

DuPont™ Tyvek® StuccoWrap®

FACT SHEET

Specially designed for use with stucco facades and EIFS systems, DuPont™ Tyvek® StuccoWrap® has an engineered surface that manages water and promotes a strong stucco façade. It is an ideal water-resistive barrier that is recognized as meeting all major building codes by ICC-ES evaluation reports, and has a long track record of proven performance.

A single layer of DuPont™ Tyvek® StuccoWrap® has been used for years in direct contact with stucco. Stucco will not chemically react with, or degrade DuPont™ Tyvek®, as DuPont™ Tyvek® is highly inert and will not react with any of the standard ingredients found in traditional stucco mixtures. Therefore, it is perfectly acceptable to use DuPont™ Tyvek® in direct contact with traditional stucco cladding mixtures in accordance ASTM C926-06 Standard Specification for Application of Portland Cement-Based Plaster.

Research has shown when stucco is directly applied to DuPont™ Tyvek® StuccoWrap® it is better than Grade D paper at managing hydration and remaining stable during curing¹. These two features result in a significant reduction of cracking in the scratch coat. Building paper can absorb water out of the stucco mix during curing. As the moisture content of the building paper changes, it expands and contracts. The movement can cause fractures in the scratch coat. Shrinkage around the lath wire can create voids or gaps. DuPont™ Tyvek® StuccoWrap® does not absorb water, helps maintain the moisture level needed for better curing, and doesn't expand and contract. It helps create a stronger stucco. In flexural strength tests on traditional 3-coat systems, stucco cured on DuPont™ Tyvek® StuccoWrap® had up to 30% more flexural strength than stucco cured on 60-minute building paper. Less cracking means better stucco integrity and less chance that water will penetrate the facade. Ideally, each stucco layer should dry at a similar rate front to back. DuPont™ Tyvek® StuccoWrap® is better than Grade D paper at helping control moisture distribution in the mix during the critical early hardening. Improving the curing process results in stronger stucco.

¹ "Development of a Textured Spun-bonded Polyolefin Water Barrier for Stucco and EIFS" presented at an Innovative Products Symposium at the ASHRAE Winter Meeting, Atlanta, GA, January 2001.



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DuPont™ Tyvek® StuccoWrap® vs. Grade D Building Paper

DuPont™ Tyvek® StuccoWrap®	Grade D Building Paper
Highly water resistant	Can absorb water
Helps channel water and moisture to the outside*	Expands when exposed to water, can hinder water drainage
Highly vapor permeable, promotes drying	Low vapor permeability, can retard drying
Good tear strength, 3X stronger than paper	Tears, punctures easily
Is not a food source for mold and mildew	Is a food source for mold and mildew
Superior UV performance and durability	No UV rating, susceptible to degradation
Easy to repair accidental damage with tape	Can't be repaired with tape
Retains strength when wet	Loses substantial strength when wet
Outstanding air infiltration protection	Low air infiltration protection

*when used in conjunction with a second intervening layer.

Code Requirements

DuPont™ Tyvek® products are recognized as water-resistive barriers in ICC-ES Evaluation Report ER-4000 and have been used successfully in traditional three coat stucco for many years. The application of DuPont™ Tyvek® water-resistive barriers is governed by the code adopted and enforced by the local jurisdiction. In jurisdictions that require two layers over wood-based sheathing and accept DuPont™ Tyvek® StuccoWrap® as equivalent to two-ply Grade D building paper, only one layer of DuPont™ Tyvek® StuccoWrap® is necessary. When stucco is installed over wood-based sheathing the International Building Code (Section 2510.6) and the 2006 International Residential Code (Section R703.6.3) requires “a water-resistive vapor-permeable barrier with a performance at least equivalent to two layers of Grade D paper” or a layer of water-resistive barrier which is separated from the stucco by an “intervening layer”. In jurisdictions that require two layers over wood-based sheathing and do not accept DuPont™ Tyvek® StuccoWrap® as equivalent to two-ply Grade D building paper, DuPont™ Tyvek® water-resistive barriers should be separated from the stucco by a second layer of DuPont™ Tyvek® water-resistive 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 water-resistive barrier and is integrated with window and door flashings, the weep screed at the bottom of the wall and any through-wall flashings or expansion joints.

It is important to note that in high exposure areas where severe weather and wind driven rains are a significant factor in normal weather patterns, we recommend design of wall systems that incorporate an intervening layer or airspace to maximize drainage. In these systems DuPont™ Tyvek® StuccoWrap® provides enhanced drainage over other two-layer systems. In addition, current literature indicates that inconsistencies in stucco applications and formulations, particularly inclusion of additives (which in some cases may contain surfactants), may negatively impact the water hold-out capabilities of all water-resistive barriers. Therefore, the practice of incorporating unapproved additives into stucco formulations is not advised.



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For more information about DuPont™ Tyvek® StuccoWrap® or other DuPont™ Tyvek® Weatherization Systems please call 1-800-44-Tyvek or visit us on the web at www.Construction.Tyvek.com.