



DuPont™
Tyvek®
CommercialWrap®

DuPont™
Tyvek®
Wrap Caps

DuPont™
Tyvek®
CommercialWrap® D

DuPont™
Tyvek®
Tape

DuPont™ Tyvek® Mechanically Fastened Air and Water Barrier Installation Guidelines

FOR BUILDINGS GREATER THAN 4 STORIES AND HIGH PERFORMANCE INSTALLATIONS OF ANY HEIGHT



Tyvek®

FOR BUILDINGS GREATER THAN 4 STORIES

REVISION 5/14

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Note

This installation guideline outlines recommended installation techniques and details for DuPont™ Tyvek® CommercialWrap and/or DuPont™ Tyvek® CommercialWrap D, referred to in this document as DuPont™ Tyvek® air and water barriers and where applicable, DuPont™ self-adhered flashing products.

DuPont™ Tyvek® Mechanically Fastened Air and Water Barrier Installation Guidelines

Applicable Products

Air and Water Barriers

PRODUCT	DIMENSIONS	AREA
DuPont™ Tyvek® CommercialWrap®	5 ft x 200 ft 10 ft x 125 ft	1,000 sq ft 1,250 sq ft
DuPont™ Tyvek® CommercialWrap® D	5 ft x 200 ft 10 ft x 125 ft	1,000 sq ft 1,250 sq ft

Installation Accessories

PRODUCT	TYPE	QUANTITY
DuPont™ Tyvek® Tape	3" Bulk Pack	24 Rolls/Case
DuPont™ Tyvek® Wrap Caps	2" Wrap Cap Screw	1,000 Caps/Box

Self-Adhered 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	25 sq ft 37.5 sq ft 56.25 sq ft

Required Materials Based on Project Requirements, Details, and Specifications*

PRODUCT
DuPont™ Adhesive/Primer
Sealant*

*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 refer to the [DuPont Weatherization Products 10-Year Limited Warranty for Buildings Greater Than 4 Stories](#). For buildings less than 5 stories, and low-rise multi-family buildings less than 6 stories, please refer to the [DuPont Weatherization Products 10-Year Limited Warranty for Buildings Less Than 5 Stories and Low-Rise Multi-Family Residential Buildings Less Than 6 Stories](#).

Weather Barrier & Energy Conservation Codes and Standards

The 2012 International Building Code (Section 1403.2 Weather Protection) requires that "exterior walls shall provide the building with a weather resistant exterior wall envelope. The exterior wall envelope shall be designed and constructed in such a manner as to prevent the accumulation of water within the wall assembly by providing a water-resistive barrier behind the exterior veneer, as described in Section 1404.2, and a means for draining water that enters the assembly to the exterior. The exterior wall envelope shall include flashing, as described in Section 1405.4." DuPont™ Tyvek® Weatherization System products have been tested to the following standards:

- ABAA Evaluated
- ASTM E 2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
- ASTM E 1677 Standard Specification for an Air Retarder (AR) Material or System for Low-Rise Framed Building Walls
- ASTM E 331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Pressure
- ASTM E 2178 Standard Test Method for Air Permeance of Building Materials
- ASTM E 283 Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
- ASTM E 2556 Standard Specification for Vapor Permeable Flexible Sheet Water-Resistive Barriers Intended for Mechanical Attachment
- ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials
- NFPA 285 Standard Fire Test Method for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Wall Assemblies Containing Combustible Components

DuPont™ Tyvek® Mechanically Fastened Air and Water Barrier Installation Guidelines

Energy Conservation Codes for commercial buildings are being adopted in many regions across the U.S. DuPont™ Tyvek® mechanically-fastened air and water barrier products meet the following codes and guidelines.

- ASHRAE 90.1 Model Energy Code air barrier requirements
- 2012 International Energy Conservation Code® (IECC)
- 2012 International Green Construction Code™ (IgCC)
- Minnesota Commercial Energy Code, Section 1323.0543, Section 5.4.3
- Massachusetts State Building Code 780 CMR 120.AA
- Wisconsin Building Code, Energy Conservation, Chapter Comm 63
- Michigan Building Code
- Rhode Island Building Code
- Georgia Building Code
- Florida Building Code

The DuPont™ Tyvek® mechanically-fastened air and water barriers meet the ICC-ES AC-38 Water-Resistive and Air-Barrier requirements as listed in the following code reports.

ICC-ES Evaluation Report ESR-2375:

- DuPont™ Tyvek® CommercialWrap®
- DuPont™ Tyvek® CommercialWrap® D

Special Considerations

1. High performance installations are defined as building envelope design requirements that exceed ASTM E1677, 65 mph equivalent structural load and 15 mph equivalent wind-driven rain water infiltration resistance.
2. DuPont™ Tyvek® CommercialWrap® D shall be installed with the grooves going up and down.
3. DuPont requires that DuPont™ Tyvek® CommercialWrap® and DuPont™ Tyvek® CommercialWrap® D be covered within nine (9) months (270 days) of its installation.
4. No surface preparation is needed for the installation of DuPont™ Tyvek® air and water barriers.
5. Adverse weather conditions or cold temperatures may require use of a primer to promote adhesion of DuPont™ self-adhered flashing products to most common building materials. Concrete, masonry, and fiber faced exterior gypsum board require the use of DuPont™ Adhesive/Primer.
6. DuPont™ self-adhered flashing products perform best when installed at temperatures above 25°F (–4°C).
7. Before applying 3" DuPont™ Tyvek® Tape, surfaces should be dry and clean. During installation apply firm, even pressure with hand or "J" roller.
8. 4" DuPont™ Flashing Tape is an alternative to 3" DuPont™ Tyvek® Tape where specified in the *DuPont™ Tyvek® Air and Water Barrier Installation Guidelines for Buildings Greater Than 4 Stories*.
9. When high performance installations are required, DuPont™ StraightFlash™, DuPont™ Flashing Tape or DuPont recommended alternate shall be used at terminations and as patches behind fastening plates (brick tie base plates, metal fastening clips, metal channels, etc.)
10. Fluid applied membrane products must not come in contact with DuPont™ Tyvek® mechanically fastened air and water barriers due to potential impact on performance properties. Refer to the DuPont™ Tyvek® Fluid Applied WB - Commercial Installation Guidelines for transitions to DuPont™ Tyvek® mechanically fastened air and water barriers.

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

Key Installation Requirements for Wraps Under the Limited Product and Labor Warranty

Continuity

It is important to maintain the continuity of the air and water barrier throughout the building envelope. The entire wall surface shall be wrapped, including unconditioned spaces. Special attention should be given to ensure a proper 6" overlap at all terminations, seams, penetrations, and transitions to maintain a continuous downward drainage plane and air and water barrier. Installing the DuPont™ Tyvek® air and water barrier as an air barrier is the preferred installation method, but when the DuPont™ Tyvek® air and water barrier is being installed as a water-resistive barrier only (Buildings under 5 stories | Low-rise multi-family residential buildings less than 6 stories), then skip-taping terminations and untaped horizontal seams are allowed. All vertical seams must be taped for both air barrier and water-resistive barrier installations.

Penetrations

Seal the DuPont™ Tyvek® around all penetrations (electrical, HVAC and plumbing, etc.) with the appropriate DuPont™ self-adhered flashing product, DuPont™ Tyvek® Tape, or sealant. Products that have flanges should be integrated into the air and water barrier. DuPont™ StraightFlash™ or DuPont recommended alternate patches should be applied behind fastening plates (brick tie base plates, metal fastening clips, metal channels, etc.) when building envelope design requirements exceed ASTM E1677, 65 mph equivalent structural load and 15 mph equivalent wind-driven rain water infiltration resistance.

Overlap

Ensure proper shingling with a 6" minimum overlap of air and water barrier components from the bottom to the top of the wall to help facilitate proper drainage.

Sealant

Review the sealant manufacturers' literature or label to confirm that the products used have the chemical and adhesive properties necessary for use with DuPont™ Tyvek® air and water barriers and DuPont flashing materials. Refer to *Chemical Compatibility of Representative Building Sealants (K-27282)* for more information about chemical compatibility.

Fasteners

Use DuPont™ Tyvek® Wrap Cap Fasteners or DuPont recommended alternates per the fastening schedule included in this installation guideline. Temporary fasteners should not be relied upon to permanently attach DuPont™ Tyvek® air and water barriers, due to the limited holding power of these fastening methods. If temporary fasteners are used, permanent fastening must be applied as soon as practically possible in order to maintain the integrity and performance of the DuPont™ Tyvek® air and water barrier and to be in compliance with DuPont Installation Guidelines if making a claim under the DuPont Product and Labor Warranty. Refer to page 13-14 of this document for more complete fastening information. Examples of recommended fasteners include:

RECOMMENDED FASTENERS

- DuPont™ Tyvek® Wrap Cap 2" plastic cap screws (for steel or wood frame construction)
- 1-1/4" metal gasketed washers with screws (for steel frame construction)
- 2" metal gasketed washers with screws (for steel frame construction)
- Tapcon® fasteners with 2" plastic caps (for masonry construction)

Special Considerations

Refer to page 18 for technical specifications such as UV exposure, compatibility with other materials, surface burning characteristics, etc.

Installation Instructions

STEP 1

- A. Starting at a corner of the building unroll DuPont™ Tyvek® air and water barrier keeping the roll plumb. Extend approximately 12" past either the inside or outside corner of the wall.
- B. Vertically overlap the next sheet of DuPont™ Tyvek® by at least 6". Vertical grid lines have been provided every 8" on DuPont™ Tyvek® CommercialWrap® to assist in alignment with stud spacing.

NOTE: It is important that proper shingling is maintained. DuPont™ Tyvek® air and water barriers should be installed from the bottom of the building up to ensure proper shingling.

NOTE: Vertical installation of DuPont™ Tyvek® CommercialWrap® is acceptable. 6" overlap and proper shingling of vertical and horizontal seams is required. This installation is not permitted for DuPont™ Tyvek® CommercialWrap® D.

STEP 2

The DuPont™ Tyvek® air and water barrier should overlap through wall flashing by a minimum of 6". Terminate the DuPont™ Tyvek® air and water barrier at the bottom of the wall with 3" DuPont™ Tyvek® Tape, or DuPont™ self-adhered flashing products.

STEP 3

Secure DuPont™ Tyvek® air and water barrier by fastening into the studs. For fastener type and spacing refer to the "Recommended Fasteners and Spacing" section of this document.

NOTE: In order to keep DuPont™ Tyvek® air and water barrier from being damaged by cladding installation, special attention should be taken to ensure that the product is pressed tightly into any inside corners before fastening.

STEP 4

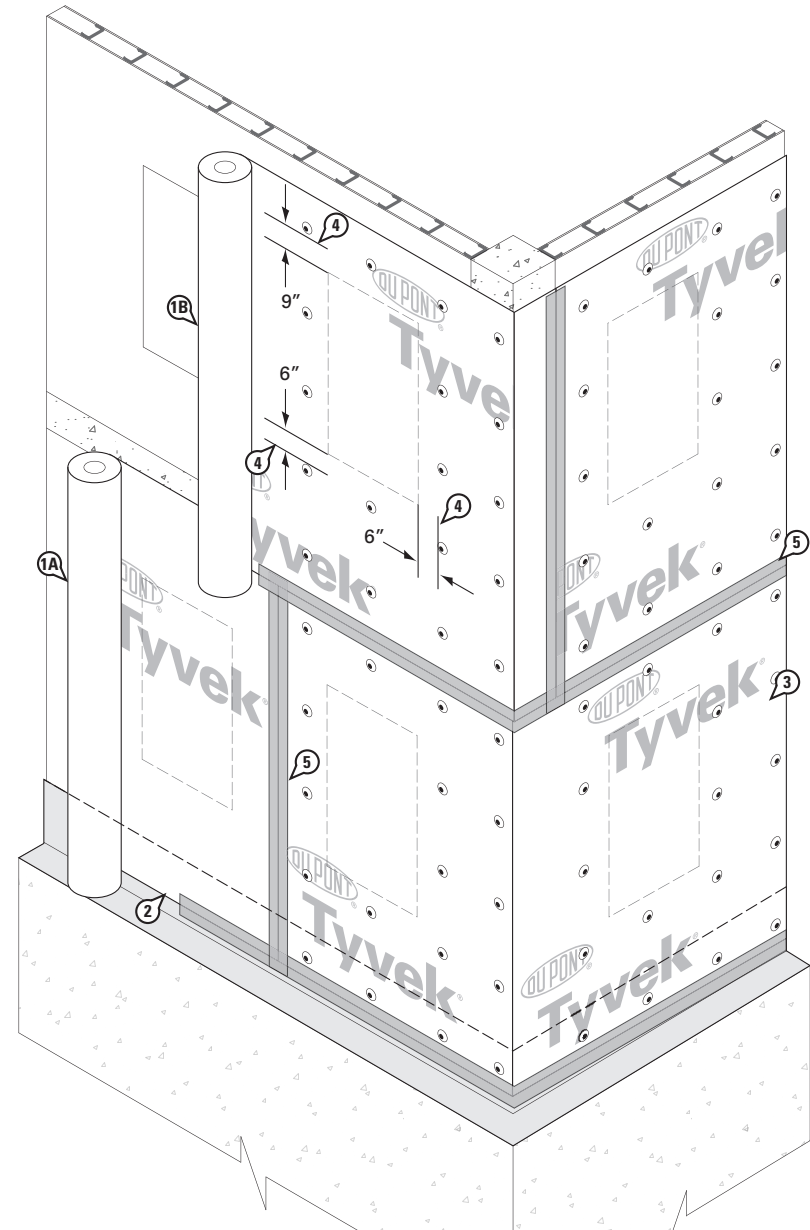
Unroll the DuPont™ Tyvek® air and water barrier directly over windows and doors rough openings. Upper layer of DuPont™ Tyvek® should overlap bottom layer of DuPont™ Tyvek® by a minimum of 6". Do not install fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings. DuPont™ Tyvek® will be fastened during flashing installation. Refer to the *DuPont Self-Adhered Flashing Systems Installation Guidelines for Buildings Greater Than 4 Stories* to prepare window and door openings.

STEP 5

Tape all horizontal and vertical seams with 3" DuPont™ Tyvek® Tape.

STEP 6

After the air and water barrier is installed, refer to the *DuPont Self-Adhered Flashing Systems Installation Guidelines for Buildings Greater Than 4 Stories* to prepare and flash windows and doors.



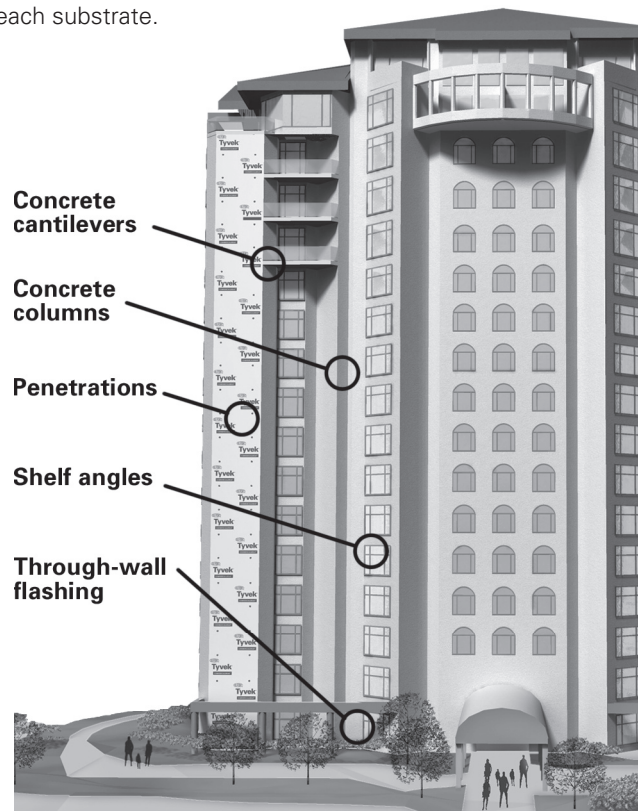
Continuity

Terminations

It is important to maintain the continuity of the air and water barrier from top to bottom with proper shingling. The entire wall surface shall be wrapped, including unconditioned spaces.

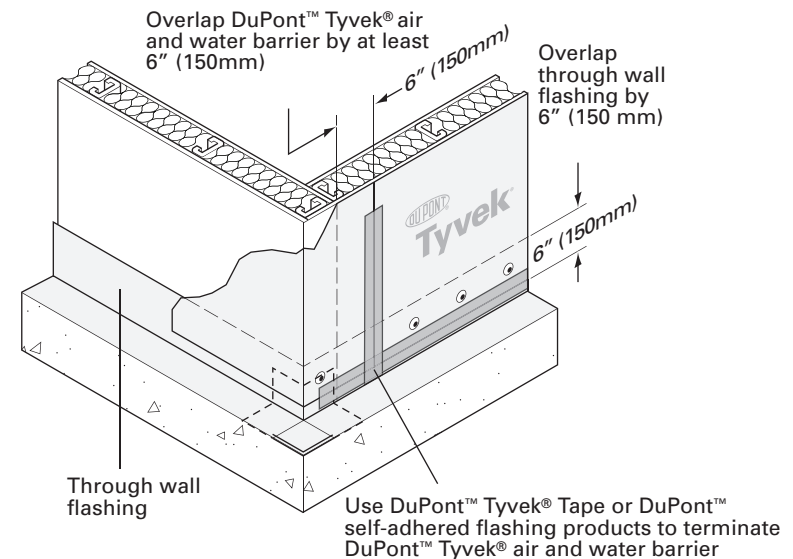
Special attention should be given to all terminations and transitions to ensure a proper drainage plane and a continuous air and water barrier is maintained.

For high performance installations, for areas of extreme exposure and to exceed ASTM E1677, install mechanical fasteners through the DuPont™ Tyvek® air and water barrier terminated at the base of the wall. Use appropriate fastener for each substrate.



Through Wall Flashing

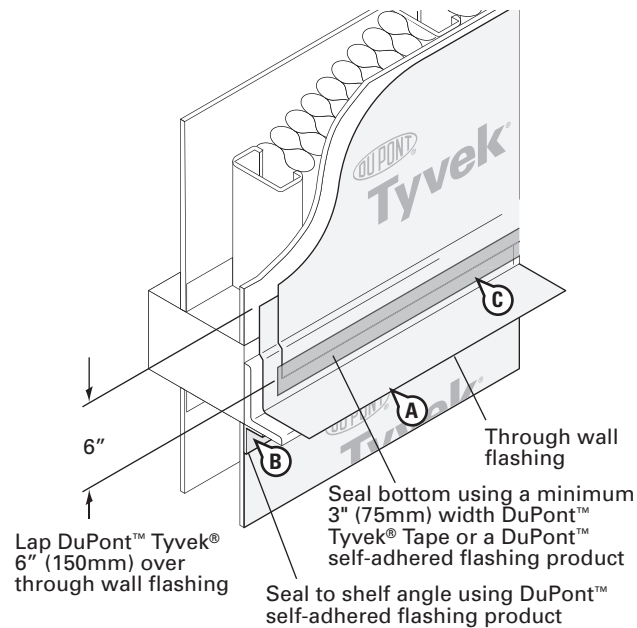
- Install through wall flashing on the vertical wall per plans and specifications. The through wall flashing may be terminated by using a reglet, counterflashing, termination bar or by embedding in a mortar joint.
- Overlap through wall flashing with DuPont™ Tyvek® air and water barrier by 6".
- Mechanically fasten bottom of the air and water barrier through top of through wall flashing.
- Seal vertical and horizontal seams using 3" DuPont™ Tyvek® Tape or a DuPont™ self-adhered flashing product.



DuPont™ Tyvek® Mechanically Fastened Air and Water Barrier Installation Guidelines

Shelf Angles

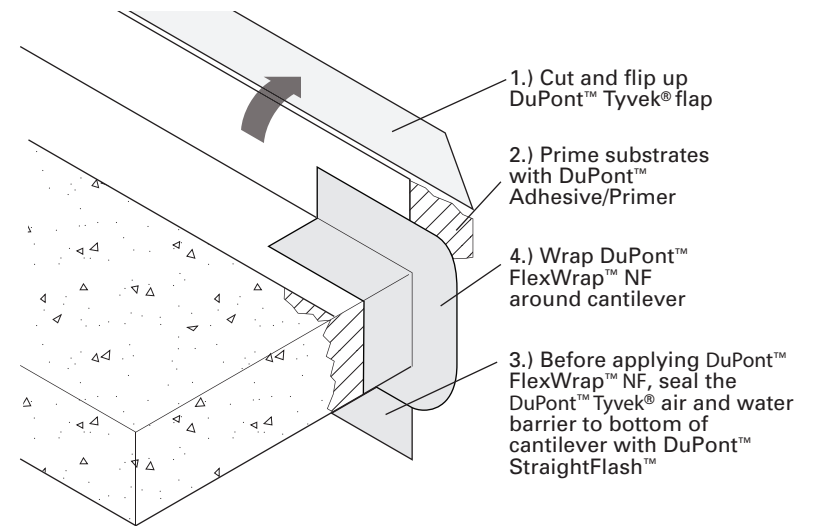
- A. Through wall flashing should be applied to the top of the shelf angle and the DuPont™ Tyvek® air and water barrier should be properly shingled over by at least 6".
- B. Seal the DuPont™ Tyvek® air and water barrier to the bottom of the shelf angle using DuPont™ self-adhered flashing products.
- C. Seal bottom of the DuPont™ Tyvek® air and water barrier to through wall flashing using 3" DuPont™ Tyvek® Tape or a DuPont™ self-adhered flashing product.



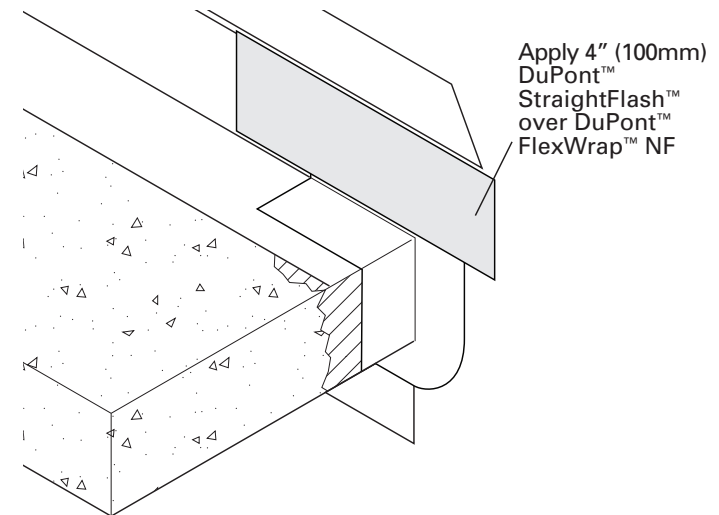
Concrete Cantilevers

Seal to concrete cantilevers using DuPont™ Adhesive/Primer and DuPont™ self-adhered flashing products.

STEP 1

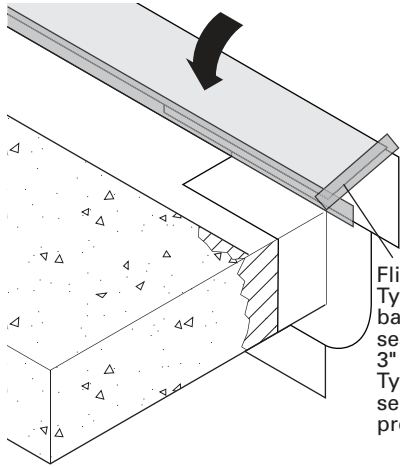


STEP 2



DuPont™ Tyvek® Mechanically Fastened Air and Water Barrier Installation Guidelines

STEP 3

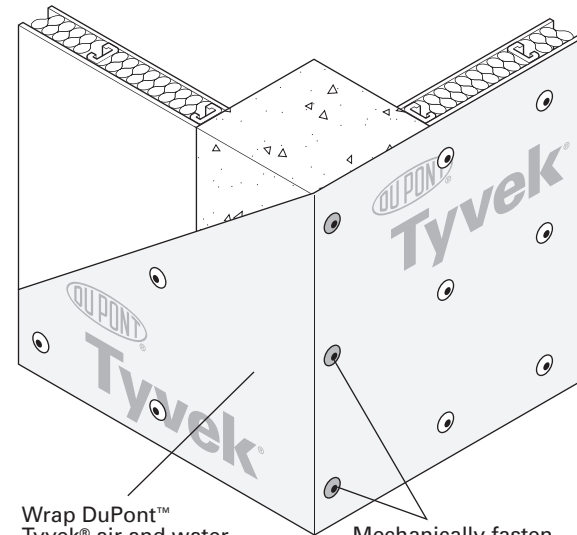


Flip DuPont™ Tyvek® air and water barrier down and tape seams using a minimum 3" (75mm) width DuPont™ Tyvek® Tape or a DuPont™ self-adhered flashing product

Concrete Column (Method 1)

- A. Wrap DuPont™ Tyvek® air and water barrier around concrete column.
- B. Mechanically fasten DuPont™ Tyvek® air and water barrier at recommend spacing. (See recommended fasteners and spacing section of this document)

NOTE: Mechanically fasten DuPont™ Tyvek® air and water barrier to concrete column if necessary to maintain recommended fastener spacing.



Wrap DuPont™ Tyvek® air and water barrier over concrete column

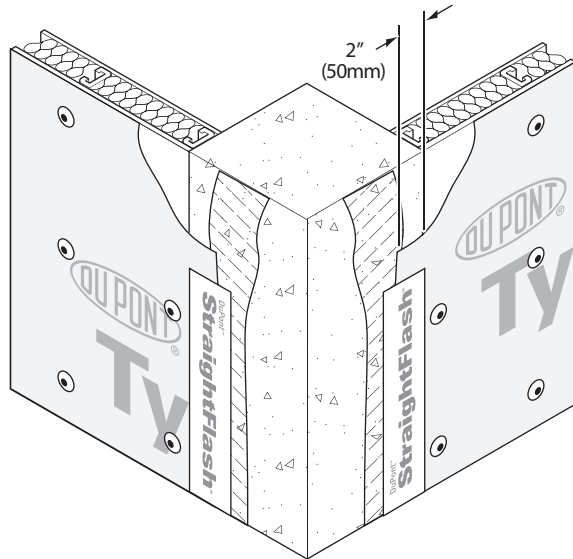
Mechanically fasten DuPont™ Tyvek® air and water barrier at recommended spacing. Use appropriate fastener for each substrate

DuPont™ Tyvek® Mechanically Fastened Air and Water Barrier Installation Guidelines

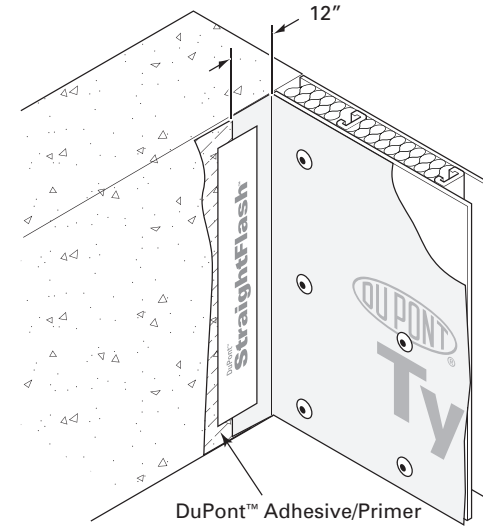
Concrete Column (Method 2)

- Prime concrete column with DuPont™ Adhesive/Primer.
- Cut DuPont™ Tyvek® air and water barrier at concrete column, leaving approximately 2" overlapping column.
- Mechanically fasten air and water barrier into studs.
- Seal air and water barrier to concrete using DuPont™ self-adhered flashing products.

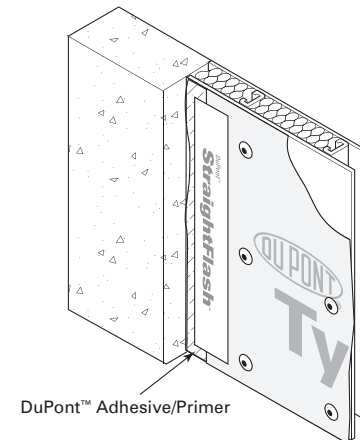
NOTE: For high performance installations, additional fasteners may be necessary to secure DuPont™ StraightFlash™. Use appropriate fastener for each substrate.



Option 1



Option 2



DuPont™ Tyvek® Mechanically Fastened Air and Water Barrier Installation Guidelines

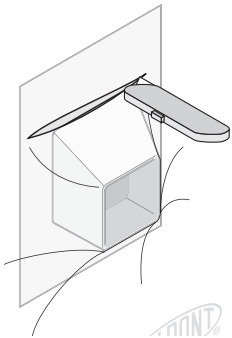
Penetrations

Seal the DuPont™ Tyvek® air and water barrier around all electrical, ductwork and plumbing penetrations with sealant and DuPont™ Tyvek® Tape, or DuPont™ FlexWrap™ NF. Products that have flanges should be integrated into the air and water barrier using DuPont™ Tyvek® Tape or DuPont™ self-adhered flashing products.

DuPont™ Tyvek® Tape should first be applied around penetration. DuPont™ Tyvek® Tape is used to reinforce the DuPont™ Tyvek® air and water barrier. It is important that the tape be tightly installed to the penetrating object. Next apply an adequate amount of sealant around the penetration.

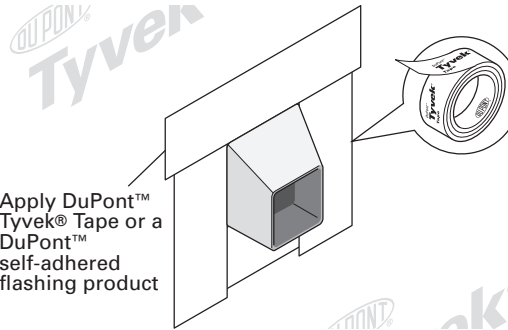
STEP 1

Cut DuPont™ Tyvek® air and water barrier back 1" around penetration.



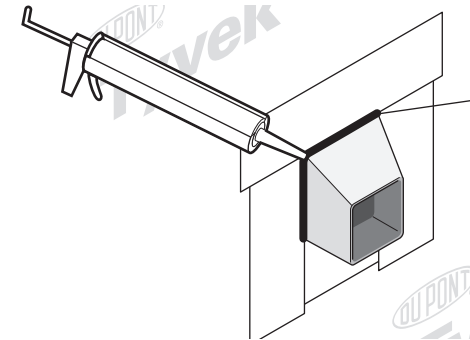
STEP 2

Apply DuPont™ Tyvek® Tape or a DuPont™ self-adhered flashing product



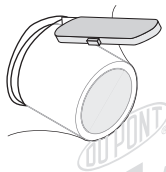
STEP 3

Apply sealant around penetration



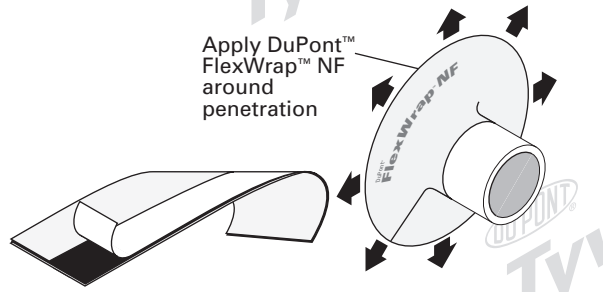
STEP 1

Cut DuPont™ Tyvek® air and water barrier back 1" around penetration.



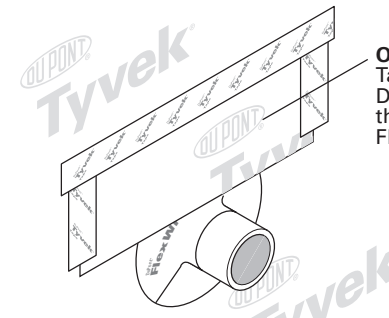
STEP 2

Apply DuPont™ FlexWrap™ NF around penetration



STEP 3

OPTIONAL: Tape a piece of DuPont™ Tyvek® over the top of the DuPont™ FlexWrap™ NF



Recommended Fasteners and Spacing

- DuPont™ Tyvek® Wrap Cap 2" plastic cap screws (for steel or wood frame construction)
- 1-1/4" metal gasketed washers with screws
- 2" metal gasketed washers with screws
- Tapcon® fasteners with 2" plastic caps (for masonry construction)

Table 1 – DuPont™ Tyvek® Air and Water Barrier with Screw Fasteners and 16" O.C. Steel Stud Spacing

Washer Size	Fastener Spacing	Allowable Pressure*	
		psf	mph
2" Metal	12"	90 psf	188 mph
	18"	60 psf	153 mph
2" Plastic	12"	70 psf	165 mph
	18"	45 psf	133 mph
1.25" Metal	12"	60 psf	153 mph
	18"	40 psf	125 mph

*Values presented are maximum allowable pressures. A factor of safety may need to be applied for certain cladding systems.

Temporary Fastening

Selection and use of temporary fastening methods is an option dependent on building schedule, cladding options, and local building practices. Temporary fasteners should not be relied upon to permanently attach DuPont™ Tyvek® air and water barriers due to the limited holding power of these fastening methods. If temporary fasteners are used, permanent fastening should be applied as soon as practically possible in order to maintain the integrity and performance of the DuPont™ Tyvek® air and water barrier.

Temporary fastening methods:

- DuPont recommended fasteners at a reduced schedule 24" to 48".
- DuPont recommended adhesives applied in vertical strips at 24" to 36" spacing or along every other stud line.
- #4 nails with 1" plastic cap (for wood frame construction)
- 1" plastic cap staple with leg length sufficient to achieve 5/8" penetration into wood stud (for wood frame construction).
- If staples without caps are used to temporarily fasten DuPont™ Tyvek® air and water barriers to exterior sheathing, the fastening schedule must not exceed 4 per square yard and each staple must be covered with DuPont™ Tyvek® Tape. Covering the staples underneath a taped air and water barrier seam is acceptable.

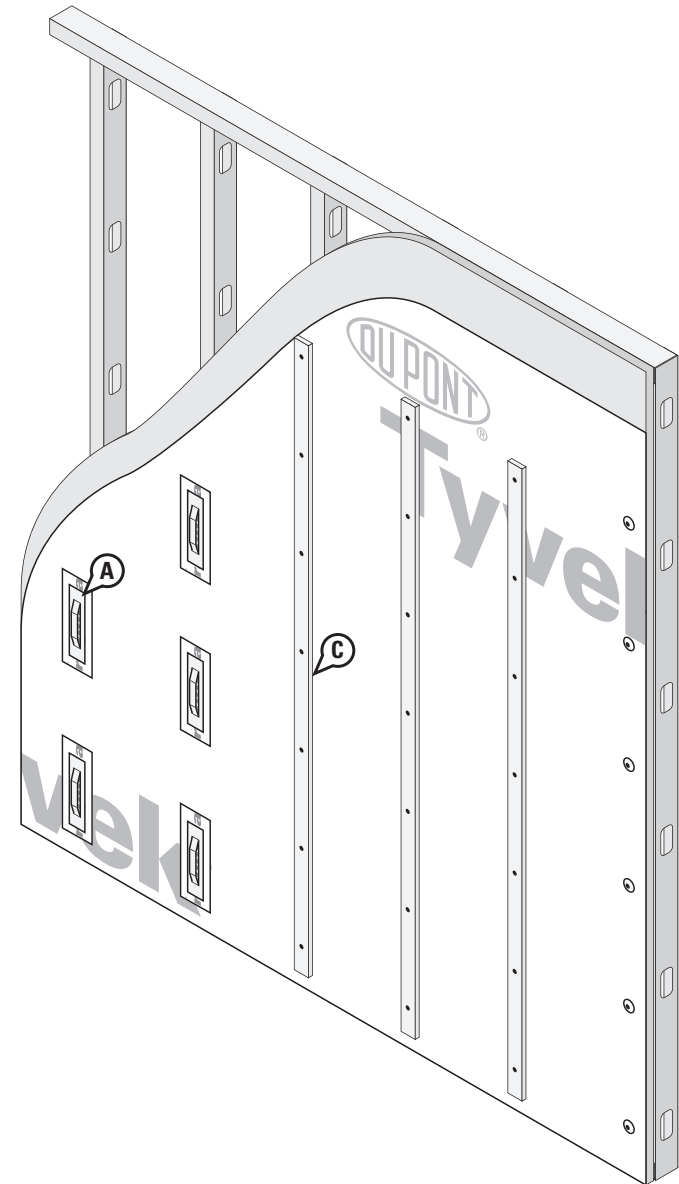
Temporary fastening methods may not be suitable for high performance installations. For additional guidance, please consult your local DuPont™ Tyvek® Specialist.

Alternate Fastening

- A. Standard brick tie base plates and metal plates with DuPont™ StraightFlash™, DuPont™ Flashing Tape or DuPont recommended alternate patches behind.
- B. Metal channels, horizontal z-girts, etc. with DuPont™ StraightFlash™, DuPont™ Flashing Tape or DuPont recommended alternate behind when high performance installations are required.
- C. Wood furring strips mounted vertically.
DuPont™ StraightFlash™, DuPont™ Flashing Tape or DuPont recommended alternate not required unless the furring strips are shimmed.

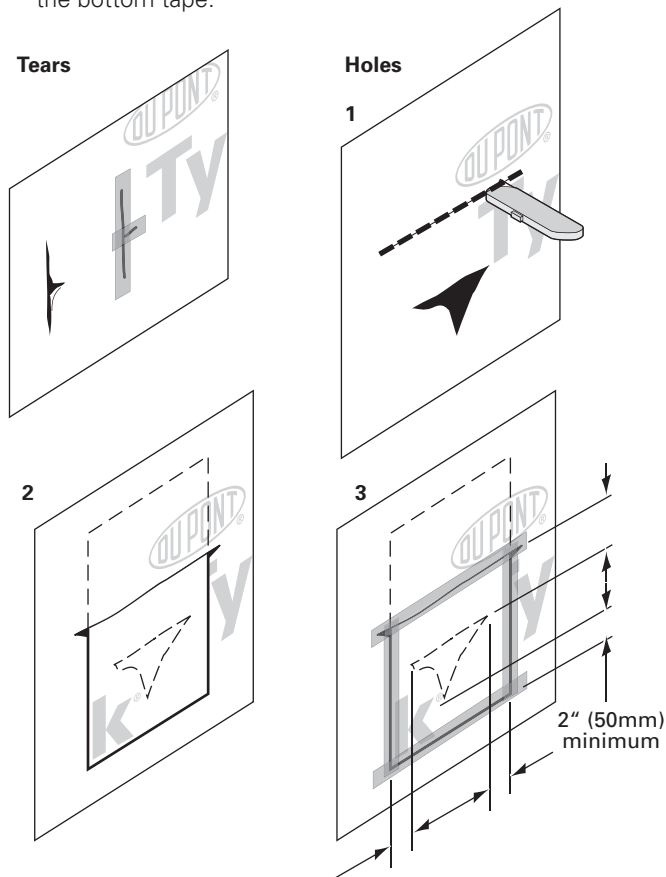
NOTE:

- Additional fasteners may be needed between brick ties, and other alternate fasteners to maintain recommended fastener spacing.
- DuPont™ StraightFlash™, DuPont™ Flashing Tape or DuPont recommended alternate patches should be applied behind fastening plates (brick tie base plates, metal fastening clips, metal channels, etc.) when building envelope design requirements exceed ASTM E1677, 65 mph equivalent structural load and 15 mph equivalent wind-driven rain water infiltration resistance.



Handling Tears and Holes

- During the course of installing the DuPont™ Tyvek® air and water barrier, minor tears may occur. Be sure to tape all tears. Tears can easily be covered with 3" DuPont™ Tyvek® Tape or DuPont™ self-adhered flashing products.
- Larger tears may require you to cut a piece of DuPont™ Tyvek® air and water barrier to repair the tear. Measure and cut a piece of DuPont™ Tyvek® large enough to cover tear by 6". Cut above the top of the tear large enough to accommodate the patch. Tuck patch into slit at least 6" and shingle over lower air and water barrier. Tape along the perimeter by starting at bottom of tear and shingling the upper tape over the bottom tape.



Facade/Exterior Considerations

Brick

The Brick Industry Association recommends a 1" air-space in front of wood stud construction and a 2" air-space in front of steel stud construction. Consistent with these requirements and recommendations, DuPont™ Tyvek® air and water barriers shall be separated from the brick veneer by a minimum 1" air-space. Window and door flashing, and through wall flashing shall be integrated with the DuPont™ Tyvek® layer ensuring proper shingling. For maximum moisture management and drying of the wall system the airspace in front of the DuPont™ Tyvek® shall be vented to the exterior at the top and bottom of the wall. Some types of brick ties can act as alternate fasteners for DuPont™ Tyvek® air and water barrier and may reduce the required number of fasteners used for the attachment of the DuPont™ Tyvek® air and water barrier if installed as soon as practically possible. DuPont™ self-adhered flashing products or recommended alternate may be required for high performance installations, contact your local DuPont™ Tyvek® Specialist for more information.

EIFS

DuPont™ Tyvek® air and water barriers and EIFS cladding shall be installed according to manufacturer's instructions and industry standards. In order to promote drainage, it is recommended that DuPont™ Tyvek® CommercialWrap® D be installed behind the exterior insulation. Window and door flashing, and through wall flashing shall be integrated with the DuPont™ Tyvek® layer ensuring proper shingling. The successful installation and performance of EIFS cladding is dependent upon the proper design and construction of the adjacent materials and systems of the structure.

Exterior Insulation

DuPont™ Tyvek® air and water barriers and exterior insulation shall be installed according to the manufacturer's instructions and industry standards. DuPont™ Tyvek® air and water barriers can be installed either over the rigid exterior insulation or underneath between the sheathing and the exterior insulation. In order to promote drainage, it is recommended that DuPont™ Tyvek® CommercialWrap® D be used when installing the DuPont™ Tyvek® layer between the sheathing and exterior insulation. Window flashing, door flashing, and through wall flashing shall be integrated with the DuPont™ Tyvek® layer ensuring proper shingling. The successful installation and performance of exterior insulation is dependent upon the proper design and construction of adjacent materials and systems of the structure.

DuPont™ Tyvek® Mechanically Fastened Air and Water Barrier Installation Guidelines

Stucco

When stucco is installed over wood-based sheathing the 2012 International Building Code (Section 2510.6) requires “a weather-resistive barrier with a performance at least equivalent to two layers of Grade D paper” or a layer of air and water barrier which is separated from the stucco by an “intervening layer”. “The individual layers shall be installed independently such that each layer provides a separate continuous plane and any flashing (installed in accordance with Section 1405.4) intended to drain to the water-resistive barrier is directed between the layers.” When DuPont™ Tyvek® air and water barriers are used behind stucco they should be separated from the stucco by a second layer of DuPont™ Tyvek® air and water barrier, a layer of Grade D building paper, felt, rigid foam board or the paper backing of paper-backed lath. The first layer (directly over sheathing or studs) serves as the wall system’s air and water barrier and is integrated with window and door flashings, the weep screed at the bottom of the wall and any through wall flashing or expansion joints. Lath shall be installed over the intervening layer (second layer) in accordance with ASTM C1063-03 Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster and applicable codes. Rigid foam board, when installed over DuPont™ Tyvek® air and water barrier as an intervening layer, may provide enhanced structural support to the DuPont™ Tyvek® layer and may reduce the required number of fasteners used for the attachment of the DuPont™ Tyvek® air and water barrier if installed as soon as practically possible. DuPont self-adhered flashing products or recommended alternate may be required for high performance installations, contact your local DuPont™ Tyvek® Specialist for more information.

Metal Panel

DuPont™ Tyvek® air and water barriers and metal panel cladding systems shall be installed according to manufacturer’s instructions and industry standards. It is recommended that DuPont™ StraightFlash™ or DuPont recommended alternate patches be installed behind all metal installation brackets. Window and door flashing, and through wall flashing shall be integrated with the DuPont™ Tyvek® layer ensuring proper shingling See “Alternate Fastening” section, page 14, for additional information.

Stone Veneer

The 2012 International Building Code (Section 1405.6) requires two layers of air and water barrier behind stone veneers over wood frame construction. When used behind stone veneer, DuPont™ Tyvek® air and water barriers shall be installed in a similar manner as they are installed behind stucco. DuPont™ Tyvek® air and water barriers should be separated from the stone and mortar by a second layer of DuPont™ Tyvek® air and water barrier, a layer of grade D building paper, felt, rigid foam board or the paper backing of paper-backed lath. The first layer (directly over sheathing or studs) serves as the wall system’s air and water barrier and shall be integrated with window and door flashings, the weep screed at the bottom of the wall and any through wall flashing or expansion joints. Lath shall be installed over the intervening layer (second layer) in accordance with ASTM C1063-03 Standard Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster and applicable codes. DuPont self-adhered flashing products or recommended alternate may be required for high performance installations, contact your local DuPont™ Tyvek® Specialist for more information.

Wood Siding

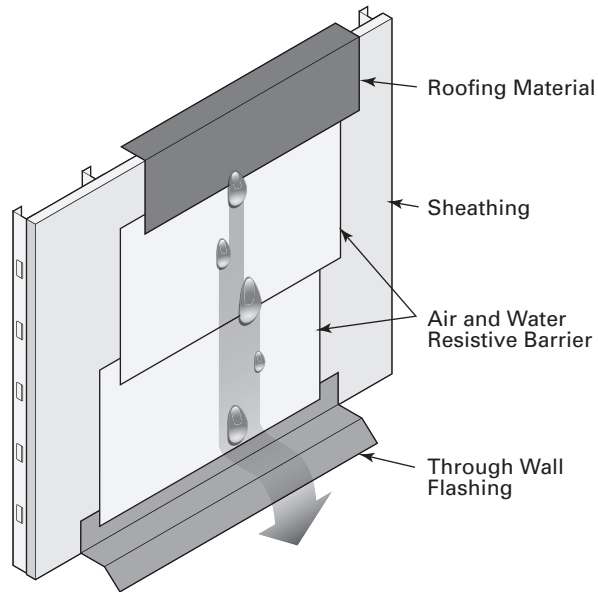
DuPont™ Tyvek® air and water barriers and wood siding shall be installed according to manufacturer’s instructions, industry standards and applicable codes. As recommended by the Western Red Cedar Lumber Association and U. S. Forest Product Laboratory, wood siding should be primed on all six sides before installation. In high exposure installations, enhanced drainage and water management may be provided by using DuPont™ Tyvek® CommercialWrap® D or by creating rainscreen cladding with a larger airspace behind the siding using furring strips. See “Alternate Fastening” section, page 14, for additional information.

Fiber Cement Siding

DuPont™ Tyvek® air and water barriers and fiber cement siding shall be installed according to manufacturer’s instructions and industry standards. In high exposure installations, enhanced drainage and water management may be provided by using DuPont™ Tyvek® CommercialWrap® D or by creating rainscreen cladding with a larger airspace behind the siding using furring strips. See “Alternate Fastening” section, page 14, for additional information.

PROPER OVERLAP FOR WATER MANAGEMENT

- A. Lap all components from bottom of the wall to the top of the wall
- B. Treat the walls of the building just like a roof



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

Technical Specifications

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

DuPont™ DuPont™ self-adhered flashing products are made from a synthetic rubber adhesive and a laminate of polyethylene film, polypropylene film, elastic fiber, synthetic rubber adhesive, polyurethane adhesive, and a top sheet of flash spunbonded high density polyethylene fibers or polypropylene film. Additives have been incorporated into these materials to provide ultraviolet light resistance. DuPont requires that DuPont™ FlexWrap™ NF, StraightFlash™ and StraightFlash™ VF be covered within nine months (270 days) of installation. DuPont requires that DuPont™ Flashing Tape 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 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 1-800-44-Tyvek.

DuPont™ 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 1-800-44-Tyvek.

Note

When installed in conjunction with other building materials, DuPont™ self-adhered flashing 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®. Use of additives, coatings or cleansers on or in the facade system may impact the performance of DuPont™ Tyvek® air and water barriers. DuPont™ Tyvek® Weatherization Systems 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 houses or buildings. 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 DuPont™ Tyvek® air and water barrier is installed directly over the wall studs, exterior facade materials should be selected to ensure maximum protection against water intrusion. Careful workmanship and proper installation of each component is very important.

DuPont believes this information to be reliable and accurate. The 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.

For complete warranty information please call 1-800-44-Tyvek.

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

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



Tyvek.

The Tyvek logo graphic consists of a horizontal bar with a blue-to-white gradient, positioned above the word "Tyvek." in a bold, blue, sans-serif font.