Product Information Sheet

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 and a Sound Transmission Classification (STC) of 15.

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 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 membrane or building wrap
- Are listed in 1, 2, 3 and 4 hour UL fire rated wall assemblies
- Contain UV-stable technology – can remain uncovered up to six months
- 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
.5	3.3	4 x 8	Square Edge
.75	5.0	4 x 8	Square Edge
1.0	6.5	4 x 8	Square Edge
1.5	9.8	4 x 8	Square Edge, Shiplap
2.0	13.0	4 x 8	Square Edge, Shiplap
2.5	15.0	4 x 8	Square Edge, Shiplap
3.0	18.0	4 x 8	Square Edge, Shiplap
3.5	21.0	4 x 8	Square Edge, Shiplap

[1] Contact your DuPont seller 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.
[3] Thermax™ Brand insulation has a higher R-Value at lower temperatures. At 40°F and 1" board thickness, R-Value is 6.6, and for 2" board thickness, R-Value is 13.2.

Sustainable Solutions

Thermax™ Metal Building Board is manufactured with a zero ozone depleting potential. The use of **Thermax™ Metal Building Board** helps reduce the carbon footprint of commercial buildings.

* Thermax™ Metal Building Board is a former product of The Dow Chemical Company.

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 1-866-583-2583 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.	55
Dimensional Stability, ASTM D2126	0.2% max
Water Absorption, ASTM C209, % by volume, max.	0.1
Water Vapor Permeance, ASTM E96, perm, max.	<0.03
Maximum Use Temperature, °F	250
Surface Burning Characteristics[3], ASTM E84 for both foam core and finished product Flame Spread Smoke Developed	 Class A 25 <450

[1] Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first.
[2] 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
- **E96** – Standard Test Method for Water Vapor Transmission of Materials
- **D1623** – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plasticss

Notice

Thermax™ Metal Building Board complies with the following codes:

- 2018, 2015, 2012, 2009 and 2006 International Residential Code (IRC) Section 316
- 2018, 2015, 2012, 2009 and 2006 International Building Code (IBC) Section 2603
- ICC-ES ESR-1659
- FM 4880 – Wall-Ceiling Construction Metal-Faced – Class 1 Fire Rated to Max. 30’ Exposure High, 4.25” Thick, 4’ Wide, When Installed as Described in the Current Edition of FMRC Approval Guide
- Thermax™ Brand 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 Class A 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
- Fire Performance Evaluation of an Exterior Masonry Wall System Incorporating Thermax™ Brand Insulation Tested in Accordance With NFPA 285, 2006 Edition (UBC 26.9, intermediate scale – multistory testing)
- FMVSS No. 302 – Flammability of Interior Materials – Passenger Cars, Multipurpose Passenger Vehicles, Trucks and Buses (Docket No. 3-3; Notice 4)

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

Warranty

Fifteen-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 1-866-583-2583.

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 1-866-583-2583

NOTICE: No freedom from any patent owned by DuPont or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where DuPont is represented. The claims made may not have been approved for use in all countries or regions. DuPont assumes no obligation or liability for the information in this document. References to "DuPont" or the "Company" mean the DuPont legal entity selling the products to Customer unless otherwise expressly noted. NO EXPRESS WARRANTIES ARE GIVEN EXCEPT FOR ANY APPLICABLE WRITTEN WARRANTIES SPECIFICALLY PROVIDED BY DUPONT. ALL IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. The buyer assumes all risks as to the use of the material. Buyer's exclusive remedy or any claim (including without limitations, negligence, strict liability, or tort) shall be limited to the refund of the purchase price of the material. Failure to strictly adhere to any recommended procedures shall release DuPont Specialty Products USA, LLC or its affiliates, of all liability with respect to the materials or the use thereof. The information herein is not intended for use by non-professional designers, applicators or other persons who do not purchase or utilize this product in the normal course of their business.

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, consult (Material) Safety Data Sheet ((M)SDS), call DuPont at 1-866-583-2583 or contact your local building inspector. In an emergency, call 1-989-636-4400 in the U.S. or 1-519-339-3711 in Canada.

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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