

THERMAX Insulation

A BRIGHT IDEA FOR INSULATING TILT-UP PANELS

A bright building environment can increase productivity – and save energy dollars, too!

Today's commercial building owners face demands and pressures at every turn. Tenants want the "best" in their commercial space, but at a reasonable price. Long-term leasing contracts, complete with rising energy costs and price uncertainty, put pressure on operating profits. Many forward-thinking companies have discovered that a properly designed and operated facility can contribute to bottom-line goals by reducing operating costs and improving productivity.

Efficient by Design

One step toward achieving a well-designed commercial facility is to install THERMAX* insulation on the interior. Ideal for insulating concrete



tilt-up panels, THERMAX Heavy Duty Plus, Heavy Duty and Light Duty products combine energy efficiency,

moisture resistance and aesthetic value in an easy-to-install package. And because it contains superior fire-resistant properties, THERMAX insulation can be used without a separate thermal barrier when installed in accordance with governing building codes.

THERMAX insulation products feature an energy-efficient glass-fiber-reinforced polyisocyanurate core sandwiched between facers that contribute to durability, moisture resistance and easy maintenance.

The polyisocyanurate core is available in a range of

roofs

walls

slabs

foundations

thicknesses. It delivers an R-value** among the highest available – 6.5 at one inch. And the glass-fiber reinforcement adds fire performance and dimensional stability.

On THERMAX Heavy Duty Plus, Heavy Duty and Light Duty products, one of the facers is radiant-barrier-quality aluminum. Designed for installation adjacent to an appropriate dead air space, this facer enhances the system's R-value by creating a reflective air space. The other facer on each product is an embossed white acrylic-coated aluminum sheet. Installed

toward the interior, this facer provides a clean-looking surface that can be pressure-washed for easy maintenance. And the white color provides a light reflectance of 65 percent, reducing light energy costs and enhancing the interior working environment.

The strong aluminum facers and high compressive strength help THERMAX insulation resist compression that can compromise the overall insulation value. In addition, the high product strength adds to job site durability, both during and after installation.

Installed With Ease

THERMAX insulation installs quickly and easily on concrete tilt-up panel walls. The insulation is mechanically fastened to the concrete panels with either a PVC clip strip (see Figure 1) or other fastening system. In some cases, tape is used over the seams for a fresh, clean look. Regardless of the fastening system, the insulation can be mechanically fastened to just about any type of wall substrate, without adhesives. As an added benefit, a separate vapor retarder is typically not required. Closed-cell THERMAX insulation, with its aluminum facer's very low perm rating, in conjunction with the joint treatment helps prevent moisture condensation within and behind the system.



FIGURE 1: THERMAX insulation with PVC clip strip.

| Choose the Right THERMAX Insulation for Your Application | | | |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| | Heavy Duty Plus ¹ | Heavy Duty | Light Duty |
| | | | |
| Finished Surface | 16.5 mil embossed white acrylic-coated aluminum sheet laminated to 1 mil aluminum on one side and 1 mil aluminum on the other | 4.0 mil puncture-resistant embossed white acrylic-coated aluminum sheet on one side and 1.25 mil aluminum on the other | 1.25 mil embossed white acrylic-coated aluminum sheet on one side and 1.25 mil aluminum on the other |
| Impact Resistance (Janka Ball) | Heavy 188 lbs | Moderate 40 lbs | Light 8 lbs |
| Pressure Washability | 2,000 psi with any spray tip and any distance from surface | 2,000 psi with any spray tip greater than 15°, 3' min. distance from any surface | 1,000 psi with any spray tip greater than 15°, 3' min. distance from any surface |
| Bird Attack Resistance | High | High | Low |
| Strength, Modulus of Rupture (1" of Product, MD) | 109,200 psi | 3,430 psi | 2,500 psi |
| Elasticity, Modulus of Elasticity (1" of Product, MD) | 106 psi | 145 psi | 74 psi |

¹THERMAX Heavy Duty Plus is designed for use on walls only.

A Bright Future

With long-term energy efficiency and low maintenance, THERMAX insulation offers commercial building owners a bright future. Whether you are a contractor, specifier, building owner or a combination of all three, consider THERMAX insulation for insulating concrete tilt-up panels. THERMAX insulation with a PVC joint closure system delivers high performance year after year.

SUCCESS STORIES

Dow's customers are successfully using THERMAX insulation on the interior of tilt-up panels.

Central Insulation Systems (CIS), based in Cincinnati, Ohio, has developed an interior insulation system using THERMAX insulation with a PVC joint closure system. According to Jim Gross, project manager and estimator at CIS, the company has used the system on commercial buildings throughout the United States.

"We have been selling and installing this attractive and energy-efficient system since 1986 and now have an extensive client base that uses this system exclusively," Jim says. "We can erect the interior finish quickly, keeping tenants and building owners happy. Our customers also appreciate the added benefits THERMAX insulation brings, such as durability, light reflectivity and a cleanable surface."

Recently, CIS has been working with Victory Bear-Fukuvi USA Inc., a producer of innovative extruded high-impact, shatter-resistant PVC for construction. With the support of Ken Lange, sales representative at Victory Bear, CIS has developed PVC interlocking channels co-extruded with a softer PVC on the edges that contact the THERMAX insulation. This forms a better seal with the insulation. Jim says his customers

appreciate the aesthetics of the professionally detailed white fastening strips and the clean white interior.



Another success story comes from one of Central Insulation Systems' clients. James N. Gray Company (JNG), an engineering, design and construction firm with offices throughout the United States and Japan, uses the system in many of the large distribution centers it builds every year.

Greg Stratton, design manager at JNG in Lexington, Ky., says, "The white facers provide the light reflectivity we need, and the high R-value meets our insulation requirements for the exterior wall systems.

We use either the self-impaling



fasteners or fasteners and mastic, depending on the substrate application. The mechanical fasteners

deliver a uniformity of attachment and better adherence than some other systems.

"In all the years we have used the THERMAX insulation with mechanical fastening system, we have not had any callbacks."

For an energy-efficient, low-maintenance interior, build your success on THERMAX insulation/finish boards.

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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.

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

Building and/or construction practices unrelated to insulation or housewrap could greatly affect moisture and the potential for mold formation. No material supplier including Dow can give assurance that mold will not develop in any specific system.

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