Joint Closure Recommendations Used in Metal Building Applications

To maximize the efficiency of **DuPont™ Thermax™ polyisocyanurate insulation** in metal buildings and alternative applications such as tilt-up concrete wall panels and parking garage ceilings, joints between boards must be properly finished. Whether on the interior or exterior, finished joints reduce air leakage and moisture infiltration. They also create a clean, professional appearance in interior applications.

Several joint closure systems are recommended by DuPont when using any of the Thermax™ product family:

- **DuPont™ Thermax™ Sheathing**
- **DuPont™ Thermax™ Metal Building Board**
- **DuPont™ Thermax™ Heavy Duty**
- **DuPont™ Thermax™ Heavy Duty Plus***
- **DuPont™ Thermax™ Light Duty**
- **DuPont™ Thermax™ White Finish.**

All accessories are available for sale in conjunction with insulation products. See specific Thermax™ product installation guidelines for board attachment procedures.

Closure System Components

Each joint closure system uses one or more of the following components:

- **Thermax™ white foil tape (for Thermax™ Heavy Duty, Thermax™ Heavy Duty Plus, Thermax™ Light Duty** or **Thermax™ White Finish)**
- **Thermax™ aluminum foil tape** (for **Thermax™ Sheathing** and **Thermax™ Metal Building Board)**
- Clip Strip
- Interlocking System
- J-Channel
- **Weathermate™ Straight Flashing**
- Construction-grade sealant and adhesive**
- Shiplap board joint

Closing a Thermax™ Joint

OPTION 1

Requires square edge boards

1. Center **Thermax™ white foil tape** over dry, clean edge joint and apply tape (Figure 1). When installing **Thermax™ Sheathing** or **Thermax™ Metal Building Board**, use aluminum foil tape.
2. Use a squeegee or stiff bristle brush to press the tape firmly to the joint. Cut tape with a knife. Do not tear tape.

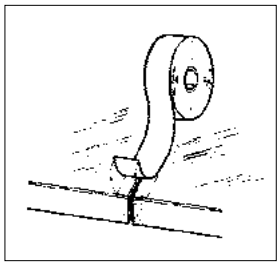
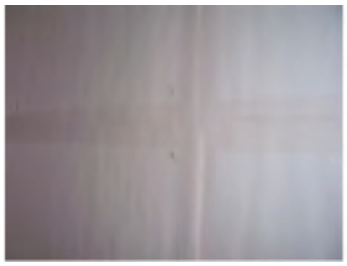
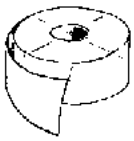
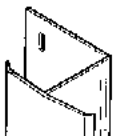
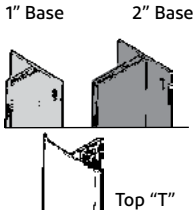
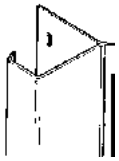
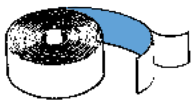
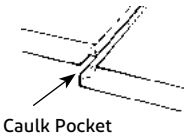


Figure 1.



Interior Air Sealing with Tape

Joint Closures from DuPont

	Joint Closure	Description	Sizes	Package Details
	**DuPont™ Thermax™ White Foil Tape** or **Thermax™ Aluminum Foil Tape**	Strong and durable foil tapes help prevent air and water vapor infiltration at joints and seams	3″ wide	150′ rolls (16 rolls/box)
	**Clip Strip**	PVC closure effectively and efficiently joins two edges of Thermax™ Insulation boards	Accommodates foam thicknesses of 1″, 1.5″, 2″, 2.5″, 2.65″, 3″ and 3.2″	10′ lengths; sold in cartons of 20 (200 linear feet)
	**Interlocking System**	• Two-part PVC closure • Sections easily snap into place for a secure fit • Base sections fasten to concrete or masonry walls or ceilings	Base **1″ section** accommodates foam thicknesses from 1″ to 1.75″ **2″ section** accommodates foam thicknesses from 2″ to 3.2″ **Top “T” section** 1″, 1.5″, 2″, 2.5″, 3″ and 3.2″	10′ lengths; sold in cartons of 20 (200 linear feet)
	**J-Channel**	• PVC closure • Typically used when other closure methods will not cover the joints between boards (such as the joint between the top and bottom of Thermax™ Insulation or at the roof peak when combining two sections of board)	Accommodates foam thicknesses of 1″, 1.5″, 2″, 2.5″, 2.65″, 3″ and 3.2″	10′ lengths; sold in cartons of 20 (200 linear feet)
	**DuPont™ Weathermate™ Straight Flashing** *For use on Thermax™ Insulation that is applied on the exterior side of back-up wall only, e.g. Thermax™ installed outboard of a Steel Stud Framed Wall*	• High-density polyethylene film facer with butyl rubber adhesive • Resists water intrusion at joints between insulation boards in standing seam metal roofs and steel stud construction	4″ and 6″ widths	100′ rolls (6 rolls/box)
	**Shiplap Board Joint**	One of the most thermally efficient joints available	N/A – edge treatment available on many rigid foam insulation products >/= 1.5″ thick	Varies

*Parking garage ceilings are a specialized application requiring additional design considerations. For assistance installing Thermax™ products in this application, call 1-866-583-2583.

** Thermax™ Heavy Duty Plus Insulation is designed for use in walls only.

† To produce a continuous air- and moisture-resistant seal, use Vulkem 116, Sikaflex 201, Dow Corning 790 or equivalent sealant. Your DuPont representative can recommend an appropriate sealant and adhesive for your application

Option 2

For exterior applications (steel stud walls and standing seam metal roofs).

1. Measure and cut **DuPont™ Weathermate™ Straight Flashing** (4" or 6" width) to cover full length of insulation boards. (Flashing is applied on the exterior of steel stud walls and exterior/top edge of standing seammetal roofs.)
2. Peel back part of release liner and center flashing over dry, clean edge joint.
3. Remove release liner while pressing flashing firmly along the joint. (Figure 2)

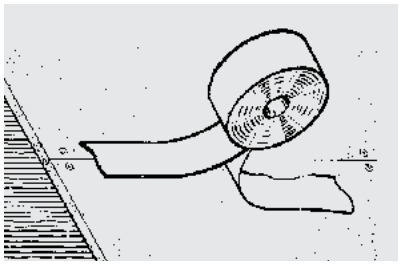


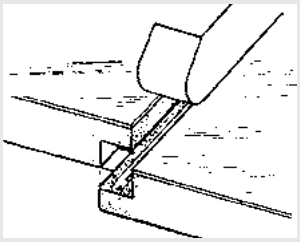
Figure 2.

DuPont™ Thermax™ Insulation with Weathermate™ Flashing Applied

Option 3

Requires shiplap edge boards

1. Apply **Great Stuff Pro™ Gaps & Cracks Polyurethane Foam Sealant*** or a compatible construction grade sealant to shiplap edge, following manufacturer instructions.
2. Fit next **Thermax™** board firmly into the sealant-lined shiplap edge and fasten. (Figure 3)
3. Center **Thermax™ tape** over dry, clean edge joint and apply tape.
4. Use a squeegee or stiff bristle brush to press the tape firmly to the joint. Cut tape with a knife. Do not tear tape.



Shiplap Edge Treatment

OPTION 4

Requires square edge boards

1. Fasten Clip Strip to wall or ceiling through holes provided at 12" o.c. with pneumatic nailer or equivalent.
2. Adjust Clip Strip to insulation board to allow for correct width. Align each PVC section 1/8" from the insulation board mark and attach.
3. Apply a construction-grade sealant to the single long flange of the Clip Strip, following sealant manufacturer instructions.
4. Slide **Thermax™ insulation boards** into place as shown. (Figure 4)

   Note: *High-humidity metal buildings may require two insulation layers for optimum moisture control. Visit building.dupont.com for installation recommendations for high-humidity applications (Form No. 179-04338).*

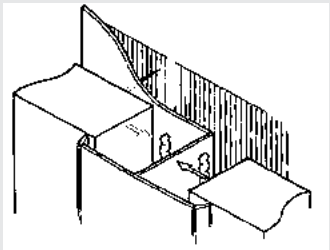
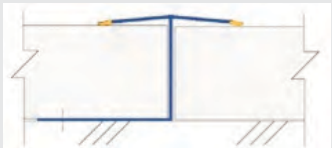


Figure 4



View from above – looking down wall

PVC attached to tilt-up wall

OPTION 5

For direct adhesion to concrete or masonry walls

1. Fasten base section of Interlocking System to concrete or masonry wall through holes provided at 12" o.c. with pneumatic nailer or equivalent.
2. Adjust base strip to insulation board to allow for correct width. Align each PVC section 1/8" from the insulation board mark and attach.
3. Apply beads of construction grade adhesive to the concrete centered 16" o.c. between the PVC strips.
4. Press board firmly into position between the PVC base strips and allow curing time, following adhesive manufacturer recommendation.
5. Apply a continuous bead of sealant along the face of the boards next to the joint.
6. Guide the top PVC section along insulation board edge until it snaps into the Interlocking System base. (Figure 5)

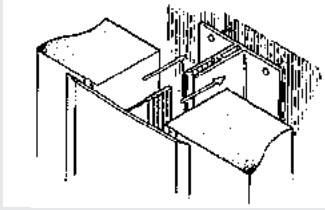


Figure 5

View from above – looking down wall

OPTION 6

1. Apply a compatible construction-grade sealant to inside of both J-Channel flanges, following sealant manufacturer instructions.
2. Fit closure around **DuPont™ Thermax™** board edge. (Figure 6)

Note: *With each system, it is important to also seal the wall-to-ceiling junction. For complete installation instructions, visit the literature library at building.dupontcom or call your DuPont representative.*

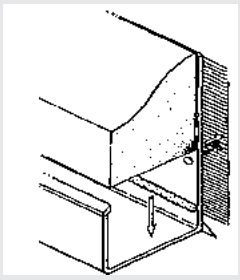


Figure 6

Side View

View from ground level – looking up wall

For more information visit
building.dupont.com
or call 1-866-583-2583

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