

# DUPONT™ TYVEK® FLUID APPLIED WB

FOR USE ON MOST COMMERCIAL WALL SUBSTRATES INCLUDING CMU AND GYPSUM SHEATHING



## PRODUCT INFORMATION—FEATURES/BENEFITS

### Air and Water Barrier Performance

- Offers an ideal combination of air and water holdout with vapor permeability.
- Air Barrier Association of America evaluated to exceed ABAA, ASHRAE 90.1 and IECC air leakage requirements when tested in accordance with ASTM E2357.

### Ease of Installation

- Single component, one-coat application.
- Offers 2 to 3 times the coverage of competitive products. Approximately 50 to 70 sq. ft./gallon in one coat, depending on substrate conditions (temperature and moisture), substrate porosity, and uniformity of application.
- Spray or pressure roll for fast and easy application.
- Installation temperature range 25°F ambient (-4°C) to a maximum surface temperature 140°F (60°C). Do not install once ambient temperature exceeds 95°F (35°C), unless surface is shaded.
- Exhibits extremely low shrinkage during curing, minimizing the risk of cracking and pin-holing.

### High Performance Durability

- The formulation of Tyvek® Fluid Applied is not water soluble and will not lose physical properties or wash off the wall when exposed to liquid water, even before curing. Can be installed on damp surfaces which is defined as when no moisture is transferred to the skin when the substrate is touched.
- The cured membrane exhibits exceptional elongation and recovery properties. When stretched it acts like a rubber band allowing the membrane to move with the building.
- Withstands 9 months of UV exposure.

### Sustainable Solutions

- Tyvek® Fluid Applied products may contribute toward LEED® points in the areas of Energy and Atmosphere (EA): Optimizing the Building Envelope and Indoor Environmental Air Quality (EQ): Construction IAQ Management Plan and Low Emitting Materials. In addition, the use of a continuous air barrier is a prerequisite for LEED applications requiring compliance with ASHRAE 90.1-2010.
- By helping to effectively seal the building envelope and reducing air leakage, the Tyvek® Fluid Applied system helps reduce the amount of energy required for heating and cooling.
- Low VOC. < 2% (by wt.)

### Complete System

- Part of a complete, integrated fluid applied weather barrier system, all backed by a limited warranty from DuPont. For best results, use with Tyvek® Fluid Applied Flashing & Joint Compound and DuPont™ Sealant for Tyvek® Fluid Applied System.

## DESCRIPTION

Tyvek® Fluid Applied WB is based on a unique formulation using silyl-terminated polyether polymer technology. It offers low shrinkage during curing, superior elongation and recovery and can be easily applied in one coat.

## TYPICAL PROPERTIES

Please contact your local DuPont™ Tyvek® Specialist before writing specifications around this product. Product properties are as follows:

Test Method	Property	Unit	Value
ASTM E2178	Air Penetration Resistance	cfm/ft <sup>2</sup> @ 75 Pa (1.57 psf)	0.0002
Gurley Hill (TAPPI T-460)	Air Penetration Resistance	sec/100 cc	>10,000
ASTM E2357	Wall Assembly Air Penetration Resistance	cfm/ft <sup>2</sup> @ 75 Pa	<0.01
ASTM E283	Wall Assembly Air Penetration Resistance	cfm/ft <sup>2</sup> @ 75 Pa	<0.01
ASTM E1677	Wall Assembly Air & Water Leakage	Type	Type I
AATCC 127	Water Penetration Resistance	cm	>1000
ASTM E331	Wall Assembly Water Penetration Resistance	Tested to 15 psf	No leakage
ASTM E96-00	Water Vapor Transmission	Method B perms	25 @ 25 mils
ASTM C1305	Low Temperature Crack Bridging	No cracking at 25 mil thickness	PASS
ASTM D4541	Adhesion Strength - Concrete	psi	>33
ASTM D4541	Adhesion Strength - Exterior Gypsum (delaminates fiberglass topsheet)	psi	>25
ASTM D903	Peel Strength	lbf/in (aluminum)	13 Cohesive failure
ASTM C794	Adhesion-In-Peel	lbf/in (mortar)	PASS
ASTM D412	Tensile	psi	169
ASTM D412	Elongation at break	%	400
ASTM D412	Recovery at 300% elongation	%	99
ASTM D2240	Hardness	Shore A	71
Accelerated weathering (G155)	Ultraviolet Light Exposure (UV)	months	9
ASTM 1970	Nail Sealability	No leakage	Pass
NFPA 285	Flame Propagation. Multiple Assemblies	—	Pass
ASTM E84	Surface Burning Characteristics	Class Flame Spread Index Smoke Developed Index	Class A 25 25
ASTM C1250	VOC	% (by wt.) g/L	<2 25-30

Test results shown represent averages. Individual results may vary either above or below averages due to normal manufacturing variations, while continuing to meet product specifications.



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## APPLICATION/USE INSTRUCTIONS

Please refer to DuPont Installation Guidelines for complete instructions.

### Use Conditions

Installation temperature range 25°F ambient (-4°C) to a maximum surface temperature 140°F (60°C). Do not install once ambient temperature exceeds 95°F (35°C), unless surface is shaded. Stirring not necessary. If separation should occur, you can gently fold material until mixture is uniform. Avoid any type of mixing that will introduce air into the product.

### Active Ingredients

Calcium carbonate

### Safety Precautions for Use

Vapor harmful if using spray application. Use in a well ventilated area. Use a NIOSH approved respirator. If vapors are inhaled, immediately remove from exposure and contact a physician. Avoid contact with eyes and skin. Protective eye wear and gloves are recommended. CAUTION: Use only as directed. Avoid contact with eyes. First Aid: Eye Contact; Wash thoroughly with water. If irritation persists, contact a physician. Skin Contact; Rinse thoroughly with citrus-based cleaners. KEEP OUT OF REACH OF CHILDREN.

### Preparation

DuPont™ Tyvek® Fluid Applied WB is intended to be installed on a membrane drainage wall system. Do not install on a wall that does not feature a continuous path for moisture drainage. Remove all surface dust, dirt and loose mortar. Surface must be clean, free from frost, grease, dirt, or other contaminants and must be reasonably smooth. Mortar joints in concrete block and voids in poured concrete shall be filled flush and smooth and allowed to cure for a minimum of 24 hours. Product can be installed on damp surfaces provided no moisture is transferred to the skin when the substrate is touched. This flexibility reduces substrate preparation and protection requirements.

### Application

Complete all joint fill and flashing beforehand. Tyvek® Fluid Applied WB may be spray or power roll applied. Application using a pressure roller, such as a Graco Pressure Roller, is preferred. Apply in a single application at 25 mils thick; spot check with a wet mil gauge. Inspect surface for voids and pinholes and repair as necessary.

### Curing

Tyvek® Fluid Applied WB is tack free or dry to touch within 2 hours at 70°F and 50% relative humidity. Curing occurs within 24 hours at 70°F and 50% relative humidity. Facade may be applied after 24 hours. Tack free time and complete cure will vary with temperature, humidity and substrate conditions.

### Clean-Up

Clean tools with mineral spirits, citrus-based cleaners, or gel-based paint stripper. Material should not be left in the pump, hose, gun, or pressure 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 Tyvek® Fluid Applied WB to the wall. Be sure that system is fully clean of any product before introducing a different product. If system is not fully clean, products can react and cause products to cure in the system.

### Equipment

Application using a pressure roller, such as the Graco Pressure Roller, is the preferred method of installation of Tyvek® Fluid Applied WB. The pressure roller can be used in conjunction with the a variety of pumps, such as the Graco IronMan 300E, IronMan 500G, GH 733, GH 833 or equivalent. All manufacture limitations should be followed. Tyvek® Fluid Applied WB may be sprayed using a high pressure air powered, airless sprayer such as the Graco X70 Xtreme® Sprayer with a 0.017" – 0.025" tip. All filters should be removed.

## TESTING/CODE COMPLIANCE

### MOISTURE PROTECTION –

#### WEATHER-RESISTANT BARRIERS

The 2012 International Building Code (IBC, Section 1403.2 Weather Protection) requires that exterior walls shall provide the building with a weather-resistant *exterior wall envelope*. This shall include flashing, as described in Section 1405.4. Tyvek® Fluid Applied System products have been tested and meet weather-resistant barrier codes and standards requirements. The following test methodologies were used:

- ASTM E96-00, Standard Test Methods for Water Vapor Transmission of Materials; Water resistive barriers are typically vapor permeable, which is generally desirable because it allows for drying of incidental moisture intrusion into the wall assembly
- AATCC 127, Hydrostatic Head Test for WRB Materials, measuring pressure to failure or time of failure at a given pressure
- ASTM E331, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, And Curtain Walls by Uniform Static Pressure.

#### AIR LEAKAGE CONTROL – AIR BARRIERS

ASHRAE 90.1 2010 (American Society of Heating, Refrigerating and Air-Conditioning Engineers) requires that the entire building envelope shall be designed and constructed with a *continuous air barrier*. This is a mandatory provision for the building envelope. IECC 2009/2012 (International Energy Conservation Code) for commercial buildings also requires a *continuous air barrier*. These codes are being adopted in many states across the United States. Tyvek® Fluid Applied System products have been tested and meet air barrier codes and standards requirements. The following test methodologies were used:

- ASTM E2178, Standard Test Method for Air Permeance of Building Materials
- ASTM E283, Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen
- ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies

- ASTM E1677, Standard Specification for Air Barrier (AB) Material or System for Low-Rise Framed Building Walls
- ASTM E779-10 Standard Test Method for Determining Air Leakage Rate by Fan Pressurization (whole building)

### Other

- 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

Tyvek® Fluid Applied System products have been evaluated according to Air Barrier Association of America (ABAA) protocol and are listed at the ABAA website under "ABAA evaluated Air Barrier Assemblies".

## NOTICE

Tyvek® Fluid Applied WB should be covered with the facade within 9 months to limit UV exposure. Follow facade manufacturer's installation and maintenance requirements in order to maintain water holdout. Depending on job site conditions, stains may appear, but will not alter the performance of the product.

## MATERIAL STORAGE/DISPOSAL

Tyvek® Fluid Applied products should be stored in a clean, dry environment, 50°- 80°F, (10°- 27°C). Storage of the products in temperatures outside that range for short periods of time is acceptable. Please refer to the Tyvek® Fluid Applied FAQ's at [www.fluidapplied.tyvek.com](http://www.fluidapplied.tyvek.com)

## 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 at the top.

## PACKAGING

Tyvek® Fluid Applied WB is available in 5 gallon pails and 50 gallon drums.

## WARRANTY

Backed by a limited product warranty, see [www.weatherization.tyvek.com](http://www.weatherization.tyvek.com).

## LIMITATIONS

Tyvek® Fluid Applied WB should not be used for below grade applications or in applications in which it will be permanently exposed. Asphalt based adhesives are not recommended for use with this product.

For more information visit us at [www.fluidapplied.tyvek.com](http://www.fluidapplied.tyvek.com) or call 1-800-44-Tyvek

