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# THERMAX™ Sheathing

## 1. PRODUCT NAME

THERMAX™ Sheathing

## 2. MANUFACTURER

The Dow Chemical Company  
 Dow Building Solutions  
 200 Larkin  
 Midland, MI 48674  
 1-866-583-BLUE (2583)  
 Fax 1-989-832-1465  
[www.dowbuildingsolutions.com](http://www.dowbuildingsolutions.com)

## 3. PRODUCT 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. In the USA THERMAX™ Sheathing can be installed exposed to the interior without a thermal barrier. In Canadian construction THERMAX™ exposed to the interior must be covered with a thermal barrier.

## SUSTAINABILITY DATA

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.

## 4. TECHNICAL DATA

### 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

### FIRE INFORMATION

THERMAX™ Sheathing products should be used only in strict accordance with product application instructions. THERMAX™ products are combustible and must be installed in accordance with local building codes. For more information, consult (M)SDS and/or call Dow at 1-866-583-BLUE (2583). In an emergency, call 1-989-636-4400.

**TABLE 1: SIZES, R-VALUES AND EDGE TREATMENTS FOR THERMAX™ SHEATHING**

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

## CODE COMPLIANCES

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 Dow sales representative or local authorities for applicable building code requirements and related acceptances.

**TABLE 2: TYPICAL 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>

## 6. AVAILABILITY

Manufactured in United States. Contact your local sales representative for availability or call 1800-232- 2436.

## 7. WARRANTY

In the USA a 15 year THERMAL warranty is available. Visit [www.dow.com/building](http://www.dow.com/building) for warranty documentation.

In Canada

**Dow Chemical Canada Inc.**

Dow Building Solutions

2400, 215 - 2 Street S.W.,

Calgary, Alberta T2P 1M4

### Technical Information

1-866-583-BLUE (2583)

### Sales Information

1-800-232-2436

[dowbuildingsolutions.com](http://dowbuildingsolutions.com)

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**CAUTION:** This product is combustible and shall only be used as specified by the local building code with respect to flame spread classification and to the use of a suitable thermal barrier. For more information, consult (M)SDS, call Dow at 1-866-583-BLUE (2583) or contact your local building inspector. In an emergency, call 1-989-636-4400.

**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 Dow can give assurance that mold will not develop in any specific system.

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