

THERMAX INSULATION/FINISH BOARDS

Exposed roof applications in metal buildings with low humidity



roofs

walls

slabs

foundations

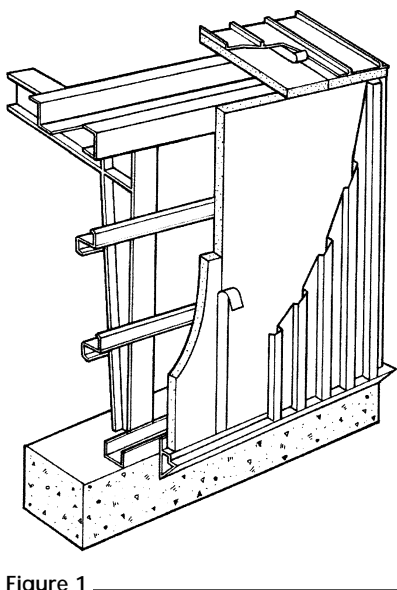


Figure 1

THERMAX* polyisocyanurate insulation/finish boards used in exposed applications help safeguard metal building systems that have low humidity** against thermal loss, moisture buildup and even fire damage.

Use THERMAX insulation/finish board products for exposed roof insulation applications in agricultural, commercial and industrial buildings such as factories, warehouses, agricultural structures, cold storage structures and similar facilities.

THERMAX insulation/finish boards and THERMAX Metal Building Board provide exceptional thermal protection installed outside the metal roof framing – “C” purlin, “Z” purlin, bar joist or other frame – with the specified joint treatment to make a total insulation system.

**Buildings in which humidity is less than 50 percent

*Trademark of The Dow Chemical Company

Products

THERMAX insulation/finish boards are designed as an insulation and interior finish. The boards are closed-cell products that are highly resistant to heat flow. All THERMAX insulation/finish board products feature a polyisocyanurate foam core with glass fiber reinforcement, and are surfaced with different solid aluminum foil facers. The reinforced core, plus chemical modifications, improves fire performance compared with other rigid insulation products and enhances dimensional stability.

The bonded aluminum foil facers serve as effective moisture vapor retarders. THERMAX Sheathing and Metal Building Board insulation products have aluminum foil facers on both sides. THERMAX Light Duty and Heavy Duty insulation products have an aluminum foil facer on one side with a white-coated facer on the other. This design is an aesthetically appealing decorative effect.

The products listed here have varying thicknesses and facings, ideally suiting THERMAX insulation/finish boards for

meeting specific designs and requirements in the roofs of metal buildings with low humidity.

Advantages

There are several advantages to using THERMAX insulation/finish board products:

- Excellent insulation – high R-value (6.5 per inch) without need for thermal barriers; can be left exposed according to building codes
- Improved fire performance – THERMAX insulation contributes minimally to the spread of flame and smoke
- Broad range of product thicknesses – allows for sizing to meet U-value/energy code requirements, allowing R-value and thickness to be tailored for design needs and minimal material cost
- Noise-dampening facers – THERMAX Metal Building Board insulation in standing seam roofs diminishes noise that often occurs in the metal panels when outside temperatures change
- Easy and fast installation

TABLE 1

THERMAX Recommendations	
Boards	Surface Facers
THERMAX Sheathing	1.0 mil (0.025 mm) aluminum both sides
THERMAX Metal Building Board	1.25 mil embossed aluminum foil on both sides
THERMAX Light Duty	1.25 mil (0.032 mm) white embossed aluminum/ 1.25 mil embossed aluminum
THERMAX Heavy Duty	3.4 mil (0.1 mm) white embossed aluminum/ 1.25 embossed aluminum

Joint Treatment for Moisture Control

Even in low-humidity buildings, condensation can build up when insulation joints are left exposed. The joint treatments described here will help control moisture buildup, airflow and heat flow.

GOOD SYSTEM

Leave square edge joints untreated. Tape the joint on the board's backside with 3" THERMAX tape (Figure 2). Taping serves as protection against moisture penetration and gives the exterior of the boards a continuous surface.

BETTER SYSTEM

Factory-produced shiplap joint used with a recommended sealant^{††} (Figure 3). *Long edges of THERMAX insulation/finish boards are shiplapped, which will often leave an uneven joint on the exposed side.* Taping the joints on the backside of the board with 3" THERMAX tape will

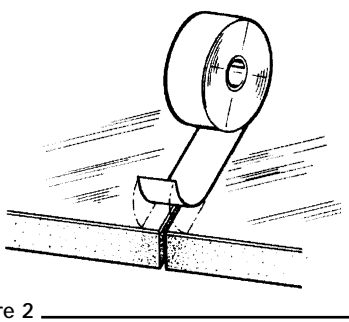


Figure 2

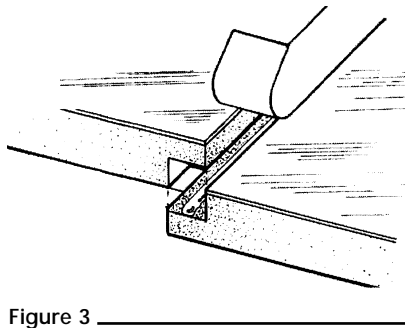


Figure 3

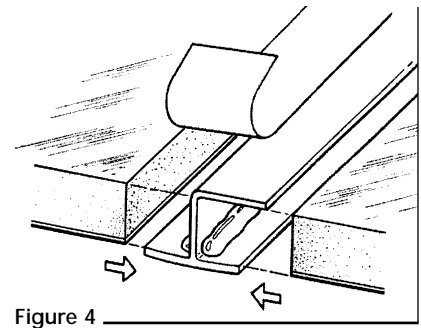


Figure 4

^{††}To produce a continuous air vapor retarder, use Vulkem 116, Sikaflex 201 or equivalent sealant.

help protect against moisture penetration and provide a continuous surface on the board's exterior. Sealant is field-applied in the shiplap and at the end joints over roof framing.

BEST SYSTEM

THERMAX White PVC Clip Strip with sealant (Figure 4). Install PVC Clip Strip on exposed joints and tape the backside of joints on the boards with 3" THERMAX tape. The PVC Clip Strip must be caulked with a recommended sealant^{††}.

In roof systems where the temperature of the roof exceeds 150°F it is recommended to use two layers of THERMAX Sheathing to separate the PVC Clip Strip from a roof system's exterior metal.

Performance Tests

Factory Mutual (FMRC Standard 4880) – Subject to the conditions of approval as Class 1 wall and ceiling panels when installed as described in the

current edition of the FMRC Approval Guide. FACTORY MUTUAL SYSTEM APPROVED.

Compliances

- **BOCA:** Building Officials and Code Administrators International, Inc. Research Report No. 98-25 and National Building Code Sect. 2603.0.
- **ICBO:** International Conference of Building Officials. Evaluation Report No. 3223 and Uniform Building Code. Sect. 2602.
- **SBCCI:** Southern Building Code Congress International. Evaluation Report No. 9574 C and Standard Building Code. Sect. 2603.

IN THE U.S.:

- For Technical Information: 1-866-583-BLUE (2583)
- For Sales Information: 1-800-232-2436

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WARNING: THERMAX insulation/finish boards do not constitute a working walkable surface or qualify as a fall protection product.

COMBUSTIBLE: THERMAX products should be used only in strict accordance with product application instructions. THERMAX products, when used in a building containing combustible materials, may contribute to the spread of fire. For more information, consult MSDS and/or call Dow at 1-866-583-BLUE (2583). In an emergency, call 1-989-636-4400.



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