

DUPONT™ TYVEK® BUILDING WRAPS VS. ZIP SYSTEM® WALL SHEATHING

INSTALLATION

DuPont™ Tyvek® building wraps give you the job-site durability, performance and ease of use needed to help you build more comfortable, longer-lasting and energy-efficient structures. Trusted by building professionals everywhere, DuPont™ Tyvek® building wraps, part of the complete DuPont™ Weatherization Systems portfolio, provide superior overall performance compared to ZIP System® wall sheathing (wood-based sheathing with a water-resistive overlay), particularly when it comes to installation, as further described in this document.

DON'T BELIEVE THE HYPE - ZIP SYSTEM® DOES NOT INSTALL 40% FASTER

In its sales literature, the manufacturer of ZIP Systems® wall sheathing claims its product installs 40% faster than the leading house wrap. In testing conducted by the Home Innovation Research Lab at the request of DuPont, five installation crews participated in a series of experiments designed to test the ZIP System® manufacturer's claims of easier, faster installation. Each crew was timed while installing the ZIP System® and the complete DuPont Tyvek® Weatherization System and sheathing, following manufacturers' installation instructions, on a framed two-story structure that included three standard double-hung and three round top windows. **Test results showed no significant installation time advantage for the ZIP Systems® wall sheathing and tape over the DuPont™ Weatherization System. The ZIP System® does not install 40% faster.**

PRECISE SPACING IS TIME-CONSUMING AND CRITICAL

The ZIP System® installation manual requires a 1/8" gap between ZIP System® panels to allow for expansion and contraction. Not maintaining the 1/8" gap can stress the bond between the tape and the ZIP System® panel creating opportunities for air infiltration, water intrusion and possible tape failure.

52 FASTENERS = 52 OPPORTUNITIES FOR WATER INTRUSION

The ZIP System® installation manual requires 52 fasteners for each 4' x 8' piece of ZIP System® Wall Sheathing, each of which must puncture the WRB overlay without compromising the coating. Maintaining the required pneumatic pressure is critical to the proper installation of the ZIP System® panels, and fluctuating compressor pressure can make this difficult. Over-driving of fasteners can puncture the weather barrier overlay around the fastener, creating additional opportunities for water intrusion.



Results of tests conducted by the Home Innovation Research Lab at the request of DuPont showed no significant installation time advantage for the ZIP Systems® wall sheathing and tape over the DuPont™ Weatherization System.

EVERY ZIP SYSTEM® SEAM AND CORNER MUST BE TAPED AND THEN ROLLED

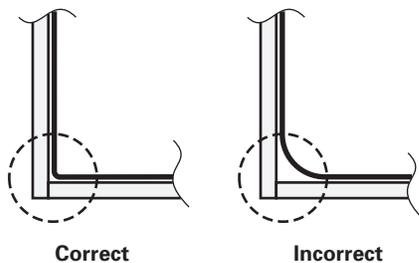
The performance of ZIP System® Wall Sheathing as an air and water barrier is dependent on the performance of the taped seams. Proper tape installation is time-consuming, complicated and crucial to the water and air resistance of the system.

Published ZIP System® installation guidelines require that all ZIP System® seam tape edges must be sealed and the tape must be centered within plus or minus 1/2" of all panel edge seam centers—with no wrinkles in the applied tape. For best results, the substrate must be clean and dry.

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ZIP TAPE DOES NOT STRETCH INTO CORNERS

Installation crews participating in the Home Innovation Research Laboratory test reported that the seam tape doesn't stretch which can make it difficult to get full adhesion when taping corner joints. It is especially difficult to properly tape inside corners.



If the tape is not fully seated in the corner, it can be stressed or otherwise damaged when the siding is placed in the corner during installation.

LESS FLEXIBILITY TO WORK AROUND THE WEATHER

Unlike DuPont™ Tyvek® building wraps, the ZIP System® sheathing and tape can only be installed in dry conditions and on dry surfaces, as directed in the ZIP System® Installation Manual. This can lead to scheduling delays and added costs when the weather doesn't cooperate.

INCOMPLETE INSTALLATION DETAILS

The published installation guidelines for the ZIP System® sheathing and tape are lacking details for the top and bottom sill plates. Guidance is not provided for bridging gaps greater than 1/8" or transitions to concrete or other materials.

ZIP SYSTEM® REQUIRES REVERSE SHINGLING

Contrary to accepted building science, the ZIP System® wall sheathing's published installation details result in reverse shingling at the heads of windows, doors and other penetrations. This conflicts with Section R703.8 of the 2006, 2009 and 2012 International Residential Code (IRC) and with major window manufacturers' installation details that require flashing to be applied shingle-fashion to prevent water from entering the wall cavity.

EASY-TO-DAMAGE ZIP SYSTEMS® PANELS MUST BE STORED AND HANDLED WITH CARE

ZIP System® wall sheathing consists of an oriented strand board (OSB) structural panel with a resin-impregnated Kraft paper overlay. As a result, care must be taken to protect the ZIP System® wall sheathing from moisture prior to installation which can eat up valuable time and space on the jobsite.

Storage instructions in the ZIP System® installation manual require that the ZIP System® **panel bundles be stored off of the ground and "covered loosely with a waterproof protective material"**. The manufacturer recommends these covers be anchored on top of the stack but away from the sides and bottom to allow for adequate air circulation.

When high moisture conditions exist, the manufacturer also recommends cutting the stack binding to prevent further damage to the swollen panels. Failure to take these precautions could result in damage to the panel.

CONCLUSION

DuPont™ Tyvek® building wraps are highly tear- and UV-resistant products that can be installed easier than the ZIP System®. DuPont™ Tyvek® weatherization products provide property owners and management groups with a system that is highly resistant to bulk water intrusion and air infiltration while allowing excellent wall system drying. The use of DuPont™ Tyvek® building wraps with today's wide array of cladding and sheathing options results in a more durable and forgiving wall system when compared to current WRB-laminated wood sheathing products.

FOR MORE INFORMATION

For more information, please call 1-800-44-Tyvek or visit www.weatherization.tyvek.com