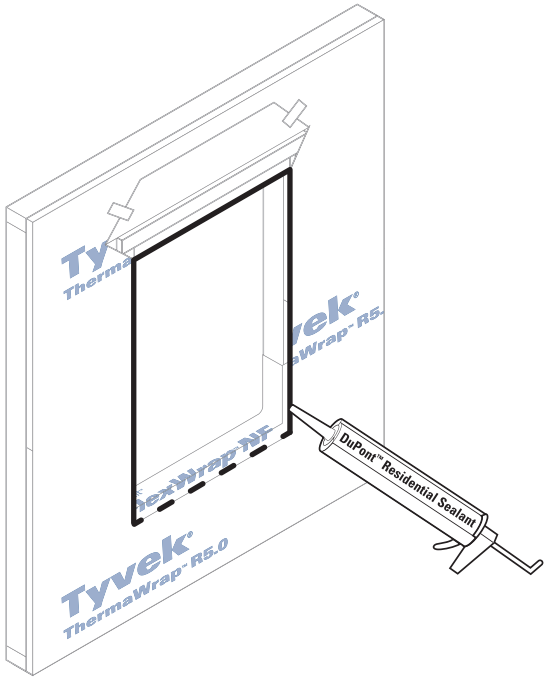






STEP 6

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



For Rectangular Windows

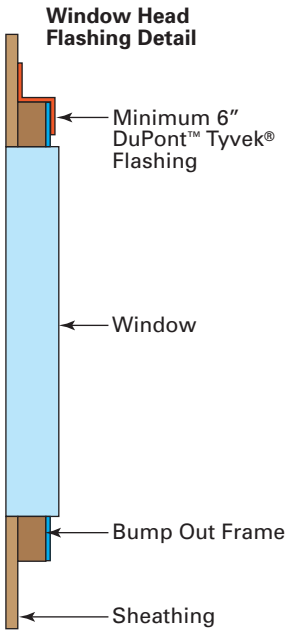
STEP 7

Install window according to manufacturer's instructions.

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

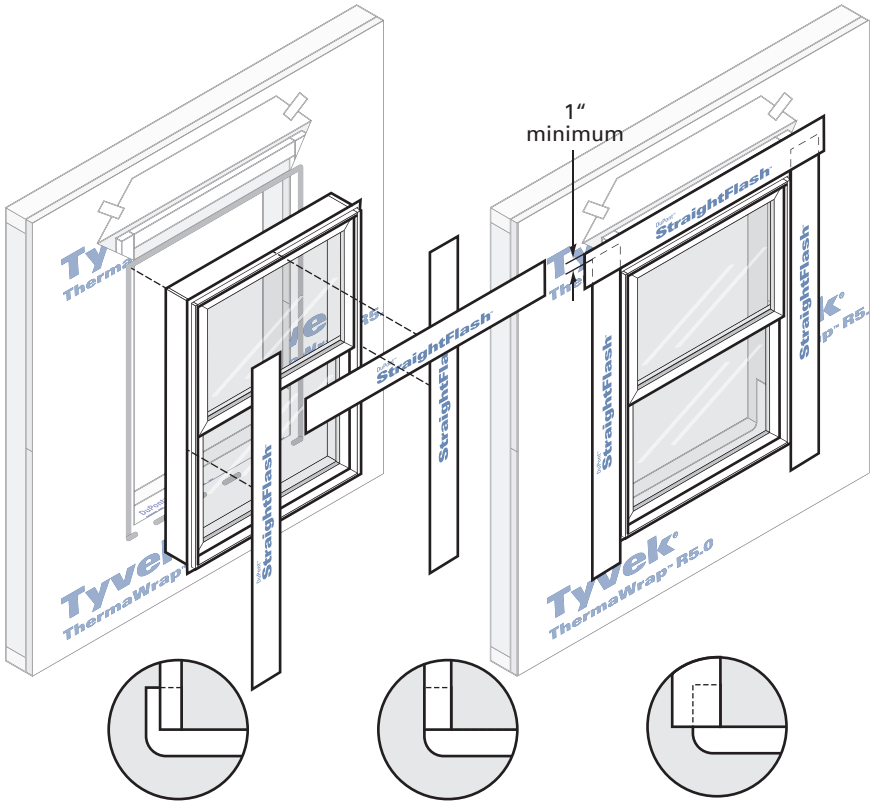
Cut a piece of DuPont™ StraightFlash™ or DuPont™ FlexWrap™ for head flashing, which extends beyond outer edges of jamb flashings. Remove release paper and install completely covering mounting flange and adhering to exposed sheathing or framing members.

For added protection against water intrusion, install a minimum of 6" flashing at the head. This will protect the interface between the bump out frame and the sheathing. Area should be clean and free of insulation fibers.



STEP 7 (CONTINUED)

NOTE: Maintain proper shingling. DuPont™ StraightFlash™, DuPont™ FlexWrap™ NF, or DuPont™ Flashing Tape at jambs must overlap the DuPont™ FlexWrap™ NF at the sill and adhere to the DuPont™ Tyvek® ThermaWrap™ R5.0 below the sill.



INCORRECT
DuPont™ FlexWrap™ NF reverse flashed

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

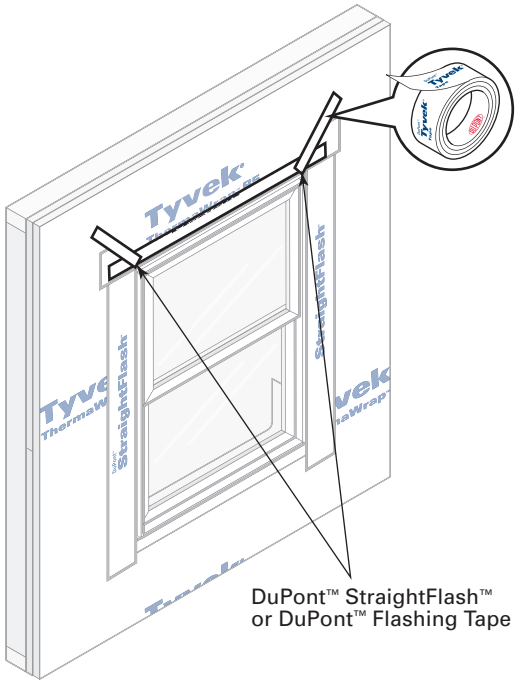
CORRECT
DuPont™ StraightFlash™ overlaps DuPont™ FlexWrap™ NF

STEP 8

Flip down upper flap of DuPont™ Tyvek® ThermaWrap™ R5.0 so it lays across head flashing.

Tape seams as shown. **DO NOT TAPE** at bottom of window. At the head, continuous tape seams as shown with DuPont™ Tyvek® Tape. Skip-taping at the head is acceptable, if an air barrier is not required or if additional drainage is desired.

Tape down diagonal seams of DuPont™ Tyvek® ThermaWrap™ R5.0.

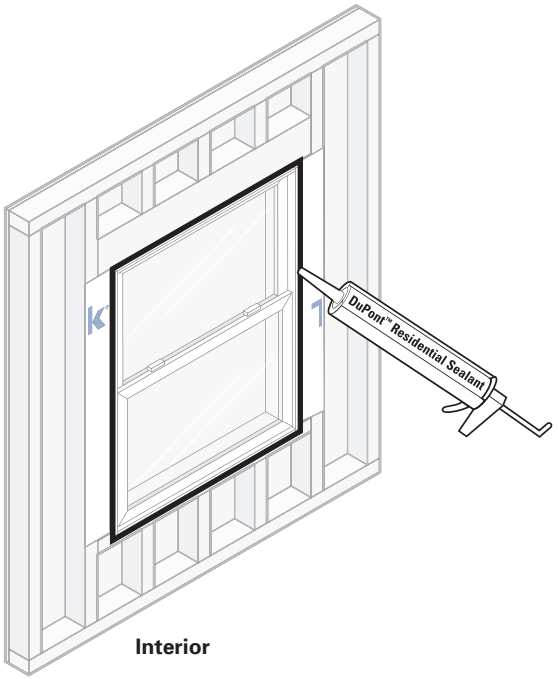


STEP 9

Final Step

Install DuPont™ Residential Sealant, or recommended sealant (and backer rod as necessary) around the window opening at the interior. It is also acceptable to use DuPont™ Window and Door Foam or recommended foam. The seal created by the sealant (and backer road as necessary) or foam will also serve as a back dam. DuPont™ Residential Sealant should be tooled flat to allow the natural curing process to create a concave shape. Be sure the sealant penetrates the grooves of the DuPont™ FlexWrap™ NF around the sill.

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



Interior

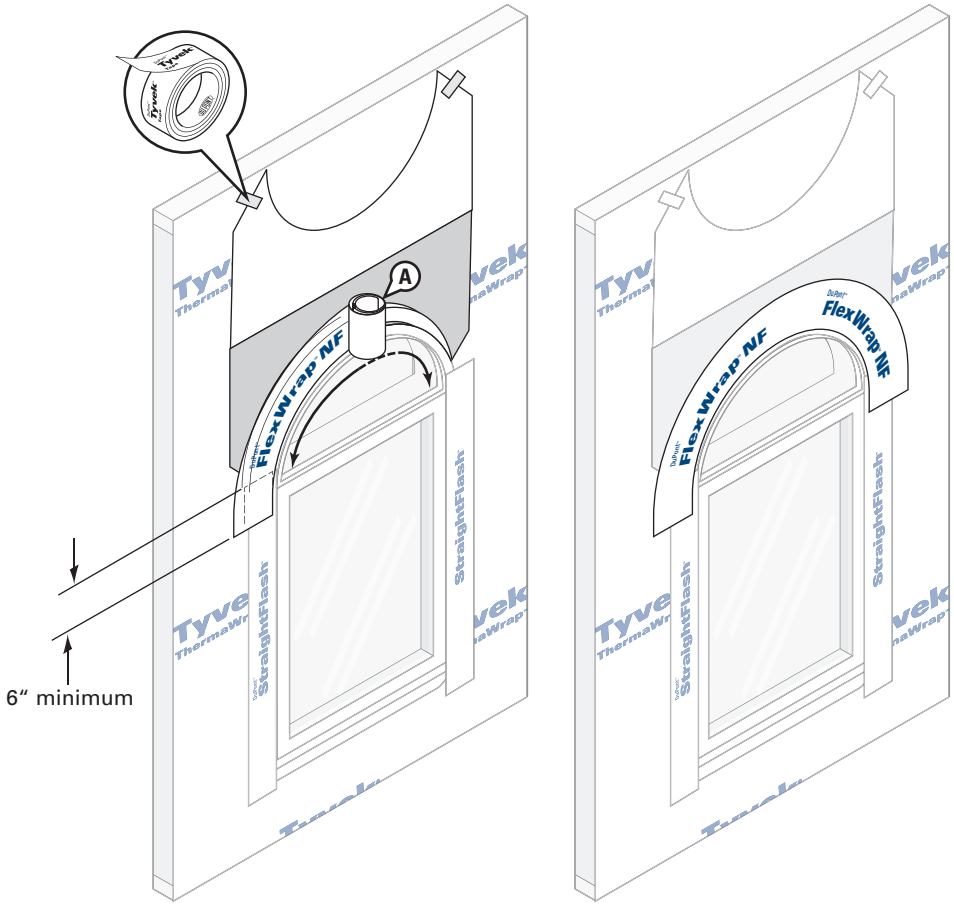
For Roundtop Windows

STEP 8

NOTE: Follow rectangular window instructions (Steps 1 through 7) for proper installation of sill and jamb flashing prior to head flashing installation.

A. Cut DuPont™ FlexWrap™ NF head flashing at least 12" LONGER than the arc length (H) of roundtop window.

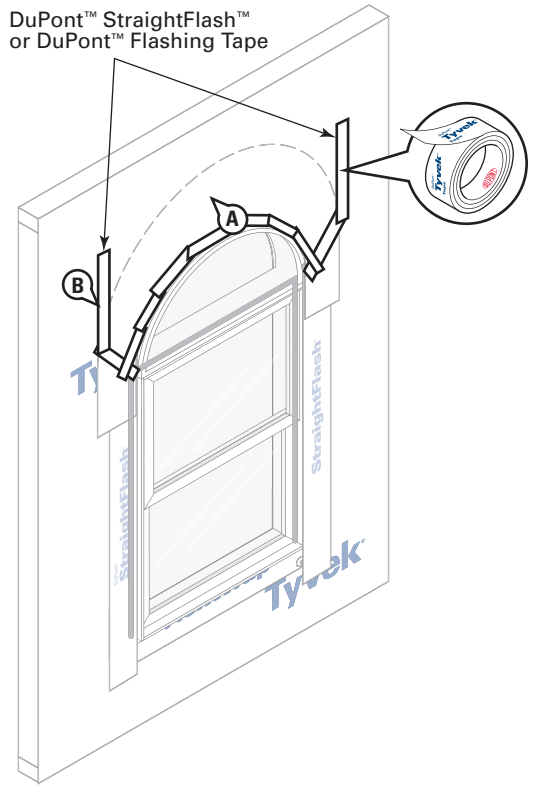
B. Remove both release papers and install to conform around top of window, covering entire mounting flange and adhering to exposed sheathing or framing members. Head flashing should overlap jamb flashings at least 6".



STEP 9

A. Flip down upper fl ap of DuPont™ Tyvek® WRB so it lays fl at across head flashing.

B. Tape seams as shown. DO NOT TAPE at bottom of window. At the head, continuous tape seams as shown with DuPont™ Tyvek® Tape. Skip-taping at the head is acceptable if an air barrier is not required or if additional drainage is desired.

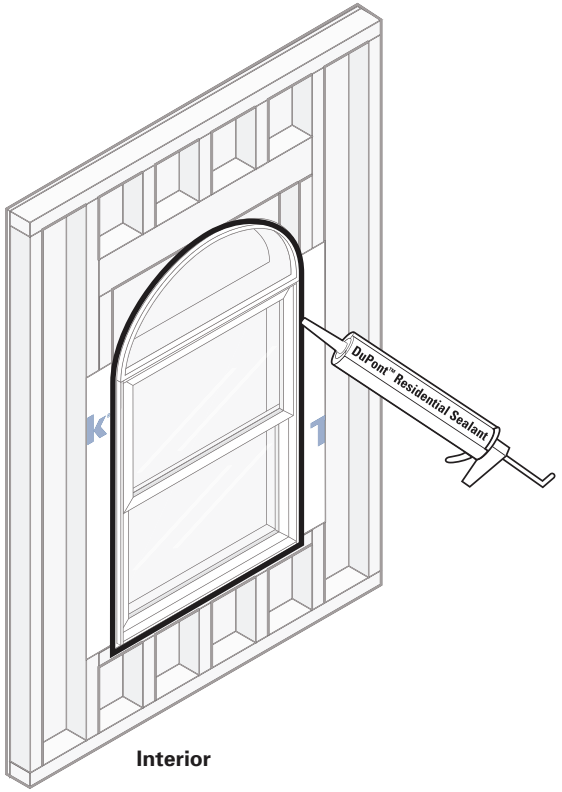


STEP 10

Final Step

Install DuPont™ Residential Sealant, or recommended sealant (and backer rod as necessary) around the window opening at the interior. It is also acceptable to use DuPont™ Window and Door Foam or recommended foam. The seal created by the sealant (and backer rod as necessary) or foam will also serve as a back dam. DuPont™ Residential Sealant should be tooled flat to allow the natural curing process to create a concave shape. Be sure that the sealant penetrates the grooves of the DuPont™ FlexWrap NF™ around the sill.

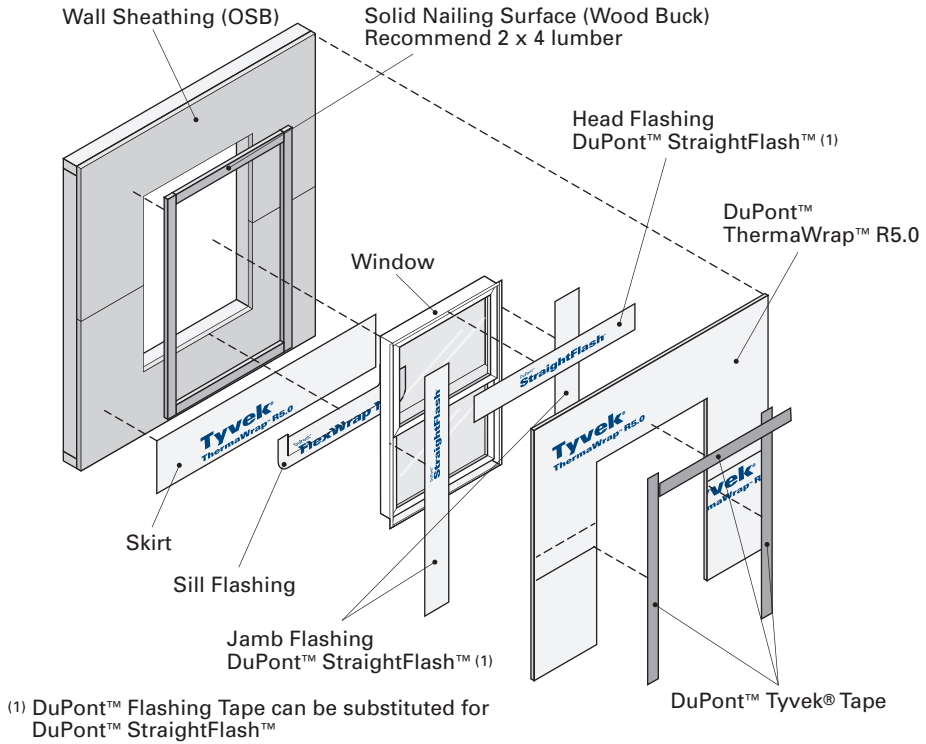
NOTE: Installations that specify a window/ door design rating of DP45 or greater require extra precautions. See General Instructions for performance requirements exceeding this design rating.



Interior

Window and Door Flashing (Window Installed Before WRB)

See page 4 for wood buck installation



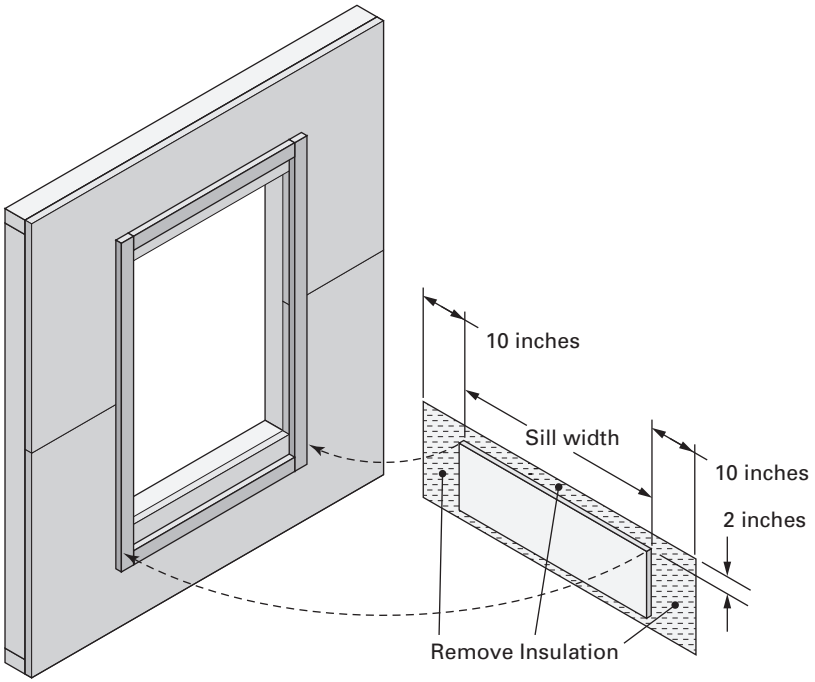
(1) DuPont™ Flashing Tape can be substituted for DuPont™ StraightFlash™

STEP 1

Create apron from DuPont™ Tyvek® ThermaWrap™ R5.0. Apron should extend at least 10″ beyond sides of rough opening and far enough below the rough opening to overlap the sill plate or the WRB below.

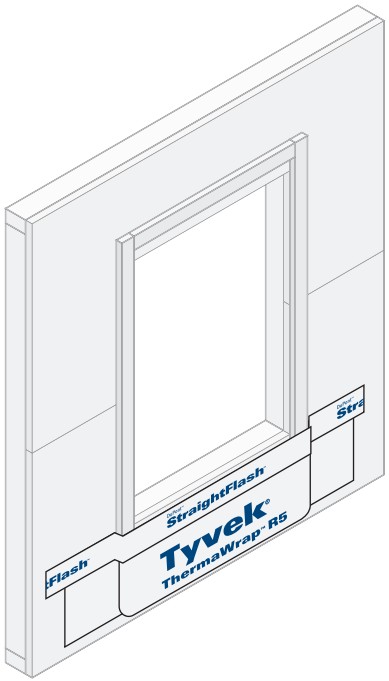
STEP 2

Before attaching, remove all insulation except the portion that will be directly under the window opening. Remove 2″ of insulation from the top.



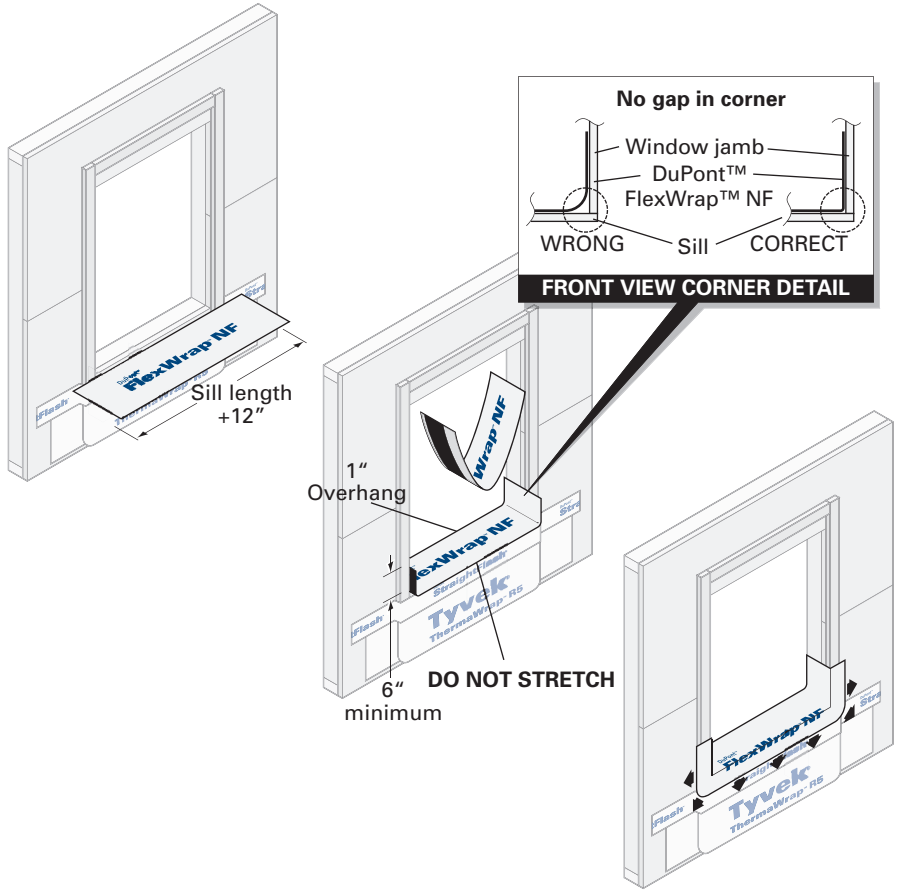
STEP 3

Using a piece of DuPont™ StraightFlash™, attached apron to the wood buck at the sill and the bottom of apron should be left free to overlap later with WRB installation. Make sure StraightFlash™ and apron conform to the edges of the bump out frame.



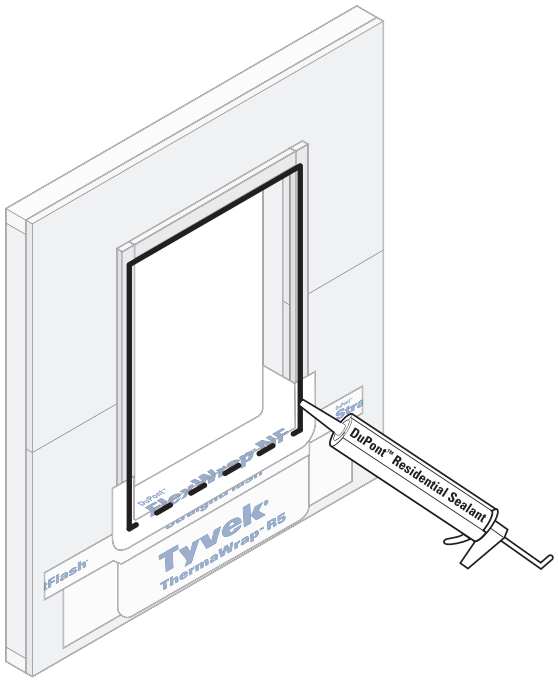
STEP 4

Cut DuPont™ FlexWrap™ NF at least 12" longer than the width of the rough opening sill. The FlexWrap™ NF must extend as far into the opening as the window and still maintain 2-3" on the face of the wall. Remove the first piece of the release paper, cover horizontal sill and adhere into rough opening along sill and up jambs (min. 6" on each side). Remove second release paper. Fan out DuPont™ FlexWrap™ NF at bottom corners onto face of wall. Coverage of DuPont™ FlexWrap™ NF should be 2"-3" onto the face of the wall.



STEP 5

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

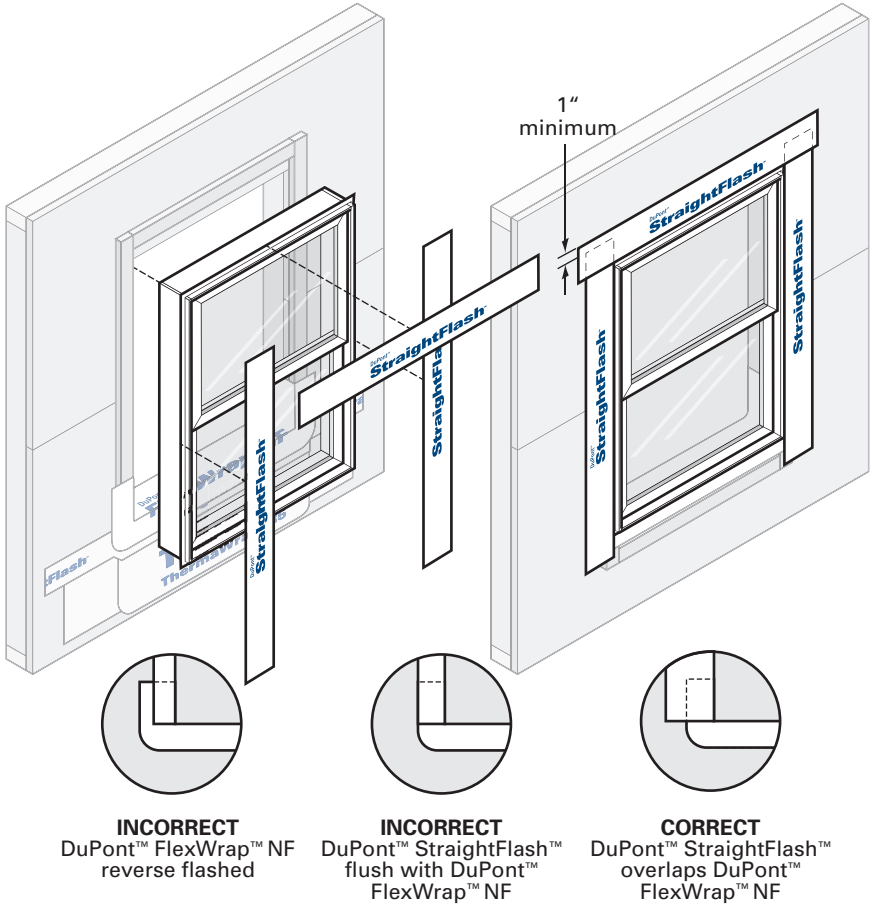


STEP 6

Install window according to manufacturer's instructions.

Cut two pieces of DuPont™ StraightFlash™ or DuPont™ FlexWrap™ NF or jamb flashing extending 1″ above window head flange and below bottom edge of sill flashing. Remove release paper and press tightly along sides of window frame.

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



INCORRECT
DuPont™ FlexWrap™ NF reverse flashed

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

CORRECT
DuPont™ StraightFlash™ overlaps DuPont™ FlexWrap™ NF

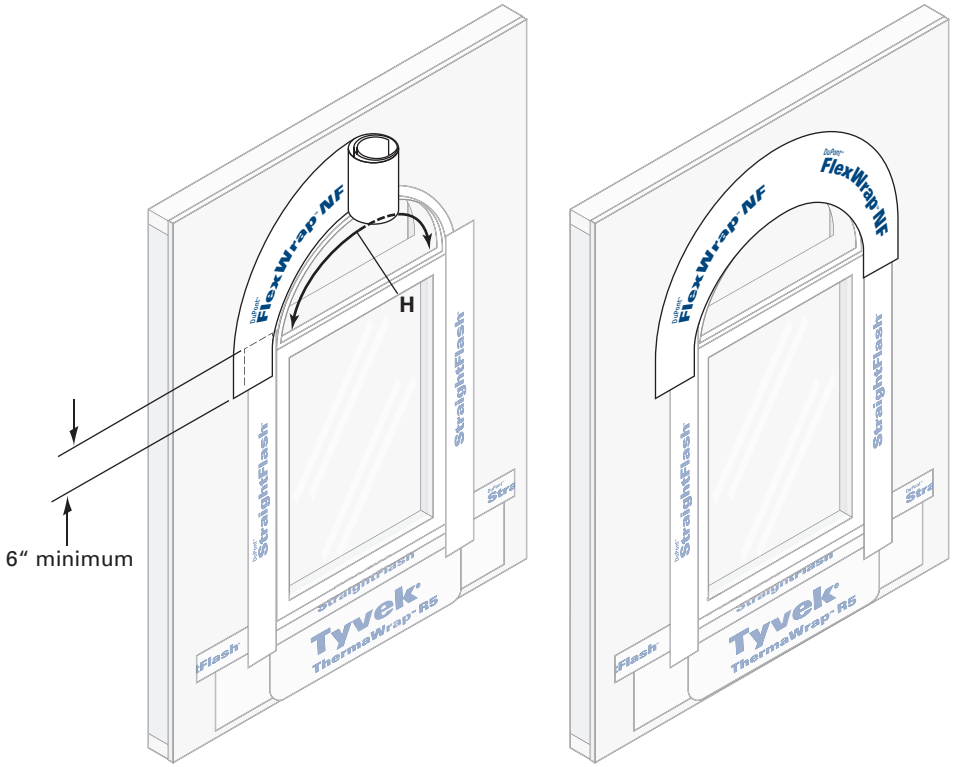
For Roundtop Windows

STEP 7

NOTE: Follow rectangular window instructions (Steps 1 through 6) for proper installation of sill and jamb flashing prior to head flashing installation.

Cut head flashing at least 12" longer than the arc length of round top window.

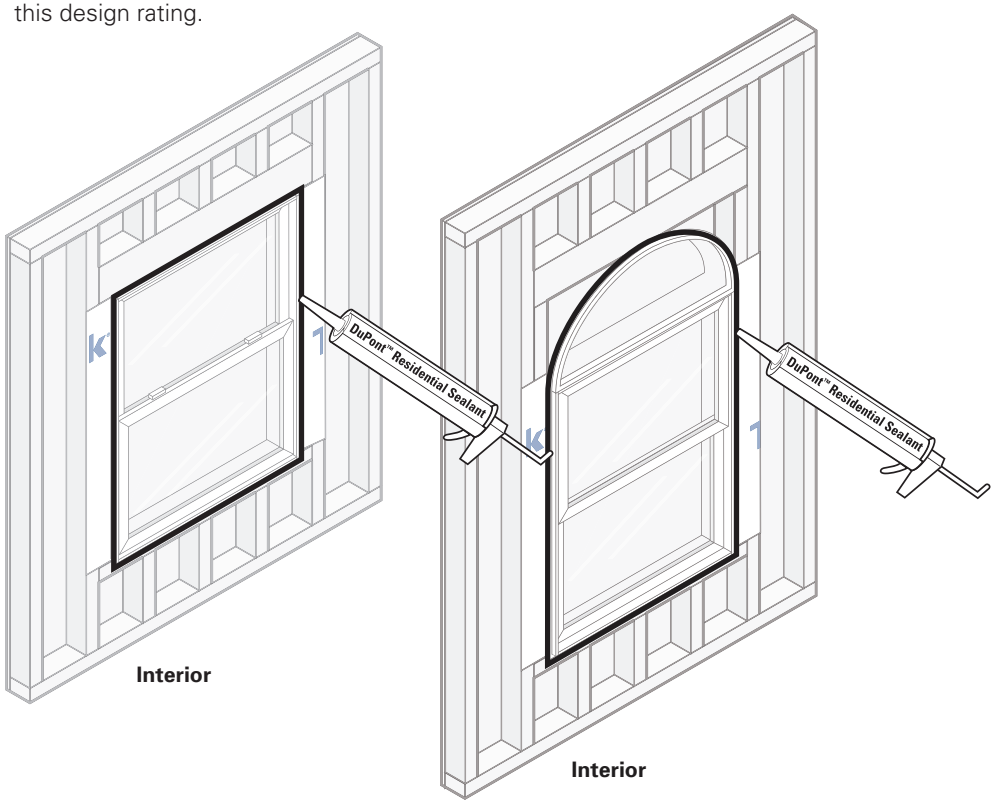
Remove both release papers and install to conform around top of window, covering entire mounting flange and adhering to exposed sheathing or framing members. Head flashing should overlap jamb flashings at least 6".



STEP 8

Install DuPont™ Residential Sealant, or recommended sealant (and backer rod as necessary) around the window opening at the interior. It is also acceptable to use DuPont™ Window and Door Foam or recommended foam. The seal created by the sealant (and backer road as necessary) or foam will also serve as a back dam. DuPont™ Residential Sealant should be tooled flat to allow the natural curing process to create a concave shape. Be sure the sealant penetrates the grooves of the DuPont™ FlexWrap™ NF around the sill.

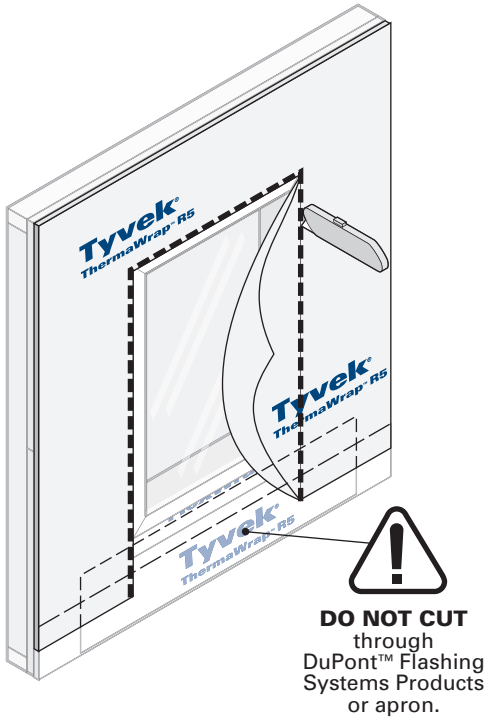
NOTE: Installations that specify a window /door design rating of DP45 or greater require extra precautions. See General Instructions for performance requirements exceeding this design rating.

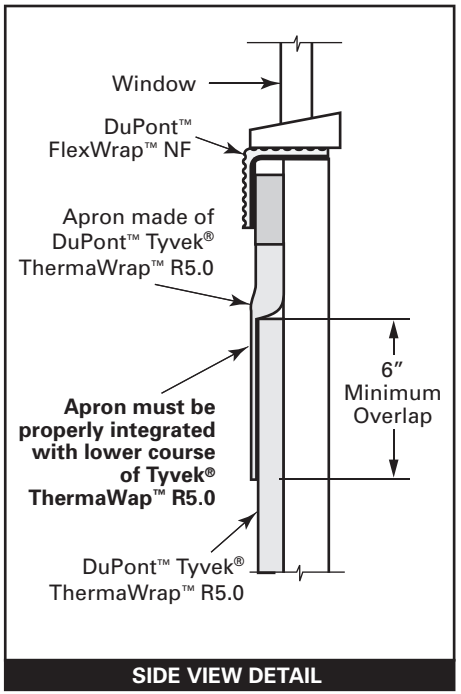


STEP 9

A. After wrapping Tyvek® ThermaWrap™ R5.0, cut as shown to expose window and apron. (Refer to page 4 to install Tyvek® ThermaWrap™ R5.0 properly).

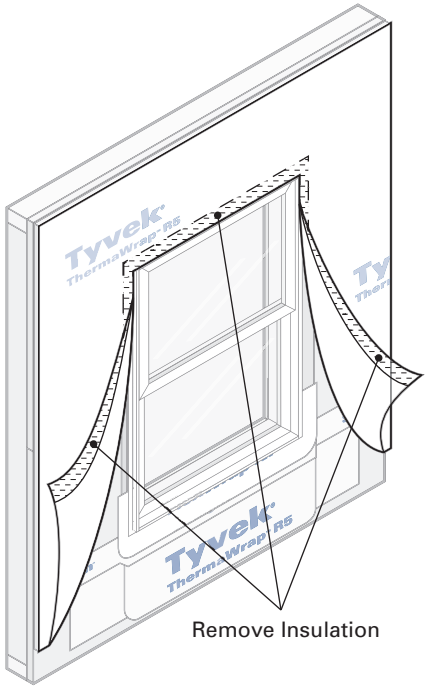
DO NOT CUT THROUGH DUPONT™ FLASHING SYSTEMS PRODUCTS OR APRON





STEP 10

Remove insulation that overlaps wood buck at the jambs. At the window head, carefully separate insulation from Tyvek® and push behind wood buck.



STEP 11

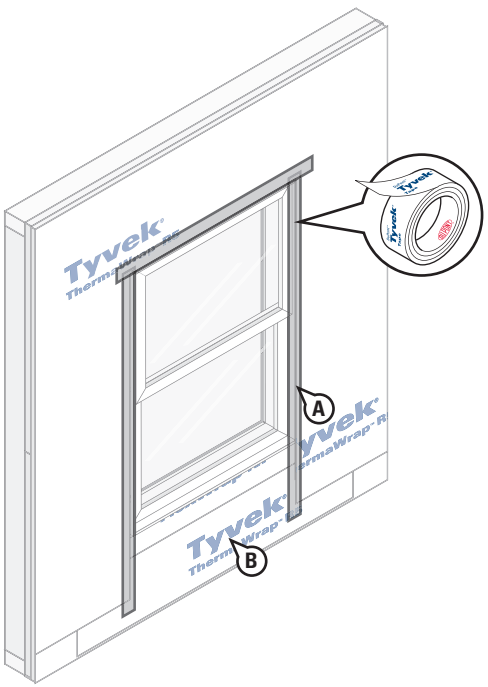
Final Step

A. Tape seams as shown. **DO NOT TAPE** at bottom of window. At the head, continuous tape seams as shown with DuPont™ Tyvek® Tape; if an air barrier is not required or if additional drainage is desired, then skip-tape at the head.

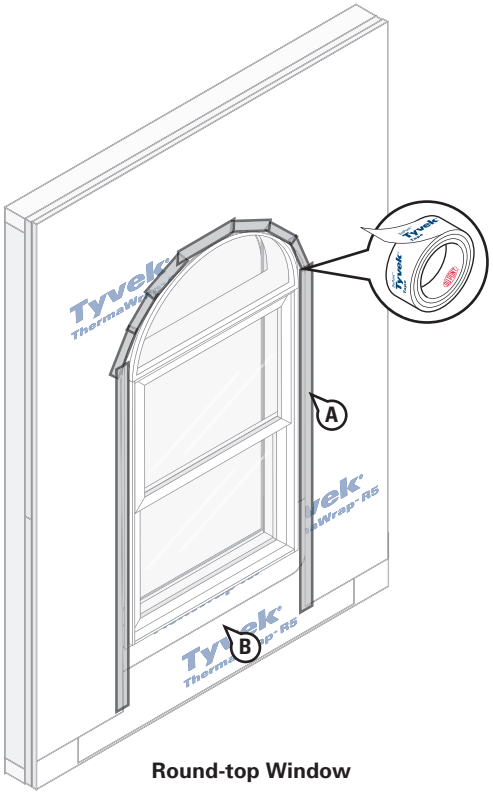
B. Lap bottom of apron and WRB over building materials below for proper shingling.

Alternate Tape Detail

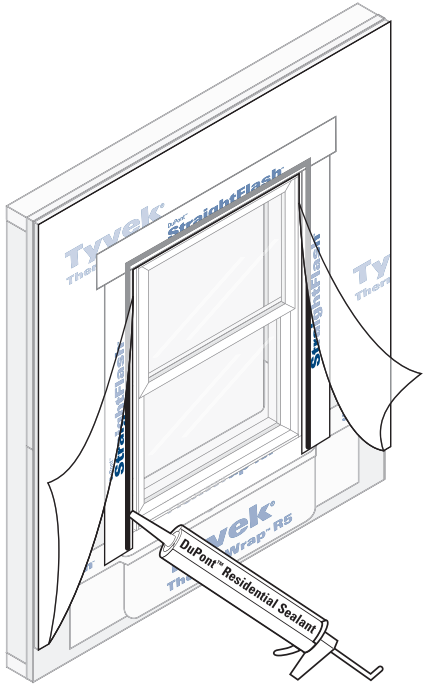
Place a continuous bead of DuPont™ Residential Sealant, or recommended sealant around the jambs and head flashing, under the DuPont™ Tyvek® WRB, pressing the DuPont™ Tyvek® WRB securely into the sealant.



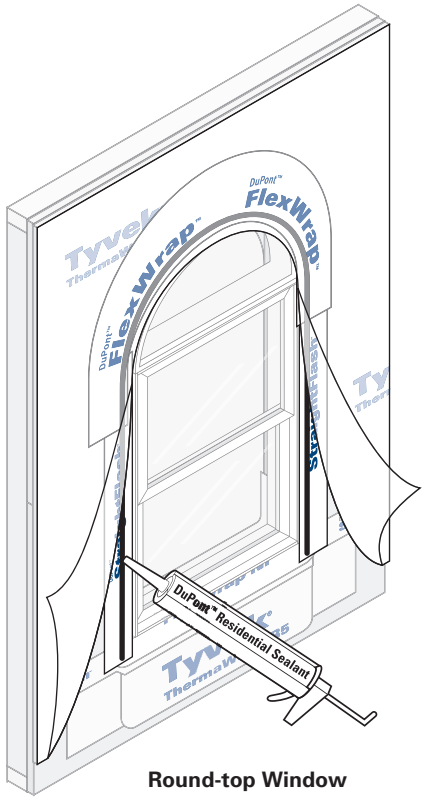
Rectangular Window



Round-top Window



Rectangular Window



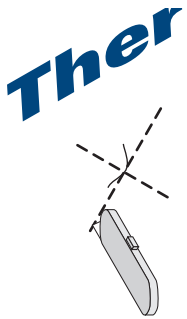
Round-top Window

Flashing Pipe Penetrations

Drilling through DuPont™ Tyvek® ThermaWrap™ R5.0 will damage the insulation. Use appropriate size boxes to compensate for the thickness of the DuPont™ Tyvek® ThermaWrap™ R5.0

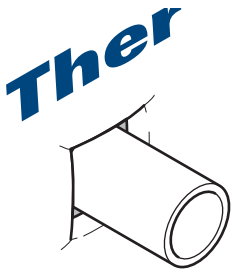
STEP 1

Make a small cut in the Tyvek® ThermaWrap™ R5.0. Expose wall sheathing and drill hole for pipe.



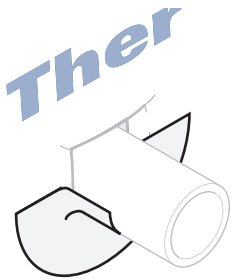
STEP 2

Install pipe and trim Tyvek® ThermaWrap™ R5.0 around the perimeter.



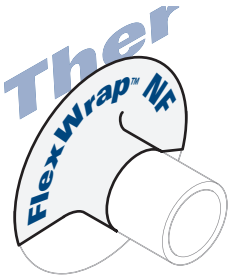
STEP 3

Install DuPont™ Tyvek® FlexWrap® NF starting with a piece at the bottom



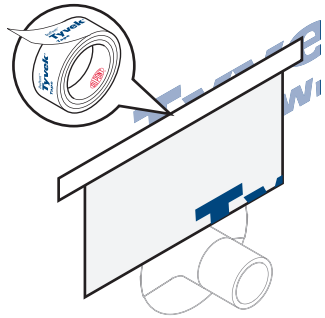
STEP 4

Install a piece of DuPont™ Tyvek® FlexWrap® NF at the top ensuring it overlaps the bottom piece a minimum of 2".



STEP 5

Tape a piece of DuPont™ Tyvek® over the DuPont™ FlexWrap™

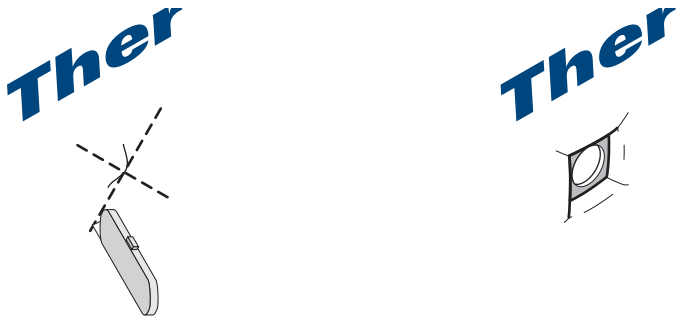


Flashing Electrical Box

NOTE: Different size electrical box or extensions may be required to compensate for thickness of Tyvek® ThermaWrap™ R5.0

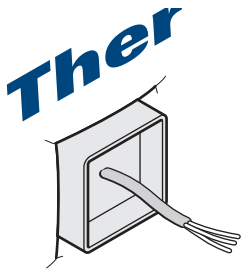
STEP 1

Make a small cut in the Tyvek® ThermaWrap™ R5.0. Expose sheathing and drill hole for wire.



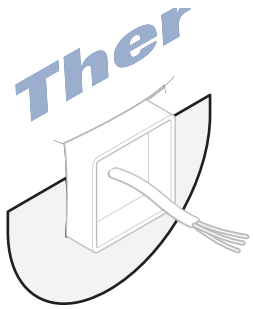
STEP 2

Pull wire through insulation and box. Secure box to the exterior of the structure.



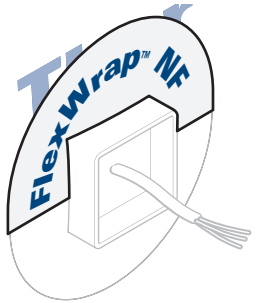
STEP 3

Install DuPont™ Tyvek® FlexWrap® NF starting with a piece at the bottom.



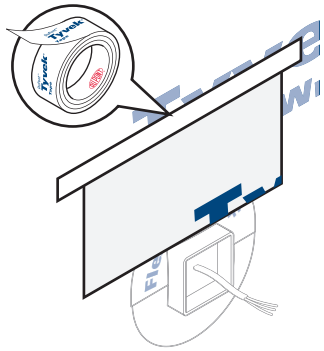
STEP 4

Install a piece of DuPont™ Tyvek® FlexWrap® NF at the top ensuring it overlaps the bottom piece a minimum of 2".



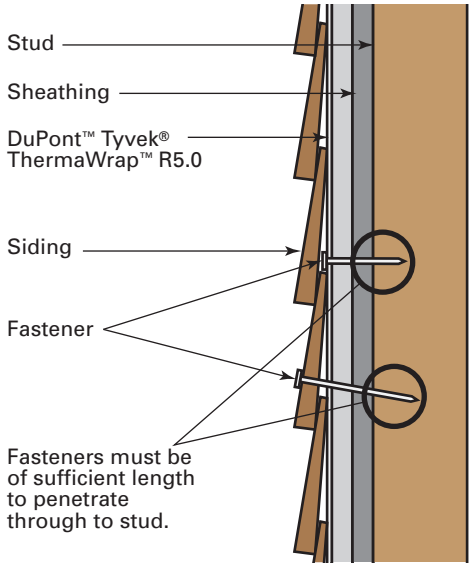
STEP 5

Tape a piece of DuPont™ Tyvek® over the DuPont™ FlexWrap™



Cladding Installation

Install cladding per manufactures guidelines and code requirements. Fasteners must be 1-1/2" longer to compensate for the thickness of the Tyvek® ThermaWrap™ R5.0 and to meet the required penetration into the structural member.

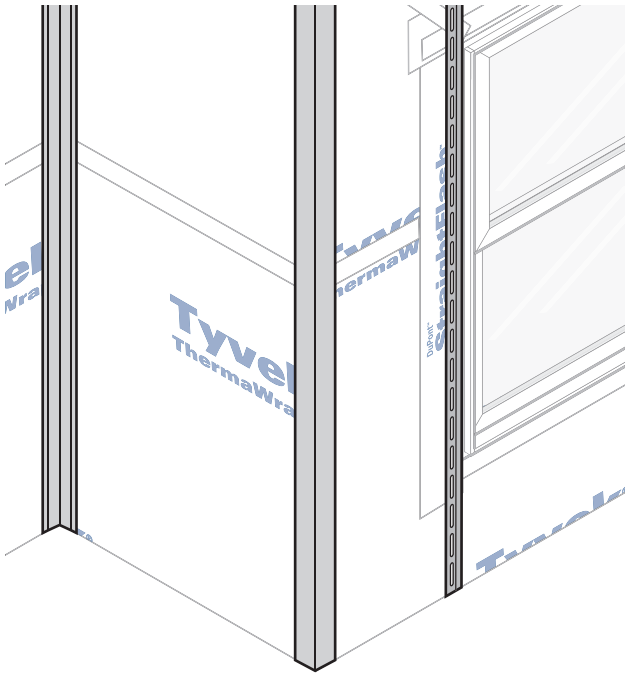


Vinyl Cladding Installation

When installing cladding fasteners, do not compress the DuPont™ Tyvek® ThermaWrap™ R5.0. Compressing the product will reduce the thermal resistance.

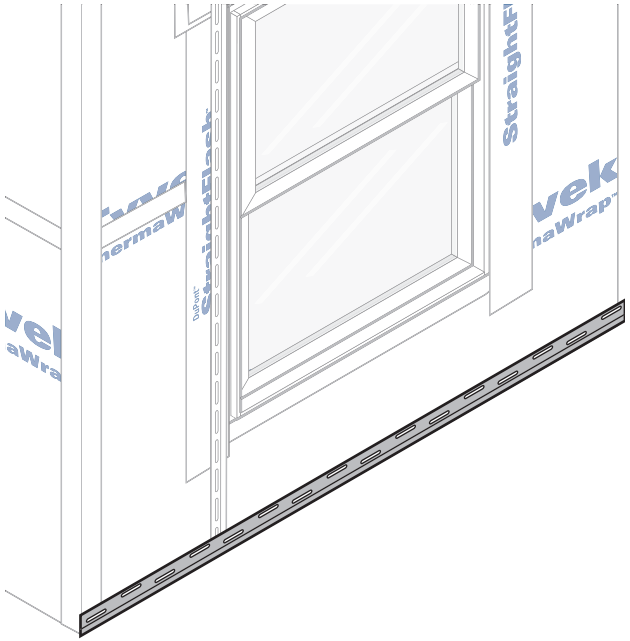
STEP 1

Install trim around windows ,doors, penetrations, interior and exterior corners, gables, etc.



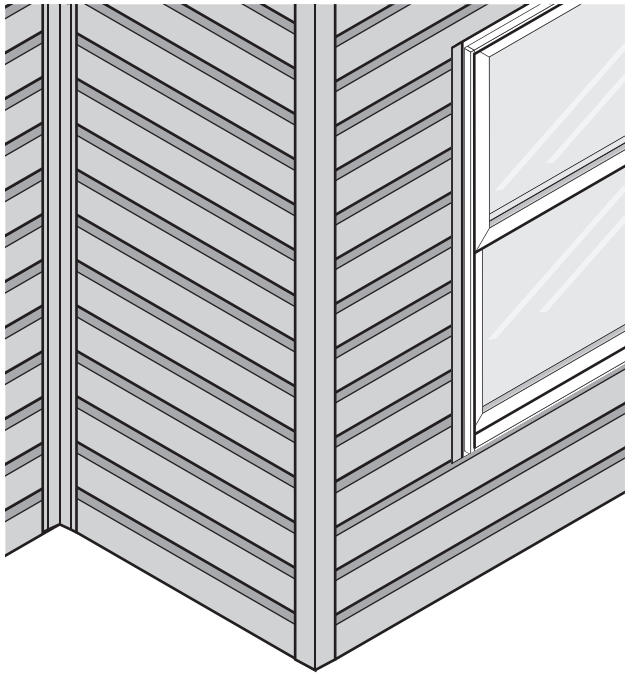
STEP 2

Install starter strip at base of wall. If termination strip is not used, be sure to not compress the DuPont™ Tyvek® ThermaWrap ™ R5.0.



STEP 3

Install cladding. Do not compress DuPont™ Tyvek® ThermaWrap™ R5.0.

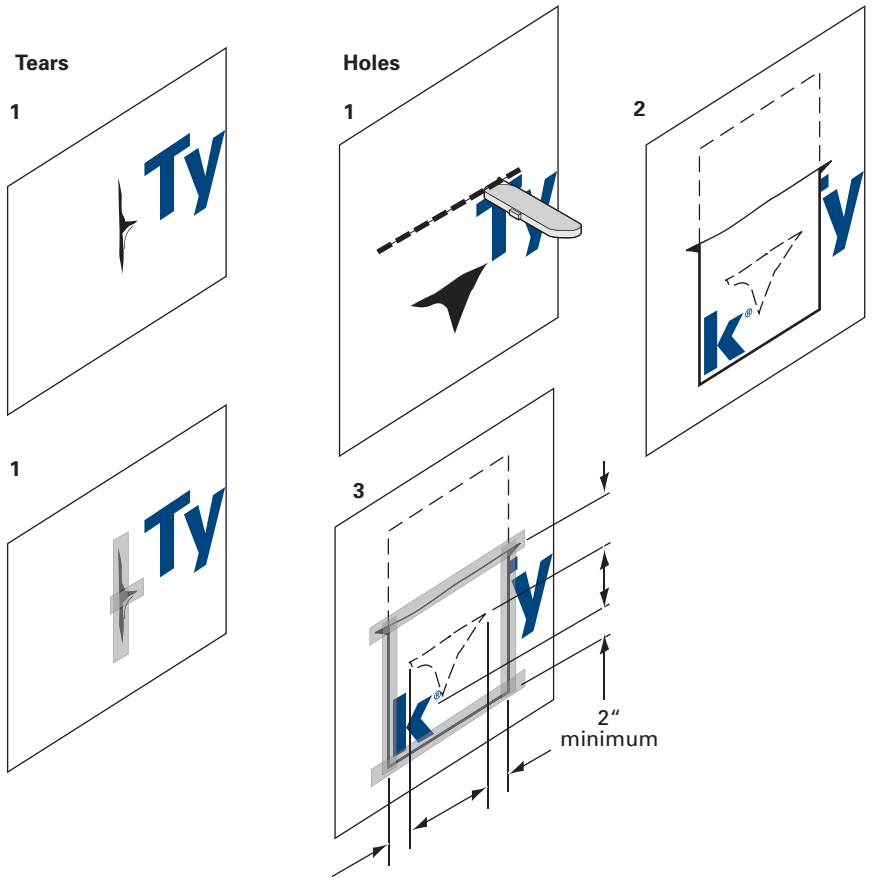


Handling Tears and Holes

During the course of installing Tyvek® ThermaWrap™ R5.0, minor tears may occur. Be sure to tape all tears. Tears can easily be covered with DuPont™ Tyvek® Tape (2" or 3") or DuPont™ Flashing Systems Products.

Larger holes (greater than 1") may require cutting a piece of DuPont™ Tyvek® water –resistive barrier (WRB) to cover the hole, maintaining proper shingling. Replace any missing insulation with a piece of Tyvek® ThermaWrap™ R5.0 insulation, by removing it from the Tyvek® facer.

Cut a slit 2" above the hole and extending a minimum of 2" on each side of the hole. Measure and cut a piece of DuPont™ Tyvek® WRB to fit into the slit and cover the hole. Tuck the cut piece of DuPont™ Tyvek® WRB into the slit. Tape along the perimeter by starting at the bottom of the patch, shingling upper tape over bottom tape.



Cladding Considerations

Water-resistive barrier performance is dependent upon the ability of the facade to drain. The following must be considered for specific facades.

Brick

The 2012 International Residential Code (Section R703.7.4.2) requires a nominal 1 inch airspace separating the brick from the water-resistive barrier (WRB). The Brick Industry Association recommends a 1 inch air-space in front of wood stud construction and a 2 inch air-space in front of steel stud construction. Consistent with these requirements and recommendations, DuPont™ Tyvek® WRBs shall be separated from the brick veneer by a nominal 1 inch air-space. Window and door flashing, and through-wall flashing shall be integrated with the DuPont™ Tyvek® WRB layer ensuring proper shingling. For maximum moisture management and drying of the wall system the airspace in front of the DuPont™ Tyvek® WRB shall be vented to the exterior at the top and bottom of the wall. Some types of brick ties will act as additional fasteners for DuPont™ Tyvek® WRBs, and, if installed as soon as practically possible after the DuPont™ Tyvek® WRB, may reduce the required number of fasteners used for the initial attachment of the DuPont™ Tyvek® WRB.

Vinyl Siding

Vinyl Siding is installed directly over DuPont™ Tyvek® WRBs. Vinyl siding shall be installed in accordance with manufacturer's instructions, industry standards and applicable codes, including ASTM D4756-06 Standard Practice for Installation of Rigid Poly(Vinyl Chloride) (PVC) Siding and Soffit. In high wind areas at gable end walls, FEMA recommends vinyl siding be installed over wood sheathing rather than over plastic foam sheathing.

Technical Specifications

DuPont™ Tyvek® WRBs used in construction products are made from 100% flash spunbonded high density polyethylene fibers which have been bonded together by heat and pressure, without binders or fillers, into a tough, durable sheet structure. Additives have been incorporated into the polyethylene to provide ultraviolet light resistance. DuPont requires that DuPont™ Tyvek® ThermaWrap™ Rv5.0 be covered within 120 days of installation.

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

Warning

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

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

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

Note

When installed in conjunction with other building materials, DuPont™ Flashing Systems products must be properly shingled with these materials such that water is diverted to the exterior of the wall system. DuPont™ Tyvek® products are air and water barriers and not the primary water barrier. The outer facade is the primary barrier. You must follow facade manufacturer's installation and maintenance requirements for all facade systems in order to maintain water holdout properties and ensure performance of DuPont™ Tyvek® products. Use of additives, coatings or cleansers on or in the facade system may impact the performance of DuPont™ Tyvek® WRB. DuPont™ Tyvek® Weatherization Systems products are to be used as outlined in this installation guideline. DuPont™ Flashing Systems products should only be used to seal penetrations and flash openings in houses or buildings. DuPont™ Flashing Systems products are not to be used in roofing applications. For superior protection against bulk water penetration, DuPont suggests a system combining a quality exterior facade, a good secondary WRB and exterior sheathing, high quality windows and doors, and appropriate flashing materials paying attention to proper installation of each component.

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

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

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

R-value

The higher the R-value, the greater the insulating power. Ask your seller for the fact sheet on R-values. DuPont™ Tyvek® ThermaWrap™ R5.0 uses a blanket insulation made of polyester and polyolefin fibers and will produce an R5.0 insulating value at a thickness of 1.5 inches.

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

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