

DuPont™ Thermax™ Wall System

Installation Procedures

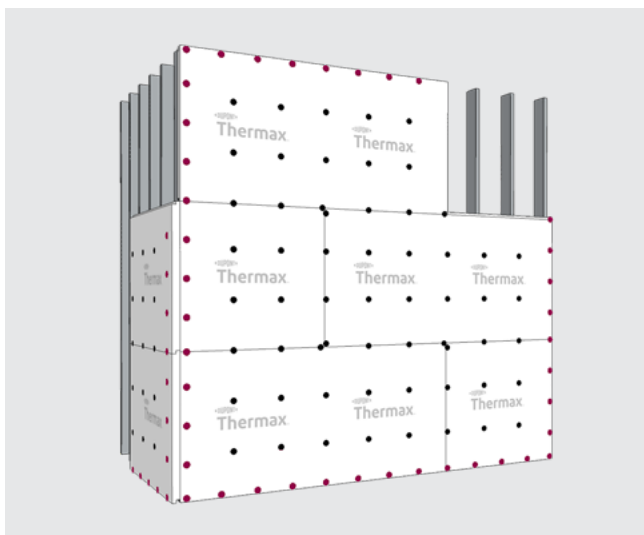
SEQUENCING OVERVIEW

Installation of the DuPont™ Thermax™ Wall System can begin once the structural steel and exterior wall steel studs have been installed and braced.

By using the all-steel bracing design, a layer of exterior gypsum drywall will not be necessary so the drywall or masonry contractor can begin immediately installing boards of DuPont™ Thermax™ XARMOR™ (ci) Exterior Insulation* directly on the exterior of the steel studs (insulation can be left exposed for 180 days). As the contractor applies additional boards, DuPont™ LiquidArmor™ Flashing and Sealant is adhered to adjoining board joints and at pre-determined thru-wall penetrations. Windows and other openings are flashed following the removal of excess Thermax™ XARMOR™ (ci) in the window opening areas of the envelope.

With the building closed in, the structure has an insulated and weatherized envelope, which will allow for work to progress quickly on the interior of the structure. By completing this step, a building can begin to be conditioned, which can speed up the work of other trades beyond the exterior walls.

Figure 1: Fastening Pattern for Thermax™ XARMOR™ (ci) Exterior Insulation



8' Thermax XARMOR™ (ci) Board with 16" o.c. Stud Spacing

Once sections of insulation boards and seam treatment are in place, a contractor can begin installing the cladding attachment.

If any of the attachments are near a board joint, cover the jointed area with LiquidArmor™ Flashing and Sealant before installing the cladding attachment.

See Table 1 and respective figures for recommended cladding attachment methods.

Be sure to install any necessary floor-line firestop in the stud cavity. As an optional component, DuPont-approved spray foam can now be applied in the stud cavity, covering the fire-stop (if installed) back to the floor edge to complete the air barrier, to further seal and insulate the envelope. DuPont-approved spray foam should be applied after the cladding attachment is in place.

This system of products provides scheduling overlaps that can save significant time on a project, minimizing negative impacts and providing an opportunity for multiple contractors to engage in finishing the exterior wall throughout the project.

CONTINUOUS INSULATION/DRAINAGE PLANE

Installation Recommendations

1. With printed side facing to the exterior, install Thermax™ XARMOR™ (ci) Exterior Insulation horizontally with the shiplap edge up (for boards that contact the steel studs).
2. Use maximum board lengths to minimize number of joints. Locate edge joints parallel to and on framing flange. Center end joints over supports. Common practice is to stagger but it is not required.
3. Anchor to exterior face of exterior metal stud wall framing with appropriate fastener. Abut insulation boards tightly together around openings and penetrations.

- As depicted in Figure 1, fasten boards of **DuPont™ Thermax™ XARMOR™ (ci)** to each support with fasteners spaced 12" o.c. at perimeter of wall and 16" o.c. in the field using TRUFAST® Walls (formerly Rodenhouse Inc.) Thermal-Grip® Fasteners or other DuPont approved fastener. Set back perimeter fasteners 3/8" from board edges and ends. One approved fastener/washer can be placed to bridge a maximum of two board edges. Drive fasteners to bear washer tight and flush with surface of insulated sheathing.
- For optimum performance and to create a water-resistive barrier, seal all end and edge joints, and thru-wall penetrations, such as window and door openings, with **DuPont™ LiquidArmor™ Flashing and Sealant**. Visit our website at building.dupont.com to download detailed installation guides for each of our flashing options.
- It is critical to apply the correct thickness and width of **LiquidArmor™ Flashing and Sealant** centered over the insulation board joints:
 - **LiquidArmor™ QS Flashing and Sealant:** 50+/-5 wet mil, 2" min.
 - **LiquidArmor™ LT Flashing and Sealant:** 30+/-5 wet mil, 1" min.
 - **LiquidArmor™ CM Flashing and Sealant:** 50+/-5 wet mil, 2" min.

Fasteners and washers along the board joints should also be completely covered with **LiquidArmor™ Flashing and Sealant**. Please refer to **Installation Procedures for LiquidArmor™ Flashing and Sealant** for additional requirements for each of the LiquidArmor™ Flashing and Sealant options.

- Thermax™ XARMOR™ (ci)** boards should be properly repaired if damaged during installation. Repairs may include applying flashing over a small hole or filling a large hole with a piece of the insulation board and then sealing with flashing.
- Once sections of insulation boards and flashing are in place, a contractor can begin installing the cladding attachment. See Table 1 for attachment options and how to seal.
- If necessary due to stud placement, the floor line fire-stop should already be installed. Finally, **DuPont-approved spray foam** can be applied to the interior of the stud cavity by a qualified SPF applicator.
- Visit www.thermaxwallssystem.com for CAD details, Tech Solution 513.0: Thermax™ Wall System, and other technical resources.

TABLE 1: Thermax™ Wall System Sealing Options Summary

	Attachment Type	LiquidArmor™ QS* Flashing and Sealant	LiquidArmor™ LT* Flashing and Sealant	LiquidArmor™ CM* Flashing and Sealant
Figure 2	Z-Girt, Horizontal (surface mounted)	Cured ⁽¹⁾ & on fasteners ⁽³⁾	Wet ⁽²⁾ or cured ⁽¹⁾ & on fasteners ⁽³⁾	Cured ⁽¹⁾ & on fasteners ⁽³⁾
Figure 3	Z-Girt, Vertical (surface mounted)	Cured ⁽¹⁾ & on fasteners ⁽³⁾	Wet ⁽²⁾ or cured ⁽¹⁾ & on fasteners ⁽³⁾	Cured ⁽¹⁾ & on fasteners ⁽³⁾
Figure 4	Hat Channel, Horizontal	Cured ⁽¹⁾ & on fasteners ⁽³⁾	Wet ⁽²⁾ & on fasteners ⁽³⁾	Cured ⁽¹⁾ & on fasteners ⁽³⁾
Figure 5	Hat Channel, Vertical	Cured ⁽¹⁾ & on fasteners ⁽³⁾	Wet ⁽²⁾ & on fasteners	Cured ⁽¹⁾ & on fasteners ⁽³⁾
Figure 6a	Over Flat Strap	Continuous over furring	Continuous over furring	Continuous over furring
Figure 6b	Under Flat Strap	Cured ⁽¹⁾ & on fasteners ⁽³⁾	Wet ⁽²⁾ & on fasteners	Contact us
Figure 7	Wood Furring	Cured ⁽¹⁾ & on fasteners ⁽³⁾	Wet ⁽²⁾ & on fasteners	Contact us
Figure 8a & 8b	Knight Wall HCl™⁽⁴⁾	Cured ⁽¹⁾ & on fasteners ⁽³⁾	Wet dipped screws ⁽³⁾	Contact us
Figure 9	Knight Wall Cl™⁽⁴⁾	Contact us	Wet dipped screws ⁽³⁾	Contact us

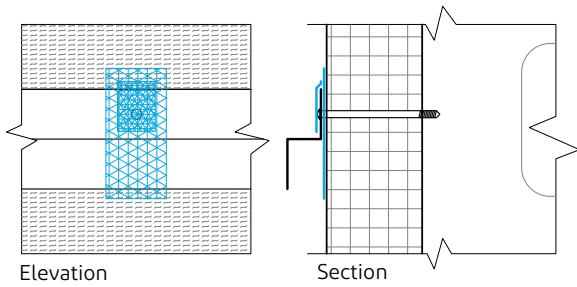
⁽¹⁾ "Cured" - Flashing is applied along the stud lines and cured at least 24 hours prior to fastening cladding attachment. This can be done at the same time the insulation board joints are sealed.

⁽²⁾ "Wet" - Flashing is wet applied under the attachment system. This can be applied directly to the attachment system before setting it and fastening to the wall.

⁽³⁾ "on Fasteners" - Flashing is wet applied to each cladding attachment fastener after cladding attachment is fastened to the wall.

⁽⁴⁾ Knight Wall attachments are registered and trademarked by Knight Wall Systems. Follow all manufacturer installation guidelines.

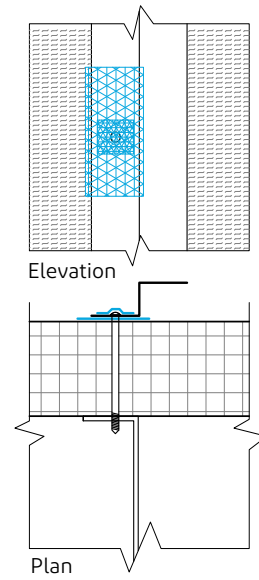
Figure 2: DuPont™ LiquidArmor™ Flashing and Sealant with Horizontal Z-Girt



The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath horizontal Z-girt and over fasteners. Options include:

- DuPont™ LiquidArmor™ **QS** (cured)
- DuPont™ LiquidArmor™ **LT** (wet)
- DuPont™ LiquidArmor™ **CM** (cured)

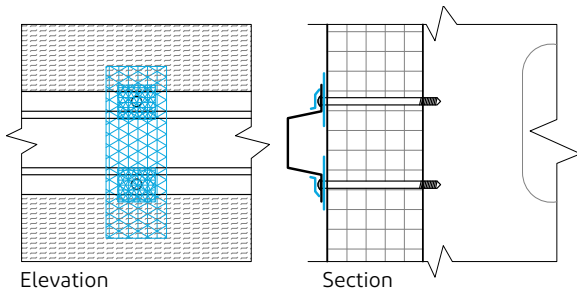
Figure 3: DuPont™ LiquidArmor™ Flashing and Sealant with Vertical Z-Girt



The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath vertical Z-Girt and over fasteners. Options include:

- DuPont™ LiquidArmor™ **QS** (cured)
- DuPont™ LiquidArmor™ **LT** (wet or cured)
- DuPont™ LiquidArmor™ **CM** (cured)

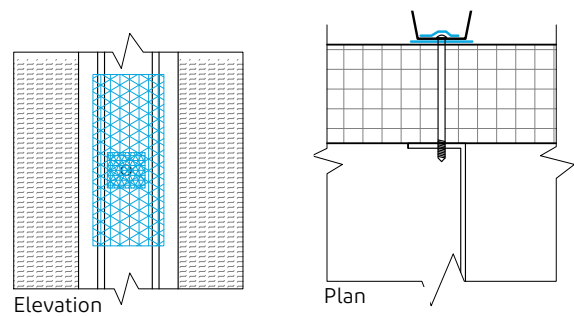
Figure 4: DuPont™ LiquidArmor™ Flashing and Sealant with Horizontal Hat Channel



The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath horizontal Hat Channel and over fasteners. Options include:

- DuPont™ LiquidArmor™ **QS** (cured)
- DuPont™ LiquidArmor™ **LT** (wet)
- DuPont™ LiquidArmor™ **CM** (cured)

Figure 5: DuPont™ LiquidArmor™ Flashing and Sealant with Vertical Hat Channel

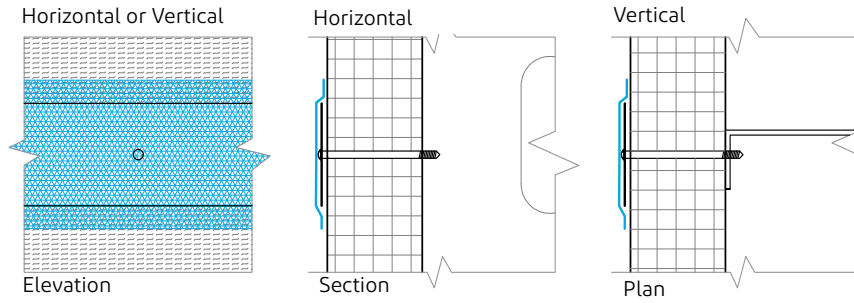


The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath vertical Hat Channel and over fasteners. Options include:

- DuPont™ LiquidArmor™ **QS** (cured)
- DuPont™ LiquidArmor™ **LT** (wet or cured)
- DuPont™ LiquidArmor™ **CM** (cured)

Figure 6: DuPont™ LiquidArmor™ Flashing and Sealant with Flat Strap

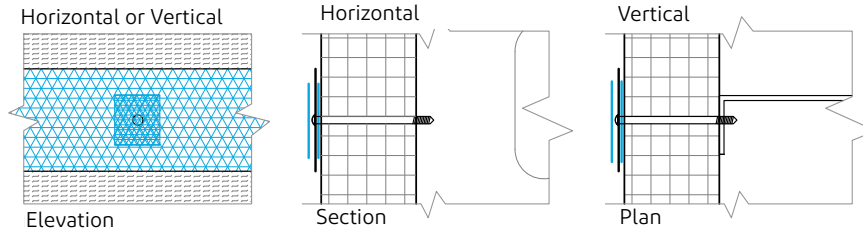
Figure 6a:
Seal Over Flat Strap



The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied over flat strap furring. Options include:

- DuPont™ LiquidArmor™ QS
- DuPont™ LiquidArmor™ LT
- DuPont™ LiquidArmor™ CM

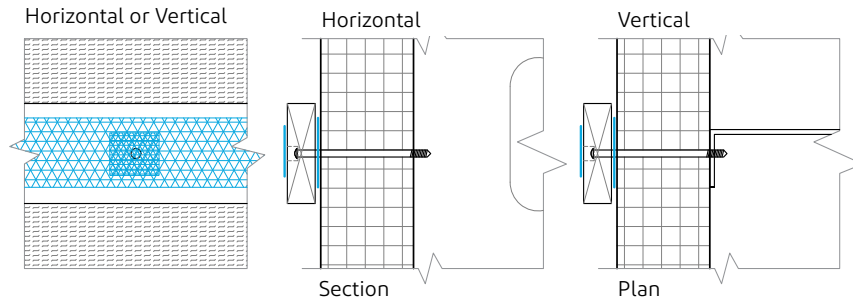
Figure 6b:
Seal Under Flat Strap
and Over Fasteners



The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath flat strap furring and over fasteners. Options include:

- DuPont™ LiquidArmor™ QS (cured)
- DuPont™ LiquidArmor™ LT (wet)

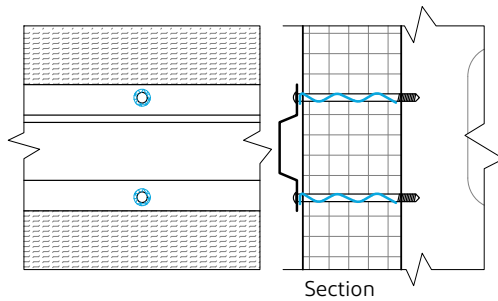
Figure 7: DuPont™ LiquidArmor™ Flashing and Sealant on Wood Furring



The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath wood furring and over fasteners. Options include:

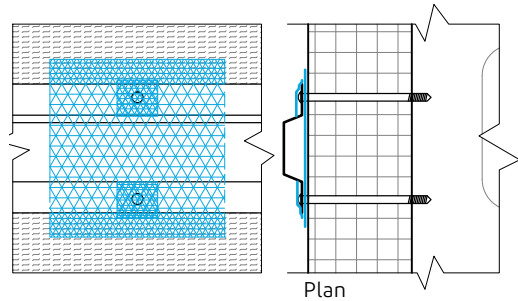
- DuPont™ LiquidArmor™ QS (cured)
- DuPont™ LiquidArmor™ LT (wet)

Figure 8a: DuPont™ LiquidArmor™ Flashing and Sealant with Knight HCl™



The sample detail above illustrates DuPont™ LiquidArmor™ LT Flashing and Sealant wet dipped screws with Knight HCl™. Visit manufacturer website for installation instructions.

Figure 8b: DuPont™ LiquidArmor™ Flashing and Sealant with Knight HCl™

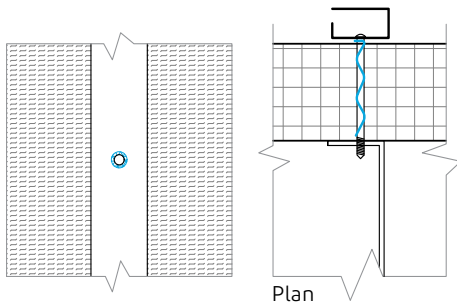


The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath Knight HCl™ and over fasteners. Options include:

- DuPont™ LiquidArmor™ QS (cured)

Visit manufacturer website for installation instructions.

Figure 9: DuPont™ LiquidArmor™ Flashing and Sealant with Knight CI®



The sample detail above illustrates DuPont™ LiquidArmor™ LT Flashing and Sealant wet dipped screws with Knight CI®. Visit manufacturer website for installation instructions.



For more information visit us at
thermaxwallsystem.com
or call 1-866-583-2583

NOTICE: No freedom from any patent owned by DuPont or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where DuPont is represented. The claims made may not have been approved for use in all countries or regions. DuPont assumes no obligation or liability for the information in this document. References to "DuPont" or the "Company" mean the DuPont legal entity selling the products to Customer unless otherwise expressly noted. NO EXPRESS WARRANTIES ARE GIVEN EXCEPT FOR ANY APPLICABLE WRITTEN WARRANTIES SPECIFICALLY PROVIDED BY DUPONT. ALL IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. The buyer assumes all risks as to the use of the material. Buyer's exclusive remedy or any claim (including without limitations, negligence, strict liability, or tort) shall be limited to the refund of the purchase price of the material. Failure to strictly adhere to any recommended procedures shall release DuPont Specialty Products USA, LLC or its affiliates, of all liability with respect to the materials or the use thereof. The information herein is not intended for use by non-professional designers, applicators or other persons who do not purchase or utilize this product in the normal course of their business.

CAUTION: This product is combustible. Protect from high heat sources. A protective barrier or thermal barrier may be required as specified in the appropriate building code. For more information, consult (Material) Safety Data Sheet ((M)SDS), call DuPont at 1-866-583-2583 or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

Rigid foam insulation does not constitute a working walkable surface or qualify as a fall protection product.

Thermal-Grip® is a trademark of TRUFASST® Walls.

CI and CI-Girt are registered trademarks controlled by Knight Wall Systems, Inc. CI-System, HCI-System, and HCI-Girt are trademarks of Knight Wall Systems, Inc.

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. © 2021 DuPont.