

# Thermax™ Sheathing

## Non-Structural. Glass-Fiber-Infused Rigid Polyiso Foam Sheathing

### FEATURES/BENEFITS

#### Description

**Thermax™ Sheathing\*** is a non-structural, rigid board insulation consisting of a glass-fiber-infused polyisocyanurate foam core laminated between 1.0 mil smooth, reflective aluminum facers on both sides. The glass-fiber reinforcement contributes to improved fire performance and dimensional stability.

**Thermax™ Sheathing** 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\*. In the USA, **Thermax™ Sheathing** can even be installed exposed to the interior without a thermal barrier. Used in conjunction with the appropriate joint closure system for the application, **Thermax™ Sheathing** – with its low perm rating – can help to reduce moisture condensation within and behind the insulation.

#### Ease of Installation

##### Thermax™ Sheathing:

- Eliminates the extra step of installing a membrane or building wrap
- Can be installed exposed to the interior without a thermal barrier (USA only)
- Contains UV-stable technology – can remain uncovered up to six months
- Reduces the potential for condensation within the wall assembly
- Is lightweight – easy to cut, handle and install

#### Available Sizes

Available sizes, R-values and edge treatments for **Thermax™ Sheathing** can be found in Table 1.

**TABLE 1: Sizes<sup>(1)</sup>, R-Values And Edge Treatments For THERMAX™ Sheathing**

| Nominal Board Thickness (in.) |             | Thermal Properties |      | *Board Size Availability |             | Edge Treatment       |
|-------------------------------|-------------|--------------------|------|--------------------------|-------------|----------------------|
| US (in)                       | Canada (mm) | R-Value            | Rsi  | US (ft)                  | Canada (mm) |                      |
| 0.50                          | *           | 3.3                | 0.58 | 4 x 8/4 x 12             | 1220 x 2440 | Square Edge          |
| 0.75                          | *           | 5.0                | 0.88 | 4 x 8/4 x 12             | 1220 x 2440 | Square Edge          |
| 1                             | *           | 6.5                | 1.14 | 4 x 8/4 x 12             | 1220 x 2440 | Square Edge          |
| 1.5                           | *           | 9.8                | 1.73 | 4 x 8/4 x 12             | 1223 x 2440 | Square Edge, Shiplap |
| 1.55                          | 39          | 10.1               | 1.78 | 4 x 8/4 x 12             | 1224 x 2440 | Square Edge, Shiplap |
| 2                             | 51          | 13.0               | 2.29 | 4 x 8/4 x 12             | 1225 x 2440 | Square Edge, Shiplap |
| 2.5                           | 64          | 15.8               | 2.78 | 4 x 8/4 x 12             | 1226 x 2440 | Square Edge, Shiplap |
| 3                             | 76          | 18.6               | 3.28 | 4 x 8/4 x 12             | 1227 x 2440 | Square Edge, Shiplap |
| 3.5                           | 89          | 21.3               | 3.75 | 4 x 8/4 x 12             | 1228 x 2440 | Square Edge, Shiplap |
| 4                             | 102         | 24.0               | 4.22 | 4 x 8/4 x 12             | 1229 x 2440 | Square Edge, Shiplap |

#### Sustainable Solutions

**Thermax™ Sheathing** is manufactured from 100% renewable power and has a zero ozone depleting potential. The use of **Thermax™ Sheathing** helps reduce the carbon footprint of commercial buildings and can contribute to LEED Credits.

\* Thermax™ Sheathing is a former product of The Dow Chemical Company.

## PROPERTIES

**Thermax™ Sheathing** 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™ Sheathing**

| Properties               | US (per ASTM C1289) |             | Canadian (per CAN/ULC S704) |                            |
|--------------------------|---------------------|-------------|-----------------------------|----------------------------|
|                          | Test Method         | Values      | Test Method                 | Values                     |
| Compressive strength     | ASTM D1621          | 25 psi min  | ASTM D1621                  | 170 kPa                    |
| Flexural Strength        | ASTM C203           | 40 psi min  | ASTM C203                   | 275 kPa min                |
| Thermal resistance       | ASTM C518           | (see table) | ASTM C518                   | (see table)                |
| Tensile strength.        | ASTM D1623          | 24 psi min. | ASTM D1623                  | 170 kPa min                |
| Dimensional stability    | ASTM D2126          | 0.2% max    | ASTM D2126                  | 0.2% max                   |
| Water absorption         | ASTM C209           | 0.1 max     | ASTM D2842                  | 3.5 max                    |
| Water vapor transmission | ASTM E96            | < 0.3 perm  | ASTM E96                    | <15 ng/Pa-s-m <sup>2</sup> |

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

## TESTING

### Applicable Standards

**Thermax™ Sheathing** meets ASTM C1289 – Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board, Type I, Class 2 and CAN/ ULC S704-11. 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
- **ASTM D2842** “Standard Test Method for Water Absorption of Rigid Cellular Plastics
- **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™ Sheathing** 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 E283 Standard Test Method for Determining Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors under specified Pressure differences across the specimen. Results were <0.02 L/s/m<sup>2</sup>
- ASTM E2357 Standard Test Method for Determining Air Leakage of Air Barrier Assemblies – no leakage
- ASTM E331 Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference – no leakage
- 2009 International Residential Code (IRC) Section 316
- 2009 International Building Code (IBC) Section 2603
- NBCC 9.25.2.2
- ICC-ES ESR-1659
- CAN/ULC S704-03/11
- CCMC listing 08433-L
- 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

- FM 4450 Approval Standard for Class 1 Insulated – Steel Deck Roofs
  - 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
  - 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
  - Fire Performance Evaluation of an Exterior Masonry Wall System Incorporating Thermax™ 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)
  - Miami-Dade NOA 08-0320.01 Interior Insulation on CMU Block
- Contact your DuPont sales representative or local authorities for state and local building code requirements and related acceptances.

#### Warranty

In the USA a 15 year 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

- In Canadian construction, **Thermax™ Sheathing** exposed to the interior must be covered with a thermal barrier.
- 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  
[thermaxwallssystem.com](http://thermaxwallssystem.com)  
or call 1-866-583-2583**

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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 1-866-583-2583 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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