

# DuPont™ Thermax™ Heavy Duty Insulation

Durable, Glass-Fiber-Reinforced Insulation with Thermoset-Coated Aluminum Facer

## FEATURES/BENEFITS

### Description

DuPont™ Thermax™ Heavy Duty Insulation is designed as an insulation and interior finish system for walls and ceilings in metal, wood post frame, and concrete or masonry buildings, as governed by building codes.

Thermax™ Heavy Duty consists of a glass-fiber-reinforced polyisocyanurate foam core faced with nominal 4 mil embossed white thermoset-coated aluminum on one side and 1.25 mil embossed aluminum on the other. The tough 4 mil white embossed aluminum surface makes it a durable insulation/finish choice for use in moderate-impact areas, and it can be pressure-washed up to 2,000 psi with a 15-degree or greater spray tip (at 3' minimum distance). Thermax™ Heavy Duty meets the USDA requirements for "Incidental Food Contact Materials" when used as surfaces not in direct contact with food, such as floors, walls, ceilings, etc.).

Thermax™ Heavy Duty also 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™ Heavy Duty – with its low perm rating – can help to reduce moisture condensation within and behind the insulation.

### Ease of Installation

#### Thermax™ Heavy Duty:

- Installs quickly to walls and ceilings – inside and outside of purlins, trusses or bar joints
- Can be installed exposed to the interior without a thermal barrier
- Helps reduce the potential for condensation within the wall assembly
- Is lightweight – easy to cut, handle and install

### Sustainable Solutions

Thermax™ Heavy Duty 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.

### Available Sizes

Sizes, R-values and edge treatment options for Thermax™ Heavy Duty can be found in Table 1. Contact your local sales representative for additional sizes.

**TABLE 1: Sizes<sup>(1)</sup>, R-Values<sup>(2)(3)</sup> And Edge Treatments For Thermax™ Heavy Duty Insulation**

Nominal Board Thickness (in.)	R-Value	Board Size (ft.)	Edge Treatment
.5	3.8	4 x 8	Square Edge
1.0	6.9	4 x 8	Square Edge
1.5	9.9	4 x 8	Square Edge, Shiplap
1.55	10.2	4 x 8	Square Edge
2.0	13	4 x 8	Square Edge, Shiplap
2.5	16	4 x 8	Square Edge, Shiplap
3.0	19	4 x 8	Square Edge, Shiplap

<sup>1</sup> Contact your local 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.

<sup>2</sup> 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 ft<sup>2</sup>·h·°F/Btu.

<sup>3</sup> Thermax™ Brand insulation has a higher R-Value at lower temperatures. At 40°F and 1" board thickness, R-Value is 7.2, and for 2" board thickness, R-Value is 14.

## PROPERTIES

DuPont™ Thermax™ Heavy Duty 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™ Heavy Duty Insulation**

Property and Test Method	Value
Compressive Strength <sup>(1)</sup> , 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 <sup>(2)</sup> , ASTM E96, perm, max.	<0.01
Maximum Use Temperature, °F	250
Light Reflectance, Visual Light Spectrophotometer, %	65
Surface Burning Characteristics <sup>(3)</sup> , ASTM E84 for both foam core and finished product	Class A
Flame Spread	25
Smoke Developed	<450

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

<sup>(2)</sup> Based on 1" thickness.

<sup>(3)</sup> 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™ Heavy Duty 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 Plastics

### Notice

Thermax™ Heavy Duty complies with the following codes:

- ASTM E2178 Standard Test Method for Air Permeance of Building Materials – leakage rates less than 0.001 L/s/m<sup>2</sup> at a test pressure of 75 Pa.
- ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies
- 2021, 2018, 2015, 2012, and 2009 International Residential Code (IRC) Section 316

- 2021, 2018, 2015, 2012, and 2009 International Building Code (IBC) Section 2603
- 2019 California Green Building Standards Code
- 2020 ICC 700 National Green Building Standard
- FM 4880 – Wall-Ceiling Construction Metal-Faced – Class 1 Fire Rated to Max. 30' Exposure High, 3.0" Thick, 4' Wide, When Installed as Described in the Current Edition of FMRC Approval Guide. Contact Dupont Technical Support for most current FM 4880 attachment requirements.
- 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](http://building.dupont.com/warranties) or contact your DuPont representative for details.

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## 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.
- Maximum product length is 30 ft. (9.1 m) with a maximum thickness of 3 inches (76.2 mm).
- 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  
[thermaxwallssystem.com](http://thermaxwallssystem.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, consult (Material) Safety Data Sheet ((M)SDS), call DuPont at 1-833-338-7668 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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