Product Information Sheet

DuPont™ Thermax™ Sheathing

Nonstructural, Glass-Fiber-Infused Rigid Polyiso Insulation

FEATURES/BENEFITS

Description

DuPont™ Thermax™ Sheathing is a non-structural, rigid board insulation consisting of a glass-fiber-infused polyisocyanurate foam core laminated between 1 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:

- Separate membrane or housewrap not needed if used with appropriate joint closure system
- Can be installed on walls and ceilings while exposed to the interior without any thermal barrier
- Contains UV-stable technology – can remain uncovered up to six months
- Helps reduce the potential for condensation within the wall assembly
- Is lightweight – easy to cut, handle and install

Available Sizes

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

TABLE 1: Sizes[1], R-Values[2][3][4] And Edge Treatments For Thermax™ Sheathing

Nominal Board Thickness (in.)		Thermal Properties*		Board Size Availability		Edge Treatment
US (in)	Canada (mm)	R-Value	LTTR m^{2*} °C/W Canada	US (ft)	Canada (mm)	
0.5	*	3.8	*	4 x 8	*	Square Edge
0.625	*	4.6	*	4 x 8	*	Square Edge
0.75	19	5.3	0.67	4 x 8	1220 x 2440	Square Edge
1	*	6.9	**	4 x 8	*	Square Edge
1.25	*	8.4	*	4 x 8	*	Square Edge
1.5	*	9.9	*	4 x 8	*	Square Edge, Shiplap
1.55	*	10.2	*	4 x 8	*	Square Edge
1.75	44.5	11.4	1.61	4 x 8	1220 x 2440	Square Edge
2	51	13	1.85**	4 x 8	1220 x 2440	Square Edge, Shiplap
2.5	*	16	*	4 x 8	*	Square Edge, Shiplap
3	76	19	2.79**	4 x 8	1220 x 2440	Square Edge, Shiplap
3.5	*	22	*	4 x 8	*	Square Edge
4	*	25	*	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] Thermax Brand insulation has a higher R-Value at lower temperatures. At 40°F mean temperature and 1" board thickness, R-Value is 7.2, and for 2" board thickness, R-Value is 14.
[3] Additional 2.8 reflective R-Value can be claimed when the air space is at least 0.75" and in conformance with requirements in ASHRAE Fundamentals Handbook.
[4] Conditioned thermal values were determined by ASTM C518 at 75°F mean temperature. Test specimens were conditioned in accordance with procedures outlined in ASTM C1289, Section 11.1.2.1.
* Product not available in Canada.
** See CCMC 08433-L for thermal values assessed by the CCMC

Sustainable Solutions

Thermax™ Sheathing is manufactured from 100% renewable power and has a zero ozone depleting potential and negligible global warming potential. The use of **Thermax™ Sheathing** helps reduce the carbon footprint of commercial buildings and can contribute to LEED Credits. California Department of Public Health (CDPH) VOC emissions compliant.

PROPERTIES

DuPont™ 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 1-833-338-7668 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[1]	ASTM D1621	25 psi min	ASTM D1621	170 kPa
Flexural Strength	ASTM C203	40 psi min	ASTM C203	275 kPa min
Thermal Resistance (LTTR)	ASTM C518	(see table)	CAN/ULC S770	1.85 m^{2*} °C/W at 50 mm
Tensile Strength	ASTM D1623	24 psi min.	ASTM D1623	134 kPa min
Dimensional Stability	ASTM D2126	0.2% max	ASTM D2126	0.3% max
Water Absorption	ASTM C209	0.1 max	ASTM D2842	0.1 max
Water Vapor Transmission	ASTM E96	< 0.01 perm	ASTM E96	≤0.44 ng/Pa-s-m^2
Surface Burning Characteristics[2], for both foam core and finished product Flame Spread Smoke Developed	ASTM E84	Class A 25 <450	CAN/ULC-S102	 290 130

[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™ 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** – Tensile Strength Perpendicular to Board Surface
- **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
- **CAN/ULC-S770** – Standard Test Method for Determination of Long-term Thermal Resistance of Closed-Cell Thermal Insulating Foams
- **CAN/ULC-102** – Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

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^2 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
- CAN/ULC S704-11 – Type 3, Class 1
- CCMC listing 08433-L
- FM 4880 – Wall 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.
- Intertek CCRR-0435

- 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
- NFPA 285 compliant when installed as part of exterior wall assemblies in CCRR-0435 or valid engineering judgement reports
- 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 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

- In Canadian construction, **DuPont™ 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 1-833-338-7668.

Disposal

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

For more information visit
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, 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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