

DuPont Performance Building Solutions

◀DUPONT▶      ▶DUPONT▶  
**Tyvek** | **Styrofoam**  
Brand™

## DuPont Commercial Wall<sup>2</sup> System

DuPont™ Tyvek® CommercialWrap® or  
CommercialWrap® D Water-Resistive and  
Air Barrier (WRB) **OVER** Exterior Insulation

Installation Bulletin

- Optimizes Thermal Efficiency and Durability Using DuPont™ Styrofoam™ Brand Extruded Polystyrene (XPS) or DuPont™ Thermax™ Brand Polyisocyanurate Board Insulation.
- Maximizes Air and Water Protection Using DuPont™ Tyvek® CommercialWrap® or CommercialWrap® D.
- Meets Fire Performance Requirements of NFPA 285.

October 2020



## Table of Contents

Introduction.....	3
DuPont Commercial Wall <sup>2</sup> System Exterior Sheathing and/or Exterior Cladding Fastener Considerations.....	3
DuPont Commercial Wall <sup>2</sup> System Applicable Products.....	3
DuPont Commercial Wall <sup>2</sup> System Warranty Information.....	3
<b>DuPont™ Tyvek® CommercialWrap® or Tyvek® CommercialWrap® D Water-Resistive and Air Barrier (WRB) Installed OVER DuPont Exterior Continuous Insulation.....</b>	<b>4</b>



## Introduction

The DuPont Commercial Wall<sup>2</sup> System in this document is based on in-depth, rigorous testing of enhanced wall assemblies that reflect the “Power of Two” when **DuPont™ Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** and **DuPont™ Styrofoam™ Brand Extruded Polystyrene (XPS)\*** or **DuPont™ Thermax™ Brand Polyisocyanurate Insulation\*** are used together to protect the building above and beyond building code minimums. This bulletin is intended for commercial buildings comprised of steel framing and/or CMU. Designers and building owners can enjoy greater peace of mind knowing that DuPont scientists and engineers have done the hard work to ensure assembly robustness when installers follow our guides. Use of this bulletin is limited to construction of the DuPont Commercial Wall<sup>2</sup> System outlined herein and is designed to serve as a resource for building professionals and installers using DuPont Performance Building Solutions Products in commercial construction. It does not override or change requirements in the DuPont Performance Building Solutions Installation Guidelines or product-specific Warranties, with the exception of using Rodenhouse Thermal-Grip® ci fasteners in lieu of DuPont™ Tyvek® Wrap Cap screws to qualify for the enhanced Commercial Wall<sup>2</sup> System Warranty. The DuPont Commercial Wall<sup>2</sup> System Warranty is based on use of the applicable products and components in the manner outlined in this bulletin. Please refer to the applicable DuPont Performance Building Solutions Product Installation Guideline for proper installation and requirements, technical specifications, codes and standards, and safe handling of **DuPont™ Tyvek® Air and Water Barriers, Fluid Applied products, Self-Adhered Flashing Systems products, Styrofoam™ Brand Extruded Polystyrene (XPS)\*, or Thermax™ Brand Polyisocyanurate Insulation\*** products. Product specific information is available at [building.dupont.com/commercial](http://building.dupont.com/commercial).

## DuPont Commercial Wall<sup>2</sup> System Exterior Sheathing and/or Exterior Cladding Fastener Considerations

It is important to consider minimizing the total number of fasteners used to attach the exterior sheathing, and/or the furring/external cladding attachment systems for optimum thermal efficiency. In many cases a metal furring or metal cladding attachment system will be installed over the exterior sheathing and/or air and water barrier with a defined fastening pattern required to meet structural and attachment requirements for the exterior cladding. All fasteners used for exterior sheathing and/or furring and cladding attachment systems should be securely fastened back to the metal framing structure as per manufacturer recommendations. When furring or cladding attachment systems are used, Project Construction Management may determine if conditions allow the fastening pattern of the exterior sheathing to be reduced with the subsequent required fasteners used to secure the furring/external cladding attachment system.

## DuPont Commercial Wall<sup>2</sup> System Applicable Products

### DuPont Exterior Continuous Insulation

- **Styrofoam™ Brand Extruded Polystyrene (XPS)** (Up to 3” depending on NFPA 285 approval and IBC)
- **Thermax™ Brand Polyisocyanurate Insulation** (Up to 4” depending on NFPA 285 approval and IBC)

### DuPont Mechanically-Fastened Water-Resistive and Air Barriers (WRBs)

- **DuPont™ Tyvek® CommercialWrap®**
- **DuPont™ Tyvek® CommercialWrap® D**

### DuPont Self-Adhered Flashing Products

- **DuPont™ FlexWrap™** (formerly DuPont™ FlexWrap™ NF)
- **DuPont™ StraightFlash™**

### Installation Accessories

- **DuPont™ Tyvek® Tape 3”**
- Rodenhouse Thermal-Grip® ci washers\*\*
- Grip-Deck® ceramic-coated self-drilling screws (#8 or #10)\*\*

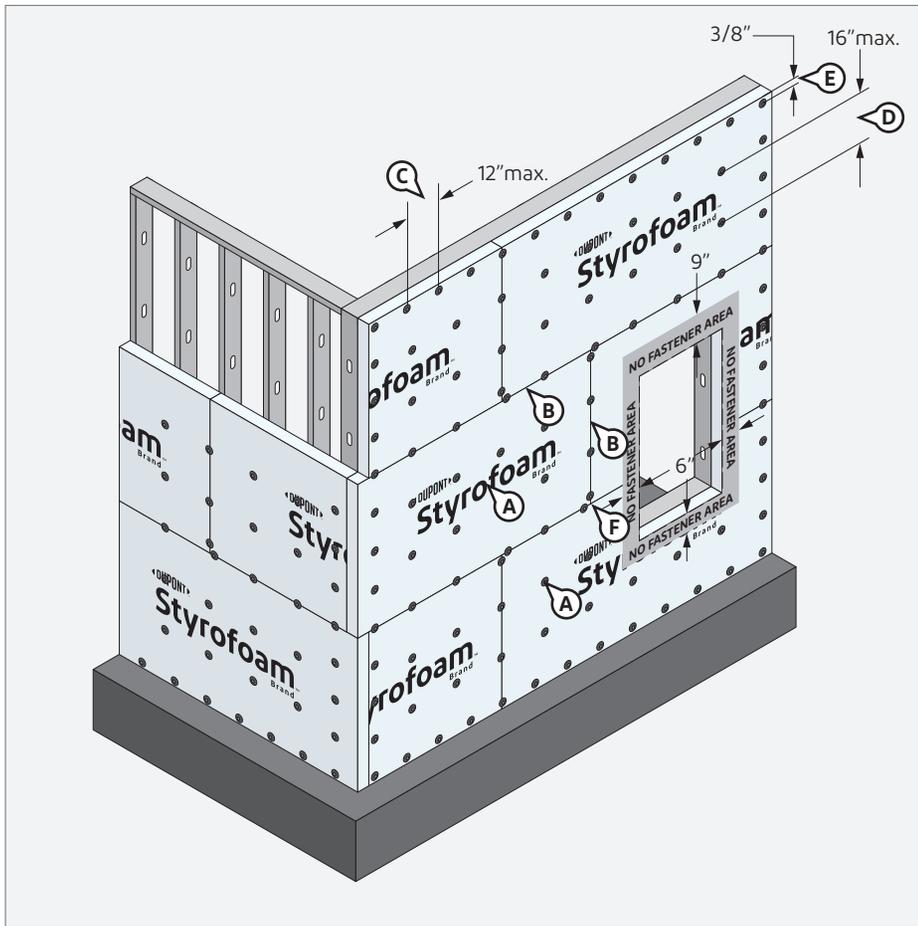
## DuPont Commercial Wall<sup>2</sup> System Warranty Information

In order to make a claim under the [DuPont Commercial Wall<sup>2</sup> System Warranty](#), you must have met all of the terms and conditions of the warranty including use of the applicable DuPont Installation Guidelines and this *Commercial Wall<sup>2</sup> System - DuPont™ Tyvek® CommercialWrap® or CommercialWrap® D Over Exterior Insulation Installation Bulletin*, and be compliant with local building codes including assembly-specific details for NFPA 285. Please visit [building.dupont.com/warranties](http://building.dupont.com/warranties) for more information about the warranty.

\*A former product of The Dow Chemical Company.

\*\*Apply per manufacturer’s guidelines. For non-DuPont products, DuPont assumes no liability in use of recommended products; installers need to evaluate suitability of recommended products in their end-use applications.

## DuPont™ Tyvek® CommercialWrap® or Tyvek® CommercialWrap® D Water-Resistive and Air Barrier (WRB) Installed OVER DuPont Exterior Continuous Insulation



### STEP 1

Install DuPont™ Styrofoam™ Brand Extruded Polystyrene (XPS) Insulation\* or DuPont™ Thermax™ Brand Polyisocyanurate Board Insulation\* to Metal Studs

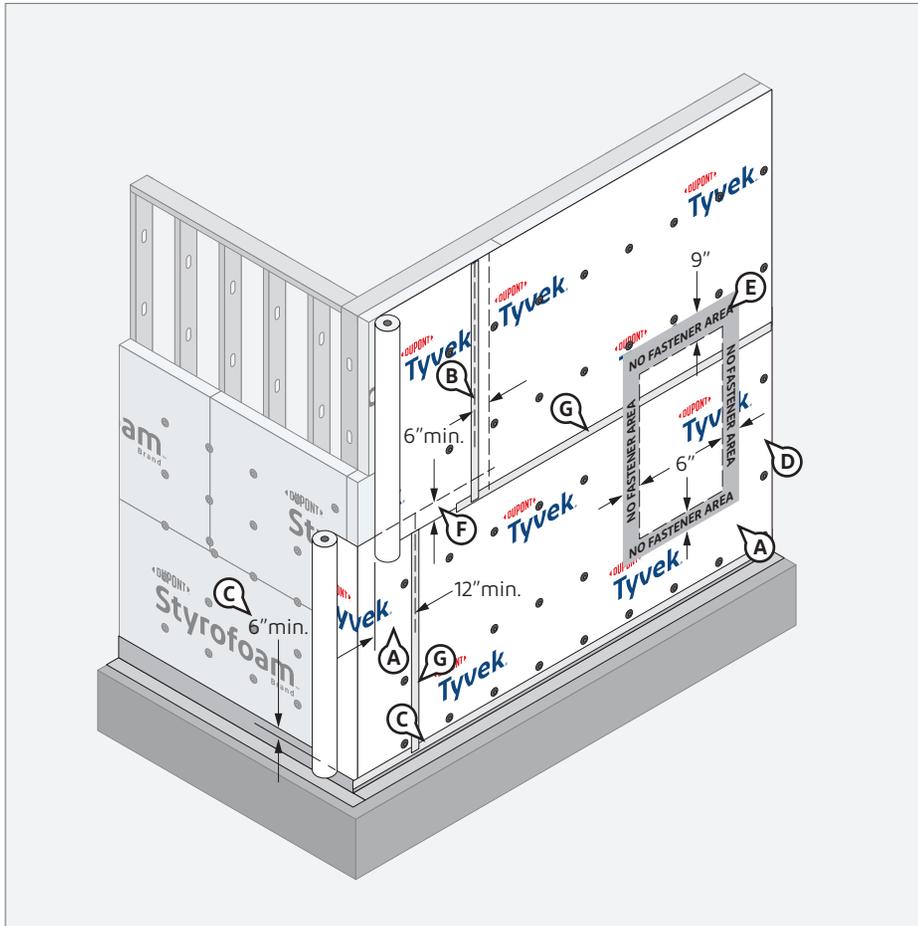
- Secure the insulation boards to metal studs with printed side facing to the exterior using Rodenhouse Thermal-Grip® ci fasteners or approved alternate. Please contact DuPont for most current list. Do not install fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings.
- Abut boards tightly together. Common practice is to stagger boards but, it is not required.
- Fasten insulation boards @ max. 12" o.c. at wall perimeters.
- Fasten insulation boards @ max. 16" o.c. around openings and in field of wall.
- Set back perimeter fasteners 3/8" from board edges and ends.
- One fastener can be used at intersection of 2 boards but, use at least 2 fasteners at intersection of 3 or more boards.

**Note:** Please refer to the applicable installation guidelines for the specified DuPont insulation product.

**Note:** For installation instructions for insulation over CMU block, refer to Steps 1-5 of the [Ultra Air Barrier Wall System in Block Wall Construction Installation Procedures](#).

\*Styrofoam™ and Thermax™ are former products of The Dow Chemical Company.

## DuPont™ Tyvek® CommercialWrap® or Tyvek® CommercialWrap® D Water-Resistive and Air Barrier (WRB) Installed OVER DuPont Exterior Continuous Insulation



### STEP 2

Install **DuPont™ Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D Water-Resistive and Air Barrier**.

- A. Starting at a corner of the building, unroll the **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** keeping the roll plumb. Extend approximately 12" past inside or outside corners.

**Note:** Install rolls from the bottom of the building up to ensure proper shingling. **Tyvek® CommercialWrap®** may be installed vertically. **Tyvek® CommercialWrap® D** must be installed horizontally with the grooves running vertically.

- B. When starting the next roll of **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D**, overlap the vertical edge of the previous roll by at least 6".

- C. The **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** should overlap through wall flashing by a minimum of 6". Terminate the **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** at the bottom of the wall with **3" DuPont™ Tyvek® Tape**, or **DuPont Self-Adhered Flashing Products**.

- D. Secure the **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** by fastening into the studs using Rodenhouse Thermal-Grip® ci flat washers with #8 or #10 Grip-Deck® ceramic-coated self-drilling screws of sufficient length to ensure proper attachment. Please contact DuPont for most current list approved alternate fasteners.

**Note:** **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** are typically installed with 12" to 18" spacing on center, however, it is acceptable to install recommended fasteners at a reduced schedule of 24" to 48" provided the exterior cladding fasteners (permanent fasteners) are installed as soon as practically possible to maintain the integrity and performance of the **DuPont™ Tyvek® WRB**.

**Note:** For installation instructions for **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** over CMU block, use the fastener installation instruction in Steps 6-9 of the [Ultra Air Barrier Wall System in Block Wall Construction Installation Procedures](#).

Press the **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** tightly into any inside corners before fastening to prevent damage by cladding installation.

- E. Unroll directly over window and door rough openings. Do not install fasteners within 6" of the sills and jambs of the openings and within 9" of the head of the openings. The **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D** will be secured at these locations during window flashing installation.

- F. When installing additional courses of **Tyvek® CommercialWrap®** or **Tyvek® CommercialWrap® D**, the upper layer should overlap the bottom layer by a minimum of 6".

- G. Tape all horizontal and vertical seams with **3" Tyvek® Tape**.

Please refer to the [DuPont™ Tyvek® Mechanically-Fastened Weather-Resistive Barrier \(WRB\) Installation Guidelines](#) and the [DuPont Self-Adhered Flashing Products Installation Guidelines for Buildings Greater Than 4 Stories](#) for additional information.

*This bulletin is limited to the installation details for construction of the DuPont Commercial Wall<sup>2</sup> System outlined herein. Please refer to the applicable DuPont Performance Building Solutions Installation Guidelines available at [building.dupont.com](http://building.dupont.com) for details not included in this bulletin. DuPont believes this information to be reliable and accurate. The information may be subject to revision as additional experience and knowledge is gained. It is the user's responsibility to determine the proper construction materials needed.*

*It is intended for informational use by persons having technical skill for evaluation and at their own discretion and risk. Since conditions of use are outside our control, **DuPont makes no warranties, express or implied, including, without limitation, no warranties of merchantability or fitness for a particular use and assume no liability in connection with any use of this information. This information is not intended as license to use or infringe any trademark, patent or technical information.** This information is not intended to be used by others for advertising, promotion, or other publication for commercial purposes.*

© 2020 DuPont. DuPont™, the DuPont Oval Logo, and all trademarks and service marks denoted with ™, SM or ® are owned by affiliates of DuPont de Nemours, Inc. unless otherwise noted. Thermal-Grip® and TubeSeal™ are trademarks or registered trademarks of Rodenhouse Inc.

43-D100371-enUS-1020



For more information about DuPont Performance Building Solutions, please call 1-833-338-7668 or visit us at [building.dupont.com/commercial](http://building.dupont.com/commercial)