Installation Guidelines for the DuPont™ Thermax™ Wall System

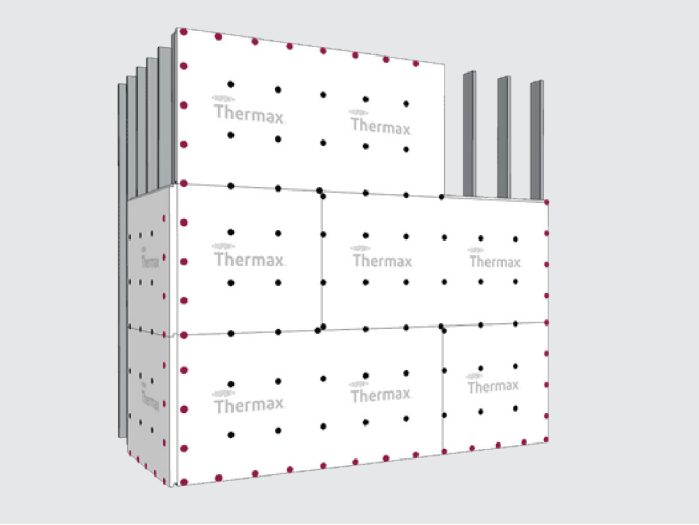
SEQUENCING OVERVIEW

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™ Brand Insulation directly on the exterior of the steel studs. As the contractor applies additional boards, DuPont™ LiquidArmor™ Flashing and Sealant is adhered to adjoining board joints and at pre-determined thru-wall penetrations. Fenestration and other openings are flashed once the excess Thermax™ Brand Insulation is removed from the openings. Refer to the *DuPont™ Thermax Wall System Detail Sets* for more information on detailing at rough openings and other conditions.

With the building closed in, the structure has an insulated and weatherized envelope, which will allow for work to progress quickly on the interior. 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 Brand Exterior Insulation



8' **Thermax XARMOR™ (ci) Board** with fasteners at 16" o.c. in the field of the wall and 12" o.c. around perimeter of wall

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™ Froth-Pak™ Foam Insulation** can be applied in the stud cavity, covering the fire-stop (if installed) back to the floor edge to complete the air barrier, and to further seal and insulate the envelope. **DuPont-approved spray foam** should be applied after the cladding attachment is in place.

Visit our website at building.dupont.com for more information regarding various NFPA-285 approved assemblies using Thermax™ Brand Insulation.

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.

INSTALLATION

Installation Recommendations

1. With printed side facing to the exterior, install **Thermax™ Brand Insulation** horizontally.
2. Use maximum board lengths to minimize number of joints. Edge joints should be centered over framing flanges. Common practice is to stagger but it is not required.
3. Anchor to face of metal stud wall framing with recommended fastener. Abut insulation boards tightly together around openings and penetrations.

*DuPont™ Thermax™ XARMOR (ci) Exterior Insulation or DuPont™ Thermax™ Sheathing can also be used in the Thermax™ Wall System..

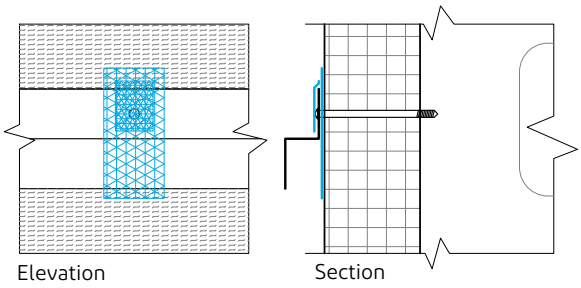
1. As depicted in Figure 1, fasten **DuPont™ Thermax™ Brand Insulation** to each support with fasteners spaced 12" o.c. at perimeter of wall and 16" o.c. in the field using TRUFAST® Walls. Thermal-Grip® Fasteners or other DuPont approved fastener. Set back perimeter fasteners 3/8" from board edges and 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.
2. For optimum performance and to create a water-resistive barrier, seal all end and edge joints and through wall penetrations (such as window and door openings).
3. with **DuPont™ LiquidArmor™ Flashing and Sealant**. Visit **building.dupont.com** to download detailed installation guides for each of our flashing options.
4. It is critical to apply the correct thickness and width of LiquidArmor™ Flashing and Sealant centered over the insulationboard joints:
   - **LiquidArmor™ QS Flashing and Sealant:** 50+/-5 wet mil, 2" min.
   - **LiquidArmor™ LT Flashing and Sealant:** 30+/-5 wet mil, 1" min.
5. Fasteners and washers along the board joints should also be completely covered with **LiquidArmor™ Flashing and Sealant. Please reference** Installation Procedures for LiquidArmor™ QS Flashing and Sealant **or** Installation Procedures for LiquidArmor™ LT for additional requirements for each of the LiquidArmor™ Flashing and Sealant options
6. Thermax™ Brand Insulation 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. Repairs might be another item to reference back to the CAD detail set.
7. 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.
8. If necessary due to stud placement, the floor line fire-stop should already be installed. Finally, **DuPont-approved sprayfoam** can be applied to the interior of the stud cavity by a qualified SPF applicator.
9. Visit building.dupont.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
Figure 2	**Z-Girt, Horizontal** (surface mounted)	Cured[1] & on fasteners[3]	Wet[2] or 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]
Figure 4	**Hat Channel, Horizontal**	Cured[1] & on fasteners[3]	Wet[2] & on fasteners[3]
Figure 5	**Hat Channel, Vertical**	Cured[1] & on fasteners[3]	Wet[2] & on fasteners
Figure 6a	**Over Flat Strap**	Cured[1] & on fasteners[3]	Continuous over furring
Figure 6b	**Under Flat Strap**	Cured[1] & on fasteners[3]	Wet[2] & on fasteners
Figure 7	**Wood Furring**	Cured[1] & on fasteners[3]	Wet[2] & on fasteners
Figure 8a & 8b	**Knight Wall HCI™ [4]**	Cured[1] & on fasteners[3]	Wet dipped screws[3]
Figure 9	**Knight Wall CI® [4]**	Contact us	Wet dipped screws[3]

[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 theattachment 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.

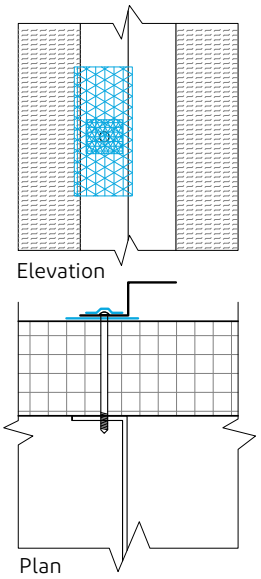
Figure 2: DuPont™ LiquidArmor™ Flashing and Sealant with Horizontal Z-Girt



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)

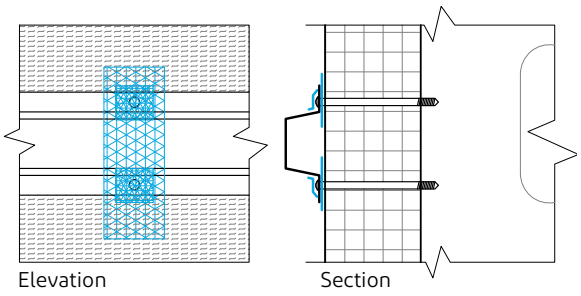
Figure 3: DuPont™ LiquidArmor™ Flashing and Sealant with Vertical Z-Girt



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)

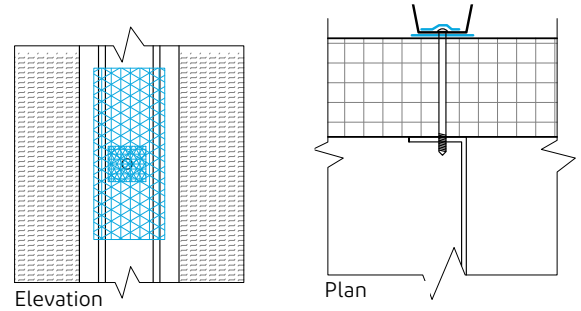
Figure 4: DuPont™ LiquidArmor™ Flashing and Sealant with Horizontal Hat Channel



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)

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

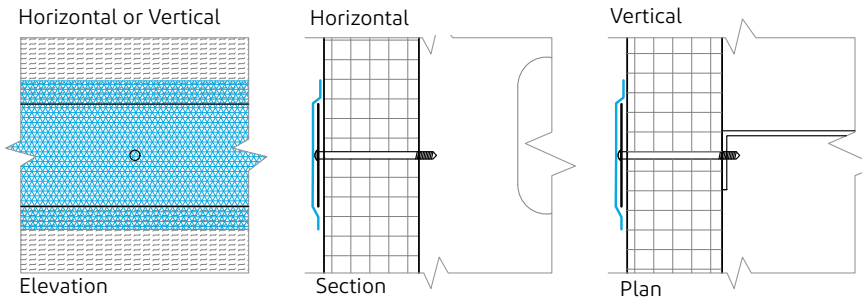


The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath vertical Hat Channel and over fasteners. Options include:

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

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

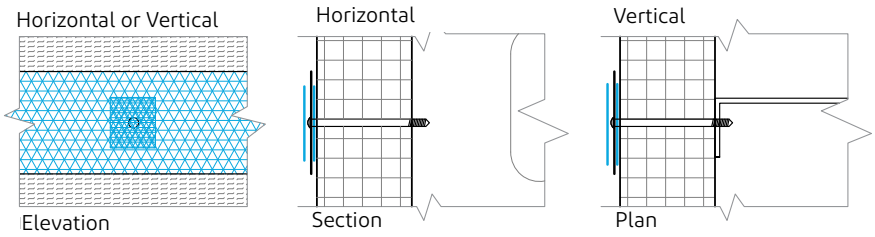
Figure 6a: Seal Over Flat Strap



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

- DuPont™ LiquidArmor™ **QS**
- DuPont™ LiquidArmor™ **LT**

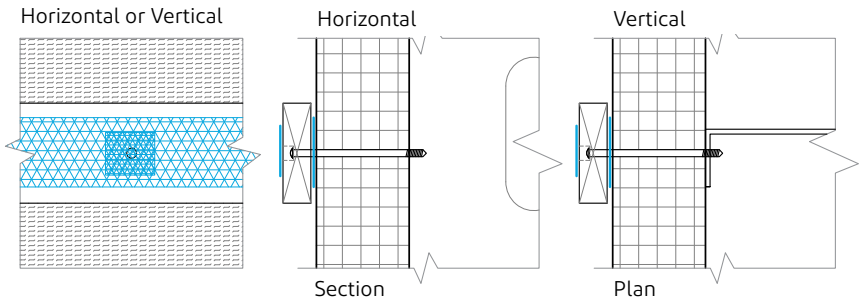
Figure 6b: Seal Under Flat Strap and Over Fasteners



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

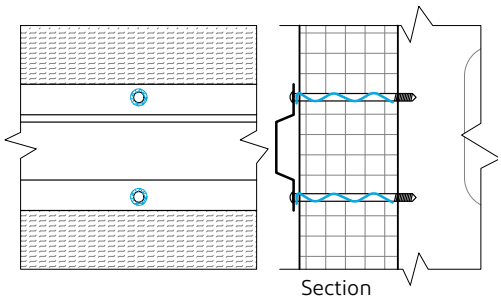
- DuPont™ LiquidArmor™ **QS** (cured)
- DuPont™ LiquidArmor™ **LT** (wet)

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



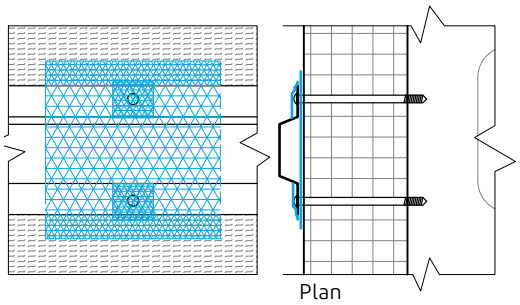
The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath wood furring and over fasteners. Options include:
- DuPont™ LiquidArmor™ **QS** (cured)
- DuPont™ LiquidArmor™ **LT** (wet)

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



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

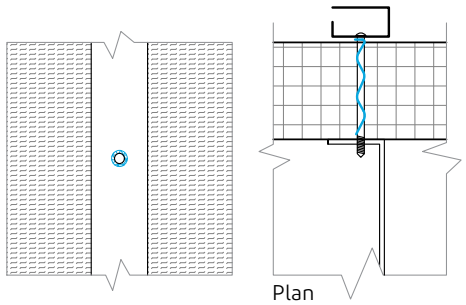
Figure 8b: DuPont™ LiquidArmor™ Flashing and Sealant with Knight HCI™



The sample detail above illustrates DuPont™ LiquidArmor™ Flashing and Sealant applied underneath Knight HCI™ 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 building.dupont.com or call 1-833-338-7668

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