



THERMAX™ METAL BUILDING BOARD

1. PRODUCT NAME

THERMAX™ Metal Building Board

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

3. PRODUCT DESCRIPTION

THERMAX™ Metal Building Board consists of a polyisocyanurate foam core with 1.25 mil embossed aluminum facers on both sides. THERMAX™ Metal Building Board has a Sound Transmission Classification (STC) of 15. And, it can be installed exposed to the interior without a thermal barrier.

THERMAX™ Metal Building Board offers high, long-term R-value. Used in conjunction with the appropriate joint closure system for the application, THERMAX™ Metal Building Board with its low perm rating helps to reduce moisture condensation within and behind the insulation.

BASIC USE

THERMAX™ Metal Building Board provides both insulation value and an interior finish system for walls in metal buildings. The boards also find application in standing seam metal roofs. THERMAX™ Metal Building Board is listed in 1, 2, 3 and 4 hour UL fire rated wall assemblies.

4. TECHNICAL DATA

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 Plastics

CODE COMPLIANCES

THERMAX™ Metal Building Board complies with the following codes:

- International Residential Code (IRC) Section 314
- International Building Code (IBC) Section 2603
- ICC-ES NER-681
- 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 products are covered under Underwriters Laboratories Inc. (UL) files R5622, R8181 and R2637
- 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, U460, U902, U904, U905, U906, U907, V454, V482
- 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)

TABLE 1: SIZES, R-VALUES AND EDGE TREATMENTS FOR THERMAX™ METAL BUILDING BOARD

NOMINAL BOARD THICKNESS ⁽¹⁾ , IN	R-VALUE ⁽²⁾	BOARD SIZE, FT	EDGE TREATMENT
.50	3.3	4 x 8, 4 x 10	Square Edge
.75	5.0	4 x 8, 4 x 10	Square Edge
1.0	6.5	4 x 8, 4 x 10	Square Edge
1.25	8.1	4 x 8, 4 x 10	Square Edge
1.5	9.8	4 x 8, 4 x 10	Square Edge, Shiplap
1.55	10.1	4 x 8, 4 x 10	Square Edge, Shiplap
2.0	13.0	4 x 8, 4 x 10	Square Edge, Shiplap
2.5	15.8	4 x 8, 4 x 10	Square Edge, Shiplap
2.75	17.3	4 x 8, 4 x 10	Square Edge, Shiplap
3.0	19.0	4 x 8, 4 x 10	Square Edge, Shiplap
3.5	22.1	4 x 8, 4 x 10	Square Edge
4.0	25.2	4 x 8, 4 x 10	Square Edge
4.25	27.0	4 x 8, 4 x 10	Square Edge

(1) Not all product sizes are available in all regions. Additional product sizes are available by custom order. Consult your Dow sales representative about other sizes and lead-time requirements.

(2) Aged R-value at 1" cured foam @ 75°F mean temperature. R-value expressed in ft²•h•°F/Btu. R-value determined by ASTM C518 using the aging process in ASTM C1289 (90 days @ 140°F).

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

TYPICAL PHYSICAL PROPERTIES

THERMAX™ Metal Building Board exhibits the typical physical properties and characteristics indicated in Table 2 when tested as represented.

ENVIRONMENTAL DATA

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.

FIRE PROTECTION

THERMAX™ products should be used only in strict accordance with product application instructions. THERMAX™ products, when used in a building containing combustible materials, may contribute to the spread of fire. For more information, consult MSDS and/or call Dow at 1-866-583-BLUE (2583). In an emergency, call 1-989-636-4400.

TABLE 2: TYPICAL 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, % linear change, max.	0.1
Water Absorption, ASTM C209, % by volume, max.	0.05
Water Vapor Permeance, ASTM E96, perms, max.	<0.03
Maximum Use Temperature, °F	250

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

5. INSTALLATION

THERMAX™ Metal Building Boards are lightweight and can be sawed or cut with a knife. They install quickly to walls (girts, steel stud, tilt-up, block, wood) and ceilings – inside and outside of purlins, trusses or bar joints. 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 Dow's joint closure systems.

Contact a local Dow representative or access the literature library at www.dowbuildingsolutions.com for more specific instructions.

6. AVAILABILITY

THERMAX™ Metal Building Board is manufactured in several locations and is distributed through an extensive network. For more information, call 1-800-232-2436.

7. WARRANTY

Fifteen-year limited thermal warranty is available. Contact your Dow representative for details.

8. MAINTENANCE

Not applicable.

9. TECHNICAL SERVICES

Dow can provide technical information to help address questions when using THERMAX™ Metal Building Board. Technical personnel are available to assist with any insulation project. Call 1-866-583-BLUE (2583).

10. FILING SYSTEMS

- www.dowbuildingsolutions.com
- www.sweets.com
- www.thermaxbydow.com

www.dowbuildingsolutions.com

Technical Information
1-866-583-BLUE (2583)
Sales Information
1-800-232-2436

IN THE U.S.
THE DOW CHEMICAL COMPANY
200 Larkin
Midland, MI 48674

NOTICE: No freedom from any patent owned by Dow 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 Dow is represented. The claims made may not have been approved for use in all countries or regions. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean The Dow Chemical Company and its consolidated subsidiaries unless otherwise expressly noted. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

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 MSDS, 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.

a proud partner of

