DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines

DuPont™ Tyvek® Fluid Applied WB+™
DuPont™ Tyvek® Fluid Applied weather barrier (WB+)™ is a vapor permeable, low VOC, single-component product with excellent elasticity and flexibility. It is easily applied in one coat and has extremely low shrinkage during curing.

DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ A full bodied, brush or trowel applied, vapor permeable elastomeric flashing material. It is used to coat rough openings for windows and doors, to fill seams, cracks and holes in the substrate, to seal around penetrations and to treat joints and transitions between building components.

DuPont™ Sealant for Tyvek® Fluid Applied System Non-vapor permeable sealant specifically designed to work with the DuPont™ Tyvek® Fluid Applied system. DuPont™ Sealant for Tyvek® Fluid Applied System has excellent adhesion and elongation. It should be used to seal around windows, doors, and penetrations.

DuPont Commercial Self-Adhered Flashing
DuPont™ StraightFlash™
A premium self-adhered membrane used for flashing windows and doors, to treat transitions and for terminations. It is made with DuPont™ Tyvek® and a 100% butyl-based adhesive layer.

DuPont™ StraightFlash™ VF
An innovative, dual-sided 100% butyl-backed self-adhered membrane designed for flashing brick mold and non-flanged windows and doors.

DuPont™ FlexWrap™ NF
A premium extendable self-adhered flashing material that efficiently conforms around corners and irregular shapes. It is made with DuPont™ Tyvek® and a 100% butyl-based adhesive layer.
Coverage Rates
Coverage rates may vary depending on application technique and substrate condition. DuPont™ Tyvek® Fluid Applied WB+™ applied at a minimum thickness of 25 mils wet will offer a theoretical coverage (not including waste) as shown in the table below.

<table>
<thead>
<tr>
<th>Wall Substrate</th>
<th>Concrete Masonry Unit (CMU)</th>
<th>Exterior Gypsum Sheathing</th>
<th>Oriented Strand Board (OSB)</th>
<th>Plywood</th>
</tr>
</thead>
<tbody>
<tr>
<td>Theoretical Coverage Rate</td>
<td>~ 50 sq.ft/gal</td>
<td>~ 65 sq.ft/gal</td>
<td>~ 60 sq.ft/gal</td>
<td>~ 60 sq.ft/gal</td>
</tr>
</tbody>
</table>

The installing professional should set a goal to ensure membrane is continuous (free of pinholes and voids) at an average thickness of 25 mils.
Weather Barrier & Energy Conservation Codes and Standards

The 2015 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 1405.3. DuPont™ Tyvek® Fluid Applied WB+™ has been tested to the following standards.

• ASTM E 2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
• 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 331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Pressure
• ASTM E1677, Standard Specification for Air Barrier (AB) Material or System for Low-Rise Framed Building Walls
• ASTM E 2178 Standard Test Method for Air Permeance of Building Materials
• ASTM E 96, Standard Test Methods for Water Vapor Transmission of Materials
• ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials
• AATCC 127, Hydrostatic Head Test for WRB Materials, measuring pressure to failure or time of failure at a given pressure
• AAMA 711-13 - Specification for Self Adhering Flashing
• AAMA 714-15 - Voluntary Specification for Liquid Applied Flashing Used to Create a Water-Resistive Seal Around Exterior Wall Openings in Buildings
• AC 212 Acceptance Criteria for Water Resistive Coatings used as Water Resistive Barriers over Exterior Sheathing

Energy Conservation Codes for commercial buildings are being adopted in many regions across the U.S. DuPont™ Tyvek® Fluid Applied Weather Barrier System products meet the following codes and guidelines.

• ASHRAE 90.1 Model Energy Code air barrier requirements
• 2012/2015 International Energy Conservation Code® (IECC)
• 2012/2015 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

Warranty Information

Please call 1-800-44-Tyvek or visit www.fluidapplied.tyvek.com for complete warranty information.

Special Considerations

NOTE: When DuPont™ Tyvek® Fluid Applied WB+™ is applied with a sprayer, the outer edges of all interfaces with DuPont™ self-adhered flashing products should be treated with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and tapered to the wall substrate to ensure smooth transitions free of pinholes and voids.

1. Suitable substrates include concrete masonry unit (CMU), concrete (48 hrs. for green concrete), exterior gypsum, OSB, plywood, wood, treated wood and metal.
2. Tyvek® Fluid Applied products can be applied to damp surfaces. A surface is considered damp if there is no visible water on the surface and no transfer of water to the skin when touched.
3. When applying DuPont™ Tyvek® Fluid Applied products over wood-based substrates such as OSB, plywood, lumber, and treated lumber, the installing professional should ensure the moisture content, measured with a wood moisture meter in the core of the substrate, shall be below 20%. Do not cover wood based substrates with Tyvek® Fluid Applied products if moisture content is 20% or above.
4. DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ can be troweled or brushed to the required thickness in any application outlined in the guide.
5. Do not install on a wall that does not feature a continuous path for moisture drainage. For membrane drainage wall systems, ensure that the drainage path is not blocked or disrupted, which can result in excess moisture buildup in the wall cavity. Tyvek® Fluid Applied products are designed for above grade application and should not be installed below grade.

6. Tyvek® Fluid Applied products should be applied when air and surface temperatures are above 25°F and a maximum surface temperature of 140°F (60°C). Do not install once ambient temperature exceeds 95°F (35°C), unless surface is shaded. Maximum in-service temperature is 180°F.

7. Avoid spraying DuPont™ Tyvek® Fluid Applied WB+™ in very windy conditions. Installing professional should consider if structure should be tented to protect the surrounding area from overspray. Avoid spraying in very dusty conditions.

8. Tyvek® Fluid Applied products may be overcoated once a touch-free skin has formed. Exterior insulation and/or exterior facade may be installed after DuPont™ Tyvek® Fluid Applied products have cured for 48 hours. Please refer to Drying/Curing information on page 11.

9. DuPont™ Tyvek® Fluid Applied WB+™ may be applied over, and integrated with Tyvek® Fluid Applied Flashing once a touch-free skin has formed (See Drying/Curing table on Page 11 for skin and working times).

10. Performance testing, included but not limited to peel adhesion, pull strength analysis, field or third party testing of air and/or water barrier properties, should be conducted after Tyvek® Fluid Applied products are fully cured (~14 days).

11. DuPont™ Tyvek® Fluid Applied products should be stored in a clean, dry environment, 50°–80°F, (10° - 27°C). Continuous storage at high temperatures will reduce the shelf life of these products. Tyvek® Fluid Applied products temporarily stored outside should be stored under cover.

12. Opened pails of Tyvek® Fluid Applied products should be covered with plastic to slow cure rate. Before reusing a previously opened container, first remove any cured material that may have formed at the top.

13. DuPont requires that Tyvek® Fluid Applied products be covered within 9 months of installation.

14. DuPont™ Self-Adhered Flashing products perform best when air and surface temperatures are above 25°F (~4°C).

15. DuPont™ Adhesive/Primer, or recommended primer, is required when applying DuPont™ Self-Adhered Flashing products on concrete, masonry, and fiber faced exterior gypsum board substrates. Priming is generally not required for adhering DuPont™ Self-Adhered Flashing products to wood. However, adverse weather conditions or colder temperatures may require DuPont™ Adhesive/Primer, or recommended primer, to promote adhesion. Priming is not required when applying DuPont™ Tyvek® Fluid Applied products, except when applying onto cut edges of exterior gypsum sheathing.

16. Uncured DuPont™ Tyvek® Fluid Applied Products must not come in contact with DuPont™ Tyvek® Mechanically-Fastened Air and Water Barriers due to potential impact on performance properties.

17. Stirring is not necessary. If separation occurs, gently fold material until mixture is uniform. Avoid any type of mixing that will introduce air into the product.

18. Asphalt based adhesives are not recommended for use with DuPont™ Tyvek® Fluid Applied products.

19. Minor discoloration of the membrane at wood knots, sap, or sheathing inks may occur after curing.

20. When DuPont™ Tyvek® Fluid Applied products are used as the primary air and water barrier, DuPont™ Tyvek® mechanically-fastened air and water barrier products may be installed as an “intervening layer” over DuPont™ Tyvek® Fluid Applied products after 24 hours of curing at 70°F (20°C) and 50% RH. For additional information about the use of “intervening layers” see the Stucco section under Facade/Exterior Considerations on page 13.

21. 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 systems 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.

For additional guidance, please call 1-800-44-Tyvek (800-448-9835), visit our website at www.fluidapplied.tyvek.com, or consult your local DuPont™ Tyvek® Specialist.
DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines

Installation Instructions

STEP 1: PREPARATION
Clean substrate by removing any material that may affect the adhesion of DuPont™ Tyvek® Fluid Applied products, such as frost, oil, grease, mold and efflorescence. Remove all dust, dirt and loose mortar from the substrate using a trowel and brush. CMU substrates should be free of holes and excess mortar. Fill all head and bed joints with mortar. Mortar joints should be struck flush.

STEP 2: FLASHING
2A. Install a through wall flashing at all necessary locations (e.g. base of the wall, shelf angles, heads of windows, etc.), see page 7 for additional information.
2B. Install DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ or DuPont™ Self-Adhered Flashing products around windows and doors in accordance with the DuPont™ Tyvek® Fluid Applied Flashing Installation Guidelines (K-29397).

NOTE: For spray applications of Tyvek® Fluid Applied WB+™, the outer edge of DuPont™ Self-Adhered Flashing products should be treated with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ tapered to the wall substrate to help ensure installation is free of pinholes and voids.

STEP 3: WALL/SUBSTRATE PREPARATION
3A. Fill small cracks and voids in masonry with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+. Large voids should be filled flush with mortar and allowed to cure.
3B. Seal around all penetrations using Tyvek® Fluid Applied Flashing and Joint Compound+ or Sealant for Tyvek® Fluid Applied System. The fillet bead should extend ½” onto both surfaces (see page 10 for detail).
3C. As a best practice DuPont recommends that all embedded masonry anchors be treated by troweling or brushing a coat of Tyvek® Fluid Applied WB+™ or Fluid Applied Flashing and Joint Compound+ around the base of the anchor (see page 11 for additional fastening recommendations).
3D. Treat all non-moving transition joints to beams, columns, and dissimilar materials (up to 1/4”) by applying a 2” wide, 60 mil thick coat of Tyvek® Fluid Applied Flashing and Joint Compound+ across the joint. Grouted joints between similar materials do not need to be treated. Transition joints up to ½” should be reinforced with fiberglass mesh tape. DuPont™ StraightFlash™ should be used for transition joints up to 1” following the primer requirements according to Special Consideration #14, on page 5. The DuPont™ StraightFlash™ should extend a minimum of 2” onto each surface. Refer to page 12 for additional information about treatment of transition joints.
3E. Treat all inside and outside corners by applying a 25 mil thick coat of Tyvek® Fluid Applied Flashing and Joint Compound+, 2” onto each adjoining surface. It is recommended that a fillet bead of Tyvek® Fluid Applied Flashing and Joint Compound+ be applied to corners to help ensure continuity. Alternately, corners may be treated using DuPont™ StraightFlash™. Be sure that DuPont™ StraightFlash™ is pressed tightly into the inside corners and is fully adhered to substrate (see Special Consideration #14, on page 5, for priming requirements).

STEP 4: WEATHER BARRIER
DuPont™ Tyvek® Fluid Applied WB+™ can be sprayed or rolled on nonporous substrates such as gypsum sheathings, in one 25-mil (0.635 mm) wet coat, but may require back rolling. Porous substrates such as CMU and non-uniform substrates such as wood sheathing and OSB can be sprayed but may require back rolling. When back rolling, use a roller cover with a 1/2” to 3/4” nap. Tyvek® Fluid Applied WB+™ needs only to be applied in a single coat at 25 mils thick (see Coverage Rates table on page 3). Thickness should be controlled by applying the appropriate volume over a marked area and by spot checking with a wet mil gauge. Integrate Tyvek® Fluid Applied WB+™ with through wall flashing and window/door flashing by overlapping the flashing with Tyvek® Fluid Applied WB+™ by a minimum of 2”. Upon completion, inspect the membrane to ensure that it is continuous and free of any voids or pinholes.
**Detailing**

It is important to maintain the continuity of the weather barrier from top to bottom. The entire wall surface shall be covered, including unconditioned spaces. Special attention should be given to all terminations, transitions, projections and penetrations to ensure a proper drainage plane and continuous weather barrier.

**Foundation**

A. Install through wall flashing in accordance with the through wall flashing manufacturer’s installation guidelines.

B. Apply DuPont™ Sealant for Tyvek® Fluid Applied System or DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ along the top edge of the through wall flashing and/or term bar and to all seams. Allow the Tyvek® Fluid Applied product to form a touch-free skin before applying DuPont™ Tyvek® Fluid Applied WB+™ (see Drying/Curing table on Page 11 for skin and working times). If DuPont™ StraightFlash™ is used in lieu of the DuPont™ Sealant for Tyvek® Fluid Applied System or DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+, the wall must be primed with DuPont™ Adhesive/Primer or recommended primer.

C. Apply DuPont™ Tyvek® Fluid Applied WB+™ onto wall surface at 25 mils thick. Overlap through wall flashing by a minimum of 2”.

**NOTE:** When spraying, the outer edge of DuPont™ Self-Adhered Flashing products should be treated with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ tapered to the wall substrate to help ensure installation is free of pinholes and voids.

**Top of Wall**

A. DuPont™ Tyvek® Fluid Applied WB+™ should be installed prior to the installation of the DuPont recommended parapet flashing membrane.

B. Apply a liberal bead of DuPont™ Sealant for Tyvek® Fluid Applied System or Tyvek® Fluid Applied Flashing and Joint Compound+ onto the Tyvek® Fluid Applied WB+™ at a location that will be approximately 2” up from the bottom edge of the parapet flashing membrane.

C. While the sealant bead is still wet, install the flashing membrane over the top of the parapet, extending a minimum of 4” onto the Tyvek® Fluid Applied WB+™.

D. Press parapet flashing membrane into sealant and secure using mechanical fasteners installed through the membrane and sealant bead.

**NOTE:** As soon as practically possible, cap the top of the wall system to reduce the likelihood of water getting behind the facade and into the wall cavity.
DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines

**Transitions**

**Method 1**: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+

A. Clean both substrates thoroughly. Remove any material that could negatively affect adhesion.

B. Fill seam between adjoining substrates flush with the surface using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+. Joints up to ¼” can be treated with Tyvek® Flashing and Joint Compound+ only. Joints from ¼” - ½” should first be reinforced with fiberglass mesh tape or filled with mortar.

C. Apply a bead of Tyvek® Fluid Applied Flashing and Joint Compound+ to both adjoining surfaces and spread material across transition seam to a width of approximately 2” and 60 mils thick. Upon completion, inspect transition treatment for thin spots, gaps or pinholes and repair as necessary.

D. Allow the Tyvek® Fluid Applied Flashing and Joint Compound+ to form a touch-free skin before applying DuPont™ Tyvek® Fluid Applied WB+™ (see Drying/Curing table on Page 11 for skin and working times).

* For non-moving joints only.

**Method 2**: Using DuPont™ Self-Adhered Flashing Products

A. Clean both substrates thoroughly. Remove any material that could negatively affect adhesion.

B. Prime both substrates using DuPont™ Adhesive/Primer or recommended primer.

C. Install DuPont™ StraightFlash™ to the primed substrates, extending a minimum of 2” onto each surface. Press StraightFlash™ firmly onto both surfaces, working it into any irregularities using a J-roller or firm hand pressure.

D. Apply DuPont™ Tyvek® Fluid Applied WB+™ onto wall surface at 25 mils thick.

**NOTE**: When spraying, the outer edges of DuPont™ Self-Adhered Flashing products should be treated with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ tapered to the wall substrate to help ensure installation is free of pinholes and voids.

* For non-moving joints only.
**DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines**

**Transitions to DuPont™ Tyvek® Mechanically-Fastened Air and Water Barriers**

A. Install DuPont™ Tyvek® Mechanically-Fastened Air and Water Barrier per the *DuPont™ Tyvek® Mechanically Fastened Air and Water Barrier Installation Guidelines* prior to application of DuPont™ Tyvek® Fluid Applied WB+™.

B. Fasten the Tyvek® Mechanically-Fastened Air and Water Barrier to the stud adjoining the transition substrate.

C. Cut DuPont™ Tyvek® Mechanically-Fastened Air and Water Barrier so that approximately 3” will overlap the adjoining substrate.

D. Fold back the 3” flap of Tyvek® Mechanically-Fastened Air and Water Barrier and prime adjoining substrate with DuPont™ Adhesive/Primer or recommended primer.

E. Fold the Tyvek® Mechanically-Fastened Air and Water Barrier back down over the interface and seal it to the primed substrate using 4” DuPont™ StraightFlash™, overlapping both surfaces evenly by approximately 2”. Apply pressure along entire surface of flashing. Refer to Special Consideration #21 for additional information.

F. Apply Tyvek® Fluid Applied WB+™ onto wall surface, overlapping the DuPont™ StraightFlash™ by a minimum of 2”.

**Uncured DuPont™ Tyvek® Fluid Applied Products must not come in contact with DuPont™ Tyvek® Mechanically-Fastened Air and Water Barriers due to potential impact on performance properties. Therefore, use of a spray guard or other physical barrier to avoid overspray onto the Mechanically-Fastened Air and Water Barrier is recommended.**

G. Upon completion, inspect surface to ensure that Tyvek® Fluid Applied WB+™ is continuous and free of any voids or pinholes.

**NOTE:** When spraying, the outer edge of DuPont™ Self-Adhered Flashing product at the interface with the Tyvek® Fluid Applied WB+™ should be treated with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ tapered to the wall substrate to help ensure installation is free of pinholes and voids.
**Penetrations**

Option 1: Using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ or Sealant for Tyvek® Fluid Applied System.

A. Clean both substrates.
B. Seal around penetration using DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ or Sealant for Tyvek® Fluid Applied System and with backer rod as necessary. Upon completion, inspect Tyvek® Fluid Applied product for gaps or pinholes and repair as necessary.
C. Tyvek® Fluid Applied product should extend a minimum of ½” onto both surfaces. Allow product to form a touch-free skin before applying DuPont™ Tyvek® Fluid Applied WB+™ (see Drying/Curing table on Page 11 for skin and working times).
D. Tool concave to achieve proper joint design.

Option 2: Using DuPont™ FlexWrap™ NF

A. Clean substrate of any material that could negatively affect adhesion and remove any sharp protrusions.
B. Apply DuPont™ Adhesive/Primer, or recommended primer, around the opening, onto face of the wall.
C. Seal around penetration with DuPont™ FlexWrap™ NF. DuPont™ FlexWrap™ NF should extend onto both surfaces by 2”.
D. Apply Tyvek® Fluid Applied WB+™, overlapping the DuPont™ FlexWrap™ NF by 1/2” min.

**NOTE:** When spraying, the outer edge of DuPont™ FlexWrap™ NF at the interface with the Tyvek® Fluid Applied WB+™ should be treated with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ tapered to the wall substrate to help ensure installation is free of pinholes and voids.
Brick Ties, Cladding Supports, and Furring Strips

As a best practice, DuPont recommends that all embedded masonry anchors be treated by brushing or troweling a coat of DuPont™ Tyvek® Fluid Applied WB+™ or DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ around the base of the anchor.

When installing mechanically attached supports or furring strips in high performance building envelope designs (building envelope design requirements exceeding ASTM E 1677, 65 mph equivalent structural load and 15 mph equivalent wind-driven rain water infiltration testing), fasteners shall be sealed by 1) embedding support bracket or brick tie base plate into an additional wet bed of DuPont™ Tyvek® Fluid Applied product, 2) applying DuPont™ StraightFlash™ patch over cured Tyvek® Fluid Applied WB+™ at prescribed cladding fastener locations, 3) applying a piece of double-sided butyl tape (by others) to the back of support bracket at fastener location, or 4) an alternate DuPont-approved method.

NOTE: If using the StraightFlash™ option, the patch may be placed in an additional wet bed of Tyvek® Fluid Applied product to increase adhesion.

When installing mechanically attached supports or furring strips in building envelope design requirements equivalent to ASTM E 1677 conditions or less, no pretreatment is necessary.

Application Over Sheathing

DuPont™ Tyvek® Fluid Applied WB+™ may be installed over exterior gypsum, OSB, and plywood sheathing. Sheathing should be clean and free from any materials that could negatively affect adhesion. When installing over sheathing, it is important that all sheathing seams are pretreated using the appropriate joint treatment method (see page 12). All flashing and detailing should be completed before installation of DuPont™ Tyvek® Fluid Applied WB+™. When applying over exterior gypsum, all cut edges along outside corners and rough openings should first be primed with DuPont™ Adhesive/Primer or recommended primer.

When spraying DuPont™ Tyvek® Fluid Applied WB+™, pretreat all overdriven sheathing fasteners with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+. Application of sheathing substrate and sheathing fasteners should be free of pinholes and voids. Installer should treat any pinholes and voids using DuPont™ Tyvek® Fluid Applied products.

DuPont™ Tyvek® Fluid Applied WB+™ can be sprayed or rolled on nonporous substrates, such as gypsum sheathings, in one 25-mil (0.635 mm) wet coat. Porous substrates such as CMU and non-uniform substrates such as wood sheathing and OSB can be sprayed but may require back rolling. When back rolling, use a roller cover with a 1/2” to 3/4” nap. Tyvek® Fluid Applied WB+™ needs only to be applied in a single coat at 25 mils thick (see Coverage Rates table on page 3). The thickness should be controlled by applying the appropriate volume over a marked area and by spot checking with a wet mil gauge. Upon completion, inspect the membrane to ensure that it is continuous and free of any voids or pinholes.

Tyvek® Fluid Applied products may be overcoated once a touch-free skin has formed (see Drying/Curing table on Page 11 for skin and working times).

Drying/Curing

The Tyvek® Fluid Applied products mentioned in this guide skin over and are dry to touch within 1-2 hours under normal conditions (70°F (20°C), and 50% RH). Uncured DuPont™ Tyvek® Fluid Applied products should not come in contact with DuPont™ Tyvek® Mechanically-Fastened Air and Water Barriers. Performance testing can commence after membrane is fully cured, approximately 14 days.

See table below for details.

<table>
<thead>
<tr>
<th>Use Recommendations</th>
<th>Application</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Over*</td>
<td>Minor touchups</td>
<td>1-2 Hours</td>
</tr>
<tr>
<td>Workable*</td>
<td>Cladding/Façade Fasteners</td>
<td>24 Hours</td>
</tr>
<tr>
<td>Exterior Façade / Exterior Insulation</td>
<td></td>
<td>48 Hours</td>
</tr>
<tr>
<td>Tyvek® CommercialWrap®/CommercialWrap® D</td>
<td>When Tyvek® Fluid Applied Product is Used as Sheathing Seam Treatment</td>
<td>48 Hours</td>
</tr>
<tr>
<td>Complete Cure</td>
<td>End-Use Testing</td>
<td>24 Hours</td>
</tr>
</tbody>
</table>

*Time required for Tyvek® Fluid Applied products to form a surface that is non-transferable to the touch.

**Time required for surface of Tyvek® Fluid Applied products to be more resistant to minor abrasion.
### Joint Treatment Methods

When rolling or backrolling, joint treatment is not necessary for gaps 1/16” wide or less. When spraying, backrolling or joint treatment is required for gaps 1/16” wide or less. Upon completion of application, wall substrate should be free of pinholes and voids.

**Method 1 (For Gaps Up to 1/4”)**

A. Apply a bead of DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ above and below the sheathing seam.

B. Smooth Tyvek® Fluid Applied Flashing and Joint Compound+ across the joint using a brush or trowel. DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ should be tapered for a smooth finish of 15-25 mils and extend a minimum of 1” on either side of the joint.

**Optional Method (For Joints Up to 1/4”)**

A. Apply a bead Tyvek® Fluid Applied Flashing and Joint Compound+ to both adjoining surfaces and spread material across transition seam to a width of approximately 2”. Make sure the seam is filled. Scrape the Tyvek® Fluid Applied Flashing and Joint Compound+ flush to the surface.

B. Check joint for thin spots and pinholes, repair as necessary.

C. Allow the Tyvek® Fluid Applied product to form a touch-free skin before applying DuPont™ Tyvek® Fluid Applied WB+™ (see Drying/Curing table on Page 11 for skin and working times).

**Method 2 (For Gaps Up to 1/2”)**

A. Firmly apply self-adhered reinforcing mesh tape.

B. Apply a bead of Tyvek® Fluid Applied Flashing and Joint Compound+ above and below the sheathing seam.

C. Smooth Tyvek® Fluid Applied Flashing and Joint Compound+ across the mesh tape using a brush or trowel. DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ should be tapered for a smooth finish of 15-25 mils and extend a minimum of 1” on either side of the joint.

D. Check joint for thin spots and pinholes, repair as necessary.

**Method 3 (For Gaps Up to 1”)**

A. Apply DuPont™ Adhesive/Primer or recommended primer above and below sheathing joint.

B. Center DuPont™ StraightFlash™ over joint and firmly press onto sheathing using a J-roller or firm hand pressure.

**NOTE:** When spraying, the outer edge of DuPont™ Self-Adhered Flashing products should be treated with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ tapered to the wall substrate to help ensure installation is free of pinholes and voids.

---

**Repair**

Small repairs can be made by coating the damaged area with a layer of Tyvek® Fluid Applied product. Larger damaged areas may need to be reinforced using fiberglass mesh or by replacing damaged substrate before reapplying Tyvek® Fluid Applied product.
DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines

**Equipment Recommendations**

**DuPont™ Tyvek® Fluid Applied WB+™** can be applied using a pressure roller or airless sprayer in conjunction with a variety of pumps, such as the Graco Mark V, GMAX II 7900, IronMan 300E, IronMan 500G, GH 733, GH 833 or equivalent. All manufacture limitations should be followed.

**Roller Applied**

Apply DuPont™ Tyvek® Fluid Applied WB+™ using a pressure roller with a 1/2” – 3/4” nap roller cover. **NOTE**: Some roller covers may have loose fibers at the start of use that may need to be worked off to limit and/or minimize loose fibers on the wall substrate. Foam-type rollers and shorter naps should not be used, as they will just slide on the substrate.

**Spray Applied**

DuPont™ Tyvek® Fluid Applied WB+™ can be spray applied using electric or gas hydraulic airless sprayers. Always ensure there is no water in the spray system prior to the introduction of Tyvek® Fluid Applied WB+™. A pre-flush of the sprayer with mineral spirits is recommended. A Graco Silver Plus spray gun or a heavy duty texture gun along with Graco RAC 5 or XHD-RAC tips are recommended.

All internal filters should be removed from the pump, spray gun, and pressure roller assembly, before applying product. The pump intake screen should be installed when applying product. The condition of the pump, as well as the size, length, and condition of the hoses used can affect the system's performance. The diameter of some hose sections may need to be increased, depending on the pumping distance desired. Refer to pump manufactures representative and guidelines regarding the operation and maintenance of the pump system. Operation of pump equipment can be hazardous. All manufacturer limitations, warnings, and safety recommendations should be followed.

**Clean Up and Purge**

Clean sprayer components and tools with mineral spirits, naphtha, citrus-based cleaners, or gel-based paint stripper. Material should not be left in the pump, hose, gun, or roller. After applying, flush system with a citrus-based cleaner, or mineral spirits until the system is clean. Avoid using water for cleanup. Low pressure portions of the system should be taken apart and cleaned by hand. Before the next usage, flush any remaining solvent out of the system before applying DuPont™ Tyvek® Fluid Applied WB+™ to the wall substrate. Be sure that system is fully clean of any residual product before introducing a different product. If system is not fully clean, ingredients can react and cause products to cure in the system. Spray tips can be cleaned in mineral spirits or naphtha using airbrush cleaning tools. Dispose of solvents per local codes and regulations.

**Facade/Exterior Considerations**

**NOTE**: Refer to Special Consideration #8, on page 5, for exterior insulation and cladding installation recommendations.

**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, Tyvek® Fluid Applied WB+™ 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® Fluid Applied WB+™ in accordance with these installation guides. For maximum moisture management and drying of the wall system, the air space in front of the Fluid Applied WB+™ shall be vented to the exterior at the top and bottom of the wall.

**Stucco**

When stucco is installed over wood-based sheathing the 2015 International Building Code (Section 2510.6) requires “a water-resistive vapor-permeable barrier with a performance at least equivalent to two layers of Grade D paper” or a layer of weather barrier which is separated from the stucco by an “intervening layer”. When the DuPont™ Tyvek® Fluid Applied WB+™ is used behind stucco, it should be separated from the stucco by an intervening layer per section 2510.6 of the 2015 International Building Code. DuPont™ Tyvek® Fluid Applied WB+™ should be installed as the first air and water barrier directly over the face of the substrate, and should be integrated with the window and door flashings, the weep screed at the bottom of the wall and any through wall flashings 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.

**Metal Panel**

When used with DuPont™ Tyvek® Fluid Applied WB+™, metal panel cladding systems shall be installed according to manufacturer’s instructions and industry standards. Window and door flashing and through wall flashing shall be integrated with the Tyvek® Fluid Applied WB+™.
DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines

Stone Veneer
The 2015 International Building Code (Section 1405.10) requires two layers of a water resistive barrier behind stone veneers over framed construction. When used behind stone veneer, DuPont™ Tyvek® Fluid Applied WB+™ shall be installed in a similar manner as it is behind stucco. When installed over wood frame construction, DuPont™ Tyvek® Fluid Applied WB+™ should be separated from the stone and mortar by an intervening layer (second layer) of a DuPont™ Tyvek® Mechanically-Fastened Air and Water Barrier, a layer of grade D building paper, felt, rigid foam board or the paper backing of paper-backed lath. DuPont™ Tyvek® Fluid Applied WB+™ should be installed as the first air and water barrier layer directly over the face of the substrate, and should be integrated with the window and door flashings, the weep screeds at the bottom of the wall and any through wall flashings 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.

Wood Siding
When used with DuPont™ Tyvek® Fluid Applied WB+™, 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 air space behind the siding using furring strips. DuPont™ Tyvek® CommercialWrap® D offers >98% drainage efficiency when evaluated in accordance with ASTM E2273 Standard Test Method for Determining the Drainage Efficiency of Exterior Insulation and Finish Systems (EIFS) Clad Wall Assemblies.

Fiber Cement Siding
When used with DuPont™ Tyvek® Fluid Applied WB+™, 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 air space behind the siding using furring strips.

Exterior Insulation
Exterior Insulation should be installed after the appropriate flashing materials have been installed and DuPont™ Tyvek® Fluid Applied WB+™ has been applied and properly integrated with flashing. Exterior insulation shall be installed in accordance with manufacturer's guidelines and industry standards. The level of performance of exterior insulation (continuous insulation) is dependent upon proper installation and continuity limitations due to the design of the building envelope.

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

DuPont™ FlexWrap™ NF, StraightFlash™ and StraightFlash™ VF flashing products are made from a synthetic rubber adhesive and a top sheet of flash spunbonded high density polyethylene fibers. Additives have been incorporated into these materials to help provide UV light resistance. DuPont requires that DuPont™ FlexWrap™ NF, StraightFlash™ and StraightFlash™ VF be covered within nine (9) months of installation.

DuPont™ FlexWrap™ NF, StraightFlash™ and StraightFlash™ VF 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 are combustible and should be protected from flame and other high heat sources. If burning occurs, ignited droplets may fall away from the point of ignition. For more information, call 1-800-44-Tyvek.

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

KEEP OUT OF REACH OF CHILDREN.

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

Use only as directed. Avoid inhalation of vapor aerosol.
Clean Up
Uncured Fluid Applied product can be cleaned from hands, tools, and equipment by using a citrus based cleaner or standard mineral spirits. Cured product can be removed by soaking in citrus based cleaners or using a gel-based paint stripper.

Precautionary Statements
Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/fumes/gas/mist/vapors/spray. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/ protective clothing/ eye protection/ face protection. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Immediately call a POISON CENTER/doctor. If skin irritation or rash occurs: Get medical advice/ attention. Wash contaminated clothing before reuse. Store locked up. Dispose of contents/container to an approved waste disposal plant. Vapor and aerosols are harmful if using spray application. Use in a well-ventilated area. Use NIOSH approved respirator. If vapors are inhaled, immediately move from exposure to fresh air and contact a physician. Avoid contact with eyes and skin.

Hazard Statement
May cause an allergic skin reaction. May cause serious eye damage. May cause genetic defects. May cause cancer. May damage fertility or the unborn child.

Shelf Life And Storage
The shelf life is 12 months for an unopened container from the date of manufacture. Reference the “Use By” date printed on the container. Store opened containers with a plastic protective liner. Before reusing a previously opened container, first remove any cured material that may have formed (skinned over) at the top. DuPont™ Tyvek® Fluid Applied products should be stored in a clean, dry environment, 50°-80°F (10°-27°C).

Disposal
Dispose of any residual fluid applied material or fluid applied coated debris in accordance with applicable federal, state, and local government regulations.

Note
When installed in conjunction with other building materials, DuPont™ Self-Adhered Flashing products and DuPont™ Tyvek® Fluid Applied products must be properly integrated so that water is diverted to the exterior of the wall system. DuPont™ Tyvek® Fluid Applied WB+™ is a secondary weather barrier. The outer facade is the primary barrier. 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. 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® Fluid Applied WB+™. Use of additives, coatings or cleansers on or in the facade system may impact the performance of DuPont™ Tyvek® Fluid Applied products. DuPont Weatherization Systems products are to be used as outlined in this installation guideline. DuPont™ Self-Adhered Flashing products and DuPont™ Tyvek® Fluid Applied products should only be used to seal penetrations and flash openings in buildings. Uncured DuPont™ Tyvek® Fluid Applied Products must not come in contact with DuPont™ Tyvek® Mechanically-Fastened Air and Water Barriers due to potential impact on performance properties. DuPont™ Self-Adhered Flashing products and DuPont™ Tyvek® Fluid Applied products are not to be used in roofing applications. For superior protection against bulk water penetration, DuPont suggests a system combining a quality exterior facade, a good secondary weather barrier and exterior sheathing, high quality windows and doors, and appropriate flashing materials paying attention to proper installation of each component.

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

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 or visit www.fluidapplied.tyvek.com.

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