

DuPont™ Tyvek® Water Resistive Barriers (WRB) vs. black paper

Test Method	Minimum Performance Requirements	
	Type 1	Type 2
Test Method D 779, or	10-minute minimum	60-minute minimum
Water Resistance Ponding Test, or	No water shall penetrate through membrane in 120 min	Not applicable
AATCC 127 – specimens held at a hydrostatic head of 55cm	Not applicable	No leakage is permitted to the underside of any specimen in 5 hours
Water Vapor Transmission Test	Minimum 5 perms	
Pliability Test	Material shall not crack when bent over a 1.6mm diameter mandrel at 32 °F	

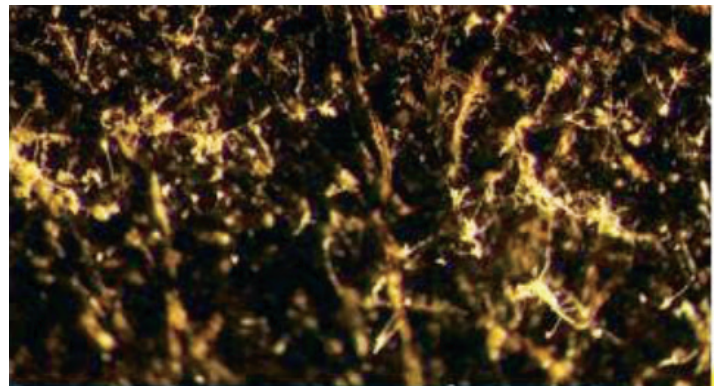
Understanding the difference between Type I and Type II WRBs is the first step in determining the type of install you will need.

- Type I WRB – **passes only base level of water resistance**, typically only 10-minute minimum water resistance according to ASTM D779. Perforated wraps and some Integrated WRBs/Coated Sheathings tend to be Type I WRBs.
- Type II WRB – **has an enhanced level of water resistive requirements**. These would exceed a 60-minute minimum water holdout according to ASTM D779, or pass the water resistance ponding test, or AATCC Test Method 127.

**** All DuPont™ Tyvek® WRBs have been tested and meet the performance requirements for ASTM E2556, Type II. ****



Tyvek® HomeWrap®: no mold growth after 75 days.



60 min. grade D black paper: mold growth after 75 days.

The test specimens were inspected for any visible mold growth after 75 days of exposure. As shown in the following pictures, the Tyvek® HomeWrap® sample did not show any mold growth. In contrast, the sample of 60-minute black paper did show mold growth. This demonstrates that under hot, humid conditions, black paper is susceptible to mold growth. Black paper is made up of cellulosic fibers which can act as a food source for mold. The combination of a moist condition due to retained moisture and the presence of a food source make black paper susceptible to mold growth unlike Tyvek® WRBs which are comprised of a continuous filament barrier, precisely bonded, to provide bulk water hold-out and high breathability.

Unlike DuPont™ Tyvek® WRBs, black paper can absorb water, retaining some moisture in the wall system. DuPont conducted tests on both Tyvek® HomeWrap® and black paper to determine susceptibility to mold growth, using the standard test method ASTM D-3273-94.



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What does this mean for a builder who is using DuPont™ Tyvek® WRBs?

The compliance path is relatively straightforward since **all Tyvek® WRBs meet the performance requirements for Type II WRBs and all Tyvek® WRBs** have a drainage efficiency of 90% or greater when measured in accordance with ASTM E2273. The primary Tyvek® WRB would then need an additional layer that will act as the intervening layer. This could be a layer of foam plastic insulating sheathing or other non-water-absorbing layer, or a designed drainage space.

DuPont™ Tyvek® HomeWrap® and CommercialWrap® have a drainage efficiency of 90% or greater.

DuPont™ Tyvek® DrainWrap™, StuccoWrap®, and CommercialWrap® D have a drainage efficiency of 98% or greater.

Reference: [Drainage Efficiency of DuPont™ Tyvek® HomeWrap® and Tyvek® CommercialWrap®](#)

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CAUTION: When cured, these products are combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information call the DuPont Contact Center at 866-583-2583 or contact your local building inspector. For emergencies contact Chemtrec 800-424-9300, CCN (Contract Number) 7442. The blowing agent contained within this product can exhibit vapor flame limits under the right conditions. If specific operating conditions are such that concentrations of the blowing agent above the lower flammable limit can accumulate in areas with high relative humidity and in the presence of high-energy electrical discharges or other ignition sources, additional measures such as increased ventilation or coded electrical equipment (class one, division two) may be warranted. DO NOT SMOKE DURING USE. DO NOT USE NEAR ANY OPEN FLAME OR ELECTRICAL SOURCE. OUTDOOR USE ONLY. INDOOR USE INCREASES LIKELIHOOD OF IGNITABLE CONDITIONS. Insta Stik™ Quik Set Commercial Roofing Adhesive contains isocyanate and a blowing agent. Read the label and (Material) Safety Data Sheet ((M)SDS) carefully before use. Wear gloves, and goggles or safety glasses. Provide adequate ventilation or wear proper respiratory protection. Contents under pressure. For outside use only.

Building and/or construction practices unrelated to insulation could greatly affect moisture and the potential for mold formation. No material supplier including DuPont can give assurance that mold will not develop in any specific system.