

DUPONT™ TYVEK® COMMERCIAL SOLUTIONS

DUPONT™ TYVEK® FLUID APPLIED WB+™

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



- By helping to effectively seal the building envelope and reducing air leakage, the DuPont™ 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 DuPont™ Tyvek® Fluid Applied Flashing & Joint Compound+ and DuPont™ Sealant for Tyvek® Fluid Applied System.

DESCRIPTION

DuPont™ 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 | Typical Value | Units |
|---------------------------|---|---------------------|--|
| ASTM D2369 | Solids | 99 | % |
| ASTM C679 | Skinover Time @50% R.H. 70 deg F | 1 to 2 | Hrs |
| ASTM E2178 | Air Penetration Resistance | 0.0002 | cfm/ft ² @ 75 Pa (1.57 psf) |
| Gurley Hill (Tappi T-460) | Air Penetration Resistance | >10,000 | sec / 100 cc |
| ASTM E2357 | Wall Assembly Air Penetration Resistance | <0.0002 | cfm/ft ² @ 75 Pa |
| ASTM E283 | Wall Assembly Air Penetration Resistance | <0.0002 | cfm/ft ² @ 75 Pa |
| ASTM E1677 | Wall Assembly Air & Water Leakage | Type I | Type |
| AATCC 127 | Water Penetration Resistance | >1000 | cm |
| ASTM E331 | Wall Assembly Water Penetration Resistance | No Leakage | Tested to 15 psf |
| ASTM E96-00 | Water Vapor Transmission | 22 @ 25 mils Thick | Method B Perms |
| ASTM C1305 | Low Temperature Crack Bridging | PASS | No Cracking at 25 mil Thickness |
| ASTM D7234 | Adhesion Strength - Concrete | >33 | psi |
| ASTM D4541 | Adhesion Strength - Exterior Gypsum (delaminates fiber glass top sheet) | >25 | psi |
| ASTM D903 | Peel Strength | 13 Cohesive Failure | lbf/in (aluminum) |
| ASTM C794 | Adhesion - in - Peel | PASS | lbf/in (mortar) |
| ASTM D412 | Tensile | 140 | psi |
| ASTM D412 | Elongation at Break | 320 | % |
| ASTM D412 | Recovery (held at 300% elongation) | 99 | % |
| ASTM D2240 | Hardness | 34 | Shore A |

PRODUCT INFORMATION—FEATURES/BENEFITS

Air and Water Barrier Performance

- Offers an ideal combination of air and water holdout with vapor permeability.
- Exceeds 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 65 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. Max in-service temperature 180°F (82°C).
- Exhibits low shrinkage during curing, helping to minimize the risk of cracking and pin-holing.

High Performance Durability

- The formulation of Tyvek® Fluid Applied is not water soluble and will not wash off the wall when exposed to liquid water, even before curing. DuPont™ Tyvek® Fluid Applied WB+™ 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

- DuPont™ 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.

| Test Method | Property | Typical Value | Units |
|-------------------------------------|--|---------------|-----------------------|
| Accelerated Weathering (ASTM G-155) | Ultraviolet Light Exposure (UV) | 9 | Months |
| ASTM D1970 | Nail Sealability | PASS | No Leakage |
| NFPA 285 | Flame Propagation. Multiple Assemblies | PASS | |
| ASTM E84 | Surface Burning Characteristics | Class A | Class |
| | | 25 | Flame Spread Index |
| | | 25 | Smoke Developed Index |
| ASTM C1250 | VOC | <2 25-30 | % (by wt) g/L |
| AC 212 | Acceptance Criteria for Water Resistive Barriers over Exterior Sheathing | Pass | |

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.

APPLICATION/USE INSTRUCTIONS

Please refer to *DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines* and *DuPont Tyvek Fluid Applied Flashing Installation Guidelines*.

Use Conditions

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. Stirring is 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. At temperatures below 50°F (10°C), product will thicken and may become difficult to spray. Avoid spraying in very windy conditions. Consider covering surrounding area to protect from overspray. Avoid spraying in very dusty conditions. See *DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines* for detailed application instructions.

Precautionary Statements

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust/ fume/ gas/ mist/ vapours/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.

Danger

- KEEP OUT OF REACH OF CHILDREN.
- USE ONLY AS DIRECTED.
- AVOID INHALATION OF VAPOR AEROSOL.

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.

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

Preparation

Remove all surface dust, dirt, fins, ridges, mortar, and other projections and fill honeycomb, aggregate pockets, holes, recessed mortar joints and other voids in concrete with substrate-patching material. 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 48 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 treatment and flashing prior to any spraying or rolling of DuPont™ Tyvek® Fluid Applied WB+™. DuPont™ Tyvek® Fluid Applied WB+™ can be applied 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. Refer to the Wall and Substrate Guidelines for complete information.

Curing

DuPont™ Tyvek® Fluid Applied WB+™ skins over and is tack free or dry to touch within 2 hours at 70°F and 50% relative humidity. Tack free time and complete cure can vary with temperature, humidity and substrate conditions. Uncured DuPont™ Tyvek® Fluid Applied products should not come in contact with DuPont™ Tyvek® Wrap products. Performance testing should be done after product is fully cured (~14 days). See curing table in *DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines* (K29398), page 11 for details.

Clean-Up

Clean 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. 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. Spray tips can be cleaned in mineral spirits or naphtha using airbrush cleaning tools.

Equipment

DuPont™ Tyvek® Fluid Applied WB+™ may be sprayed using a high pressure air powered, airless sprayer or applied using a pressure roller in conjunction with a variety of pumps. See *DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines* (K29398), page 13, for pump, equipment and tip configurations. All manufacturer limitations should be followed.

TESTING/CODE COMPLIANCE

MOISTURE PROTECTION – WEATHER-RESISTANT BARRIERS

The 2012/2015 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, Refrigeration 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 2009/2012/2015 (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 standard 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)
- ASTM E96 Standard Test Methods for Water Vapor Transmission of Materials

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
- AC 212 Acceptance Criteria for Water Resistive Coatings used as Water Resistive Barriers over Exterior Sheathing

NOTICE

DuPont™ Tyvek® Fluid Applied WB+™ should be covered with the façade within 9 months to limit UV exposure. Follow façade 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). Dispose per local codes and regulations.

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 previously opened containers with a plastic protective liner placed directly over top of the remaining product, and apply bucket lid. Before reusing a previously opened container, first remove any cured material that may have formed at the top.

PACKAGING

DuPont™ Tyvek® Fluid Applied WB+™ is available in 5 gallon pails or 55 gallon drums. The lid contains a reclosable integrated pouring spout / hose inlet designed to assist with spraying and pressure rolling applications while minimizing waste generation.

WARRANTY

Backed by a limited product warranty, see www.weatherization.tyvek.com.

LIMITATION

DuPont™ 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 and/or mastics are not recommended for use with this product.

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. For more information, visit us at www.fluidapplied.tyvek.com or call 1-800-44-Tyvek.

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