Product Information Sheet

DuPont™ Thermax™ XARMOR™ (ci) Exterior Insulation

Toughest, Most Durable Polyiso Insulation for the Thermax™ Wall System

FEATURES/BENEFITS

Description

DuPont™ Thermax™ XARMOR™ (ci) Exterior Insulation is the toughest insulation for the patented Thermax™ Wall System. Designed for continuous insulation, **Thermax™ XARMOR™ (ci)'s** glass-fiber-reinforced polyisocyanurate foam core is homogenous – featuring finer cell size and better cell orientation, reducing voids and knit lines – resulting in one of the highest R-values[2] available for immediate insulation and weather protection on the job site, as well as long-term thermal performance.

Thermax™ XARMOR™ (ci) is also the only Thermax™ insulation with a dark exterior facer optimized to go behind rain screen exteriors. Its integral, durable thermoset-coated aluminum facer provides a drainage plane, water-resistive barrier and exterior sheathing; eliminating the need for a membrane, building wrap or exterior gypsum. Boasting a strong 4.0 mil embossed, acrylic-coated exterior foil facer, **Thermax™ XARMOR™ (ci)** provides builders with more durability for long-term performance.

With its low perm rating and high insulating value, **Thermax™ XARMOR™ (ci)** can help reduce the potential for condensation within the wall assembly. Thermax™ is also manufactured using a distinct free-rise technology using a unique fiberglass core for better product consistency, durability and fire performance than generic polyisocyanurate insulations.

Ease of Installation

Thermax™ XARMOR™ (ci):

- Eliminates the extra step of installing a membrane or building wrap when used with LiquidArmor™ and DuraGard CM™.
- Is optimized to go behind rain screen exteriors
- 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

High Performance Durability

With more than 30 years of exceptional performance, Thermax™ Brand products feature a distinct free-rise technology for better product consistency, durability and fire performance than generic polyisocyanurate insulations.

Available Sizes

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

Sustainable Solutions

Thermax™ XARMOR (ci) Exterior Insulation 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.

TABLE 1: Sizes[1], R-Values[3] And Edge Treatments For Thermax™ XARMOR™ (ci) Exterior Insulation

Nominal Board Thickness (in.)	R-Value	Board Size (ft.)	Edge Treatment
0.625	4.6	4 x 8/4 x 12	Square Edge
1.0	6.9	4 x 8/4 x 12	Square Edge
1.25	8.4	4 x 8/4 x 12	Square Edge
1.55	10.2	4 x 8/4 x 12	Shiplap
2.0	13	4 x 8/4 x 12	Square Edge, Shiplap
2.5	16	4 x 8/4 x 12	Shiplap
3	19	4 x 8/4 x 12	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] Aged R-value at 1" of cured foam @ 75°F mean temperature. R-value expressed in $ft^2 \cdot h \cdot °F/Btu$. R-value determined by ASTM C518 using the aging process in ASTM C1289 (90 days @ 140°F).
[3] 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.

Complete System

Thermax™ Brand insulations have a wide variety of facers to meet the needs of a diverse range of projects. Choose products for interior/exterior, exposed/covered, robust/economic applications and more.

PROPERTIES

DuPont™ Thermax™ XARMOR™ (ci) Exterior Insulation exhibits the properties and characteristics 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™ XARMOR™ (ci) Exterior Insulation

Property and Test Method	Value
Thermal Resistance[1], ASTM C518, R-value.	6.9
Compressive Strength[2], ASTM D1621, psi	25.0
Flexural Strength, ASTM C203, psi.	40 min.
Dimensional Stability, ASTM D2126	0.2% max.
Water Absorption, ASTM C209, % by volume, max.	0.1
Water Vapor Permeance, ASTM E96, perms	≤0.01
Maximum Use Temperature, °F	250
Surface Burning Characteristics[3], ASTM E84 for both foam core and finished product Flame Spread Smoke Developed	 Class A 25 <450

[1] Aged R-value at 1" of cured foam @ 75°F mean temperature. R-value expressed in ft²•h•°F/Btu.
[2] Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first.
[3] 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™ XARMOR™ (ci) 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
- **D2842** – Standard Test Method for Water Absorption of Rigid Cellular Plastics
- **E96** – Standard Test Methods for Water Vapor Transmission of Materials
- **D1623** – Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics

Notice

Thermax™ XARMOR™ (ci) complies with the following codes:

- ASTM E2178 Standard Test Method for Air Permeance of Building Materials – leakage rates less than 0.001 L/s/m² 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
- Thermax™ Brand products are covered under Underwriters Laboratories Inc. (UL) file R5622
- Intertek CCRR-0435

- 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

Twenty-year limited Thermal warranty and Fifteen-year Water Resistive warranty may be applicable when used as a component in the Thermax™ Wall System. 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

- Vertical joints should be staggered and butt joints must be installed over structural members. For optimum performance seal all joints between boards with LiquidArmor™ CM Flashing and Sealant.
- 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 (Material) Safety Data Sheet ((M)SDS) 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
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 call the DuPont Contact Center at 866-583-2583 or contact your local building inspector. For emergencies contact Chemtrec 800-424-9300, CCN (Contract Number) 7442.

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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