

DuPont™ Thermax™ Metal Building Board Insulation

Long-Term R-Value Insulation for Metal Buildings and Standing Seam Metal Roofs

FEATURES/BENEFITS

Description

DuPont™ Thermax™ Metal Building Board Insulation provides both insulation value and an interior finish system for walls in metal buildings as well as in standing seam metal roofs. It consists of a polyisocyanurate foam core with 1.25 mil embossed aluminum facers on both sides.

Thermax™ Metal Building Board offers high, long-term thermal resistance, with facers that help prevent water and water vapor intrusion into the insulation foam allowing it to stabilize at a higher R-value. Used in conjunction with the appropriate joint closure system for the application, **Thermax™ Metal Building Board** – with its low perm rating – can help to reduce moisture condensation within and behind the insulation.

Available Sizes

Sizes, R-values⁽²⁾ and edge treatment options for **Thermax™ Metal Building Board** can be found in Table 1. Contact your local sales representative for additional sizes.

Ease of Installation

Thermax™ Metal Building Board is:

- Lightweight and easy to handle – can be sawed or cut with a knife
- Easy to install quickly to walls (girts, steel stud, tilt-up, block, wood) and ceilings (inside and outside of purlins, trusses or bar joints)
- Can be installed exposed to the interior without a thermal barrier
- Eliminate the extra step of installing a separate membrane or building wrap
- Are listed in 1, 2, 3 and 4 hour UL fire rated wall assemblies
- Helps reduce the potential for condensation within the wall assembly

TABLE 1: Sizes⁽¹⁾, R-Values And Edge Treatments For Thermax™ Metal Building Board Insulation

Nominal Board Thickness (in.)	R-Value	Board Size (ft.)	Edge Treatment
4.0	25	4 x 8	Square Edge

¹ Contact your DuPont Sales Representative for information at different R-values and other sizes and lead time requirements. Not all product sizes are available in all regions.

² R-value means resistance to heat flow. The higher the R-value the greater the insulating power. Stabilized R-value @75°F mean temperature determined in accordance with ASTM C518, R-values expressed in ft²·h·°F/Btu.

Sustainable Solutions

Thermax™ Metal Building Board is manufactured with a zero ozone depleting potential blowing agent. The use of Thermax™ brand insulation helps reduce the carbon footprint of commercial buildings. Thermax™ is compliant with California Department of Public Health (CDPH) VOC emissions requirements.

PROPERTIES

DuPont™ Thermax™ Metal Building Board Insulation exhibits physical properties as indicated in Table 2 when tested as represented. Review all instructions and (Material) Safety Data Sheet ((M)SDS) before use. Please contact DuPont at 1-833-338-7668 when additional guidance is required for writing specifications that include this product.

TABLE 2: Physical Properties of Thermax™ Metal Building Board

Property and Test Method	Value
Compressive Strength ⁽¹⁾ , ASTM D1621, psi, min.	25
Flexural Strength, ASTM C203, psi, min.	40
Dimensional Stability, ASTM D2126	0.2% max
Water Absorption, ASTM C209, % by volume, max.	0.1
Water Vapor Permeance ⁽²⁾ , ASTM E96, perm, max.	<0.01
Maximum Use Temperature, °F	250
Surface Burning Characteristics ⁽³⁾ , ASTM E84 for both foam core and finished product	Class A
Flame Spread	25
Smoke Developed	<450

⁽¹⁾ Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first.

⁽²⁾ Based on 1" thickness.

⁽³⁾ Calculated flammability values for this or any other material are not intended to represent hazards that may be present under actual fire conditions.

TESTING

Applicable Standards

Thermax™ Metal Building Board meets ASTM C1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board, Type I, Class 2. Applicable standards include:

- **C203** – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
- **C209** – Standard Test Methods for Cellulosic Fiber Insulating Board
- **C518** – Standard Test Method for Steady- State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- **D1621** – Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- **D2126** – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
- **D2842** – Standard Test Method for Water Absorption of Rigid Cellular Plastics
- **E96** – Standard Test Method for Water Vapor Transmission of Materials
- **D1623** - Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics

Notice

Thermax™ Metal Building Board complies with the following codes:

- ASTM E2178 Standard Test Method for Air Permeance of Building Materials – leakage rates less than 0.001 L/s/m² at a test pressure of 75 Pa.
- ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
- ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
- 2021, 2018, 2015, 2012, and 2009 International Residential Code (IRC) Section 316
- 2021, 2018, 2015, 2012, and 2009 International Building Code (IBC) Section 2603
- 2021, 2018, 2015, 2012 International Green Construction Code
- 2019 California Green Building Standards Code
- 2020 ICC 700 National Green Building Standard
- Thermax™ products are covered under Underwriters Laboratories Inc. (UL) File R5622
- UL 1256 – Fire Test of Roof Deck Constructions, Roof Deck Construction No. 120 and No. 123
- Class A UL 723 (ASTM E84) Surface Burning Characteristics of Building Materials

- The following designs are 1, 2, 3 or 4 hour wall rated assemblies as listed in the UL Fire Resistance Directory: U026, U326, U330, U354, U355, U424, U425, U460, U902, U904, U905, U906, U907, V454, V482, V499
- Intertek CCRR-0435
- Miami-Dade County approved

Contact your DuPont sales representative or local authorities for state and local building code requirements and related

acceptances.

Warranty

In the USA a 20-year limited thermal warranty is available. Visit building.dupont.com/warranties or contact your DuPont representative for details.

HANDLING

WARNING: For Professional Use Only – Read and follow the entire Handling section and the Safety Data Sheets (SDSs, formerly MSDSs or Material Safety Data Sheets) carefully before use. The information below is designed to protect the user and allow for safe use and handling of Thermax™ Brand products. Follow all applicable federal, state, local and employer regulations.

Precautionary Statements

- Butt joints must be installed over structural members. The surface of the insulation at all joints must be continuously sealed with tape or with one of DuPont's joint closure systems.
- Thermax™ Brand products should be used only in strict accordance with product application instructions.
- Thermax™ Brand products, when used in a building containing combustible materials, may contribute to the spread of fire. For more information, consult MSDS and/or call DuPont at 1-833-338-7668.

Disposal

Dispose of any residual Thermax™ Brand product, coated debris, or solvent in accordance with applicable federal, state, and local government regulations.



**For more information visit us at
thermaxwallsystem.com
or call 1-833-338-7668**

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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 call the DuPont Contact Center at 866-583-2583 or contact your local building inspector. For emergencies contact Chemtrec 800-424-9300, CCN (Contract Number) 7442.

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

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

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