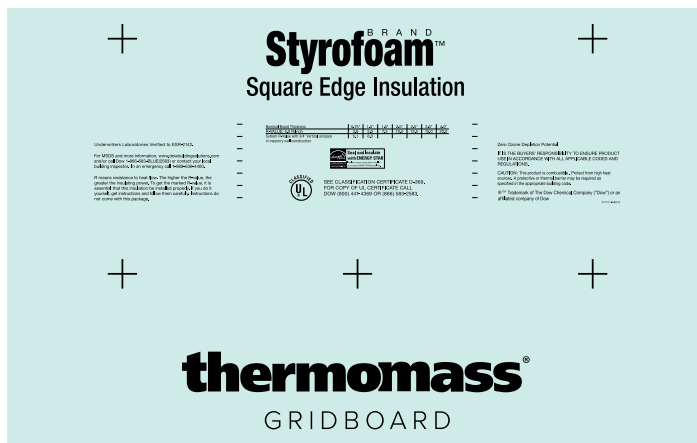


Styrofoam[™] Brand GRIDBOARD Square Edge Insulation

Durable, Moisture-Resistant Insulation for Rigid Concrete Sandwich Wall Applications



FEATURES/BENEFITS

Description

Styrofoam[™] Brand GRIDBOARD Square Edge Insulation* is an extruded polystyrene foam (XPS) insulation board that meets the needs of the commercial market. Styrofoam[™] Brand GRIDBOARD Insulation is intended for use in a variety of Thermomass concrete sandwich wall insulation systems – including pre-cast, tilt wall and cast-in-place.

With more than 60 years of proven performance in wet environments, the closed-cell structure of Styrofoam[™] Brand Square Edge Insulation resists water pickup, enabling it to retain a high R-value* over time. It is classified as a Type III product when tested in accordance with CAN/ULC S701-17 and provides a long term insulating performance of R-5 per inch.

Ease of Use

Styrofoam[™] Brand Square Edge Insulation boards:

- are easy to handle, cut, fabricate and install
- feature a pre-marked grid pattern to aid with on-site fabrication and connector placement
- provide a weather resistant barrier to enhance the building's resistance to air and moisture penetration
- can be used in a variety of applications including foundation walls, precast, tilt walls and more
- come in a wide selection of sizes and thicknesses with square edge/butt edge configuration
- have a minimum compressive strength of 25 psi and a flexural strength of 50 psi
- are designed to provide excellent energy efficiency with an insulating performance of R-5 per inch
- are resistant to degradation from soil components and will retain insulating performance characteristics after prolonged exposure to moisture
- help protect foundation dampproofing and waterproofing
- minimize the freeze-thaw cycling of the foundation, reducing the potential for cracking
- warm the foundation, reducing the potential for condensation
- will not corrode, rot or support mold growth are compliant with international building codes and standards

Sustainable Solutions

- Styrofoam[™] Brand GRIDBOARD Insulation is reusable in many applications.
- Styrofoam[™] Brand GRIDBOARD Insulation is hydrochlorofluorocarbon (HCFC) free with zero ozone depletion potential.
- Styrofoam[™] Brand insulation products produced in North America contain an average of 20% pre-consumer recycled content certified by UL Environment Inc.

* Styrofoam[™] Brand Square Edge Insulation is a former product of The Dow Chemical Company

** R-5 represents the resistance to heat flow. The higher the R-value, the greater the insulating power

Available Sizes

- Width and length: 4' x 8' and 4' x 9'
- Thickness: 1.0", 1.5", 2.0", 2.5", 3.0", 3.5" and 4.0"

See Table 1 for product and packaging data. Available lengths and edge configurations vary by thickness. Not all product sizes are available in all parts of the country. Contact your local DuPont representative for details.

TABLE 1: Product and Packaging Data for Styrofoam™ Brand GRIDBOARD Square Edge Insulation

Thickness in (mm)	Product Dimensions in (cm)	Pallet Dimensions ft (m)	Board Feet per Pallet ft (m)	Bundles per Unit	Pieces per Bundle	Pieces per Pallet
1 (25)	1 x 48 x 96 (25 x 1219 x 2438)	4 x 8 x 8 (1.22 x 2.44 x 2.44)	3072 (936)	8	12	96
1.5 (38)	1.5 x 48 x 96 (38 x 1219 x 2438)	4 x 8 x 8 (1.22 x 2.44 x 2.44)	3072 (936)	8	8	64
2 (50)	2 x 48 x 96 (50 x 1219 x 2438)	4 x 8 x 8 (1.22 x 2.44 x 2.44)	3072 (936)	8	6	48
2.5 (63)	2.5 x 48 x 96 (63 x 1219 x 2438)	4 x 8 x 8 (1.22 x 2.44 x 2.44)	2800 (853)	7	5	35
3 (75)	3 x 48 x 96 (75 x 1219 x 2438)	4 x 8 x 8 (1.22 x 2.44 x 2.44)	3072 (936)	8	4	32
3.5 (89)	3.5 x 48 x 96 (89 x 1219 x 2438)	4 x 8 x 8 (1.22 x 2.44 x 2.44)	2688 (819)	8	3	24
4 (100)	4 x 48 x 96 (100 x 1219 x 2438)	4 x 8 x 8 (1.22 x 2.44 x 2.44)	3072 (936)	8	3	24

* R means resistance to heat flow. The higher the R-value, the greater the insulating power. R-value determined by ASTM C518.

PROPERTIES

Styrofoam™ Brand GRIDBOARD Square Edge Insulation exhibits physical properties as indicated in Table 2 and 3 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: U.S. Physical Properties of Styrofoam™ Brand Square Edge Insulation

Test Method	Property	Typical Value	Units
ASTM C518	Thermal Resistance ¹ per inch		
	@ 75°F mean temp.	5.0	ft ² ·h·°F/Btu, R-value, min.
	@ 40°F mean temp.	5.4	
@ 25°F mean temp.	5.6		
ASTM D1621	Compressive Strength ²	25	psi, min.
ASTM C272	Water Absorption	0.1	% by volume, max.
ASTM E96	Water Vapor Permeance ³	1.5	perm, max.
–	Maximum Use Temperature	165	°F
ASTM D696	Coefficient of Linear Thermal Expansion	3.5 x 10 ⁻⁵	in/in·°F
ASTM C203	Flexural Strength	50	psi, min.

¹ R-values are consistent with criteria of CAN/ULC S701-17 and the requirements of the FTC R-value rule (16 CFR Part 460).

² Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first.

³ Based on 1" thickness.

TABLE 3: Canadian Physical Properties of Styrofoam™ Brand Square Edge Insulation

Test Method	Property	Typical Value	Units
CAN/ULC S770-15	Long-term Thermal Resistance ¹ Rsi (R)		
	24° C (75° F)	0.87 (5.0)	Rsi (R - ft ² · h°F/Btu)
	4° C (40° F)	0.95 (5.4)	
-4° C (20° F)	0.98 (5.6)		
ASTM D1621	Compressive Strength ²	175 (25) min	kPa (psi)
ASTM D2842	Water Absorption	0.7	% by volume, max.
ASTM E96	Water Vapor Permeance ³	90 (1.5) max	ng/Pa · s · m ² (perm)
	Maximum Use Temperature	74 (165)	°C (°F)
ASTM D696	Coefficient of Linear Thermal Expansion	6.3 x 10 ⁻² (3.5 x 10 ⁻⁵)	mm/m °C (in/in °F)
ASTM C203	Flexural Strength	350 (50)	kPa (psi)

¹ R-values are consistent with criteria of CAN/ULC S701-17 and the requirements of the FTC R-value rule (16 CFR Part 460).

² Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first.

³ Based on 1" thickness.

INSTALLATION

Use Conditions

Styrofoam™ Brand GRIDBOARD Square Edge Insulation can be used within commercial interior walls and exterior foundation walls in above- and below-grade applications.

Styrofoam™ Brand GRIDBOARD Insulation can be used under the slab or over the deck or subfloor and is suitable for use in pervious, semi-pervious and practically impervious soils.

TESTING

Applicable Standards

Styrofoam™ Brand GRIDBOARD Square Edge Insulation meets **ASTM C578**, Type IV –Standard Specification for Rigid Cellular Polystyrene Thermal Insulation. Applicable standards include:

- **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
- **E96** – Standard Test Methods for Water Vapor Transmission of Materials
- **D696** – Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and 30°C with a Vitreous Silica Dilatometer
- **C203** – Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
- **D2126** – Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
- **C272** – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Construction

Notice

Styrofoam™ Brand GRIDBOARD Insulation complies with the following codes:

- International Residential Code (IRC) and International Building Code (IBC), see ESR-2142
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate D369
- Calif. Std. Reg. # CA T064 Florida Building Code FL 3835
- Factory Mutual Approved – Subject to conditions of approval as a roof insulation when installed as described in the current edition of the FM Approval Guide

Warranty

In the United States, a 50-year thermal limited warranty is available on **Styrofoam™ Brand products** 1.5 inches and greater. For thickness less than 1.5 inches, other warranties may apply. Warranties are available as described at building.dupont.com/warranties.

HANDLING

WARNING: For Professional Use Only. Read and follow the entire Safety, Handling, and Storage 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 DuPont products. Follow all applicable federal, state, local and employer regulations.

Precautionary Statements

Styrofoam™ Brand GRIDBOARD Square Edge Insulation is combustible; protect from high heat sources. A protective barrier or thermal barrier may be required as specified in the local building codes. For more information, consult the SDS, call DuPont at 1-866-583-2583 or contact your local building inspector.



**For more information visit
thermomass.com
or call 1-(800)-232-6075**

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Styrofoam™ Brand Extruded Polystyrene Foam Insulation

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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