

DUPONT™ TYVEK® COMMERCIAL SOLUTIONS

**ADDITIONAL CONSIDERATIONS WHEN SPRAYING
DUPONT™ TYVEK® FLUID APPLIED WB+™****INTRODUCTION**

This bulletin is designed to serve as a resource for building professionals and installers using DuPont™ Tyvek® Fluid Applied WB+™ Products in spray applications. The information included in this bulletin does not override any requirements appearing in the Installation Guidelines or Warranty and should be used in conjunction with those documents. Additionally, please note that all spray and material hazards are included in the Installation Guidelines, SDS, and Technical Data Sheets. These documents, and all other DuPont™ Tyvek® Fluid Applied Product information can be found at www.weatherization.tyvek.com.

GENERAL APPLICATION

DuPont™ Tyvek® Fluid Applied WB+™ can be sprayed or rolled onto both porous and nonporous substrates to achieve the required thickness of 25 mils. In general, due to the significantly higher application rates, spraying is the preferred application method for projects requiring large areas of treatment. DuPont™ Tyvek® Fluid Applied WB+™ can be applied to concrete masonry unit (CMU), concrete (48 hrs. for green concrete), exterior gypsum, OSB, plywood, wood, treated wood and metal. When spraying onto porous substrates such as CMU and non-uniform substrates such as wood sheathing and OSB, it may be necessary to backroll after spraying to help eliminate residual pinholes and voids from the spraying process. If backrolling is necessary, a roller cover with a 1/2" to 3/4" nap should be used because foam-type rollers and smaller naps will cause the roller to slide. Thickness should be controlled by applying the appropriate volume over a marked area and spot checking with a wet mil gauge as coverage rates will vary depending on the porosity of the substrate.

SUBSTRATE CONDITIONS

Clean the substrate prior to applying DuPont™ Tyvek® Fluid Applied Products. Adhesion can be affected by surface materials such as frost, oil, grease, mold or efflorescence. DuPont™ Tyvek® Fluid Applied Products can, however, be applied to damp surfaces.

It is important to pretreat all sheathing seams when spraying DuPont™ Tyvek® Fluid Applied WB+™ over exterior gypsum and/or wood-based sheathing. This process should include treating the outer edges of all interfaces with DuPont™ Self-Adhered Flashing products and DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ that is tapered to the wall substrate for smooth transitions that are free of pinholes and voids. Refer to the *DuPont™ Tyvek® Fluid Applied WB+™ Wall and Substrate Guidelines* (K-29398) for additional information.

USE CONDITIONS

Stirring the DuPont™ Tyvek® Fluid Applied WB+™ is not necessary prior to spraying. However, should separation occur, gently mix and fold the material upon itself until the mixture is uniform. Avoid any type of mixing that introduces air into the product.

DuPont™ Tyvek® Fluid Applied WB+™ will thicken and may become difficult to spray at temperatures below 50°F (10°C). Spraying in very windy conditions may result in overspray of the material beyond the intended application surface. Therefore, the installing professional should consider tenting the building structure to protect surrounding areas from overspray. Spraying in very dusty conditions is not recommended.

Opened pails and drums of DuPont™ Tyvek® Fluid Applied WB+™ should be covered with a piece of plastic sheet to slow the cure rate. If a previously opened container is used, any cured-material skin at the top should be removed before use. This will help prevent cured product from blocking the flow of material through the spray system.

DuPont™ Tyvek® Fluid Applied Products should be applied when the air and surface temperatures are above 25°F (-4°C). The maximum surface temperature of the substrate should not exceed 140°F (60°C).

PRIOR TO SPRAYING

DuPont™ Tyvek® Fluid Applied WB+™ will cure in the presence of moisture. Therefore, the pump, hose, and suction line of the sprayer should be flushed with mineral spirits or naphtha prior to introducing the DuPont™ Tyvek® Fluid Applied WB+™ to avoid blockage due to cured material accumulating in the system. In addition, removal of internal filters to facilitate smooth operation of the pump and sprayer is recommended.

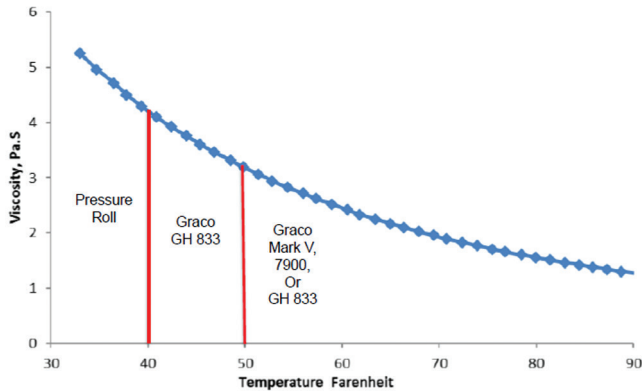
DuPont™ Tyvek® Fluid Applied WB+™ vapor and aerosols can be harmful and application must be conducted in a well-ventilated area. Wear protective gloves/protective clothing/eye protection/face protection and a NIOSH-approved respirator. Refer to the DuPont™ Tyvek® Fluid Applied WB+™ Installation Guidelines, SDS, and Technical Data Sheet for detailed information about application and material hazards. Visit www.fluidapplied.tyvek.com, or consult your local DuPont™ Tyvek® Specialist for additional information.

ADDITIONAL CONSIDERATIONS WHEN SPRAYING DUPONT™ TYVEK® FLUID APPLIED WB+™

SPRAY CONDITIONS AND EQUIPMENT

Tyvek® Fluid Applied WB+™ can be sprayed above 40°F (4°C) with the equipment summarized in the Spray Equipment Requirements Table, below. When temperatures are below 40°F (4°C), DuPont™ Tyvek® Fluid Applied WB+™ should be pressure rolled rather than sprayed. The plot (shown below) provides a snapshot of material viscosity as a function of temperature in addition to applicable pump selection and/or application method.

PUMP SELECTION BASED ON APPLICATION TEMPERATURE AND PRODUCT VISCOSITY



The low-temperature limit for sprayability with the Graco Mark V and 7900 is approximately 50°F (10°C) and the low-temperature limit for sprayability with the Graco GH 833 is approximately 40°F (4°C).

The optimal distance for the spray gun from the wall surface will typically range from 12 to 18 inches depending on the pump and spray tip used. The consistency of application can be managed by maintaining a fixed distance and angle of the spray gun to the receiving substrate and maintaining a steady spray rate. Fanning of the sprayer and varying spray rate will result in an uneven thickness and should be avoided.

Spraying should be conducted at the lowest possible pressure required to atomize the DuPont™ Tyvek® Fluid Applied WB+™. This can be achieved by slowly increasing the pressure until the spray pattern is consistent without “fingers” or “tails”. Spraying with a larger diameter hose, smaller tip orifice, and/or higher fan width may help to facilitate better atomization.

If the maximum pressure setting is reached and the spray pattern is still not suitable, it is possible an incorrect tip size or worn tip is the cause. In this case, a smaller orifice diameter or clean tip should be considered. A combination of spray tip size and application pressure determine the spray rate.

The installer may attempt to increase the coverage area by reaching the sprayer to a point that the proper spray gun position described above cannot be met. This will result in an increasingly thinner coating as the reach distance increases. Overlap of spray passes from 30–50% can help to ensure complete and uniform substrate coverage. Periodic measurement of the application thickness with a wet mil gauge can assist in maintaining a consistent thickness. DuPont™ Tyvek® Fluid Applied WB+™ can be spray applied using electric or gas hydraulic airless sprayers. In addition to listing the suggested sprayer models or



Graco Heavy-Duty Texture Gun with RAC 5 Spray Tip and Guard

their equivalents for various spray conditions, the Spray Equipment Requirements Table, below, also includes the appropriate accessories for spraying DuPont™ Tyvek® Fluid Applied WB+™.

The Graco Silver Plus Spray Gun or Heavy-Duty Texture Gun along with Graco RAC 5 or XHD-RAC tips are recommended.

SPRAY EQUIPMENT REQUIREMENTS FOR DUPONT™ TYVEK® FLUID APPLIED WB+™

Equipment	Type of Airless Sprayer	Minimum Ambient Temperature (Degrees F)	Maximum Pressure (PSI)	Maximum Flow Rate (GPM)	Minimum Hose Diameter	Tip Size (mils)
Graco Mark V or Equivalent	Electric	50	3300	1.35	3/8"	519-631
Graco GMAX II 7900 or Equivalent	Gas	50	3300	2.2	3/8"	519-631
Graco 833 or Equivalent	Gas	40	4000	4	3/8"	519-635
Pressure Roller	NA	<40	NA	NA	3/8"	NA

ADDITIONAL CONSIDERATIONS WHEN SPRAYING DUPONT™ TYVEK® FLUID APPLIED WB+™

DUPONT™ TYVEK® FLUID APPLIED WB+™ DELIVERY TO THE SPRAYER

DuPont™ Tyvek® Fluid Applied WB+™ is available in 5-gallon buckets and 55-gallon drums (each drum contains 50 gallons of material). Minimizing exposure of the DuPont™ Tyvek® Fluid Applied WB+™ to air will maximize the pot life of the product. For the drum, the DuPont™ Tyvek® Fluid Applied WB+™ is contained within a vacuum-sealed bag and metalized liner. When using the drums, remove the lid, open the vacuum-sealed bag, and fold the opened bag over the walls of the drum as shown below. This will expose the desiccant package and metalized liner which can then be removed. The lids of both containers are equipped with an integral pouring spout that can also be used as hose inlets.



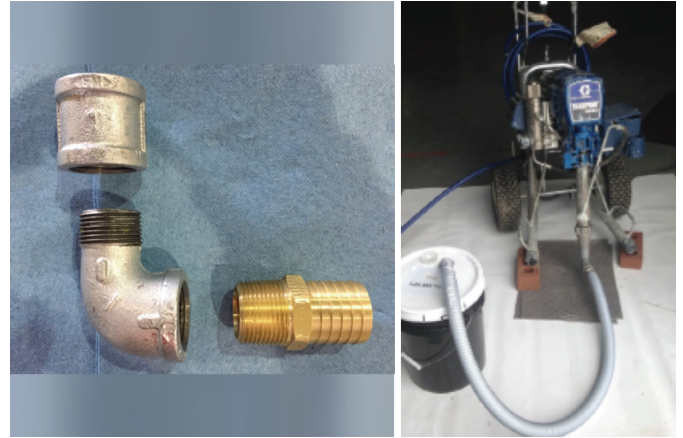
55-gallon drum contains 50 gallons of DuPont™ Tyvek® Fluid Applied WB+™ packaged within a vacuum-sealed bag, shown folded over walls of drum after removing lid (left), with removable metalized liner and desiccant (right)

After removing the lid, the lower portion of the delivery pump can be placed directly into the container. However, the recommended method is to connect a siphon hose to the inlet housing which can then be inserted through the integrated pouring spout of the 5-gallon bucket or bung hole of the 55-gallon drum as shown in the pictures below. The use of a siphon hose helps to minimize material loss and facilitate clean-up.



Siphon hose inserted through integrated pouring spouts of the 5-gallon bucket (left) and 55-gallon drum (right) with vacuum-sealed bag folded over drum walls and dip tube connected to siphon hose”

The images below show an example of components that can be used to connect a siphon hose to the lower section of a Graco Mark V pump. Modification of the lower section of the pump to accommodate a siphon hose utilizes a 1" NPT (Female pipe thread), 1" NPT Street Elbow, and 1-1/4" Barb x 1" NPT. Once all parts are assembled and connected to the pump using Teflon tape as necessary, the siphon hose can be connected with a hose clamp.



Individual components necessary for connection of siphon hose include 1" NPT (Female Pipe Thread), 1" NPT Street Elbow, and 1-1/4" Barb x 1" NPT (left) and components assembled and connected to the lower section of the Graco Mark V pump and siphon hose (right).

The delivery equipment should supply a sufficient volume of product to avoid “starving” the system and spraying should be discontinued before the level of the DuPont™ Tyvek® Fluid Applied WB+™ runs low to avoid the introduction of air into the system. The spray equipment manufacturer can be contacted for additional information about operation guidelines and recommendations based on the material properties and constraints provided.

CLEANING AND PURGING OF SPRAY EQUIPMENT

If the pumping system has been used with other materials, it should be cleaned of any residual material before introducing the DuPont™ Tyvek® Fluid Applied WB+™. If the system is not completely clean, ingredients can react and cause products to cure in the system.

After use with the DuPont™ Tyvek® Fluid Applied WB+™, sprayer components and tools can be cleaned with mineral spirits, naphtha, citrus-based cleaners, or gel-based paint stripper. It is important to avoid using water for cleanup. DuPont™ Tyvek® Fluid Applied WB+™ should not be left in the pump, hose, gun, or on roller after spraying. A citrus-based cleaner or mineral spirits can be used to flush the system until it is clean. Any remaining solvent should be flushed out of the system into a separate container prior to the next application of DuPont™ Tyvek® Fluid Applied WB+™ onto the wall substrate. The lower portions of the pump can be cleaned by hand to ensure removal of all residual material. Spray tips can be cleaned with mineral spirits or naphtha using airbrush cleaning tools. Solvents should be disposed according to local codes and regulations.

ADDITIONAL CONSIDERATIONS WHEN SPRAYING DUPONT™ TYVEK® FLUID APPLIED WB+™

INTEGRATION WITH DUPONT™ TYVEK® MECHANICALLY-FASTENED AIR AND WATER BARRIERS AND DUPONT™ SELF-ADHERED FLASHING PRODUCTS

There are applications in which it is necessary to transition from DuPont™ Tyvek® Mechanically-Fastened Air and Water Barriers to a wall section treated with DuPont™ Tyvek® Fluid Applied WB+™ such as a hybrid wall that transitions from wood or fiber cement sheathing to CMU. In these instances, DuPont™ StraightFlash™ is used as a transition material to terminate the Tyvek® Mechanically-Fastened Air and Water Barrier onto the substrate prior to installation of the DuPont™ Tyvek® Fluid Applied WB+™. While uncured DuPont™ Tyvek® Fluid Applied WB+™ is installed over DuPont™ StraightFlash™ at the transition, 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, the use of a spray guard is recommended when spraying DuPont™ Tyvek® Fluid Applied WB+™ adjacent to DuPont™ Tyvek® Mechanically-Fastened Air and Water Barriers. An example of a typical spray guard is shown below.



Use of a spray guard is recommended to avoid overspray when transitioning on DuPont™ Tyvek® Mechanically-Fastened Air and Water Barriers

When spraying DuPont™ Tyvek® Fluid Applied WB+™ onto DuPont™ Self-Adhered Flashing products, the outer edge of the flashing should be treated with DuPont™ Tyvek® Fluid Applied Flashing and Joint Compound+ and tapered to the wall substrate to help ensure installation is free of pinholes and voids. These edges can also be pre-treated by spraying the DuPont™ Tyvek® Fluid Applied WB+ at a 45-degree angle along the edge of the self-adhered flashing.

Please refer to the *DuPont™ Tyvek® Fluid Applied WB+™ Commercial Wall and Substrate Guidelines* (K-29398) for more information about integration with DuPont™ Self-Adhered Flashing products.

**For additional guidance, please call
1-800-44-Tyvek (800-448-9835), visit
www.fluidapplied.tyvek.com, or consult
your local DuPont™ Tyvek® Specialist**



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