

DuPont™ Styrofoam™ Brand Plazamate™ ST-100 Insulation

Sturdy, Moisture-Resistant Insulation for Commercial Plaza Decks

Overview

DuPont Styrofoam Brand Plazamate ST-100 Foam Insulation* is designed for installation above waterproofing membranes in commercial plaza deck applications. Styrofoam Brand Plazamate ST-100 Insulation helps the roof membrane maintain a steady temperature, minimizing the harmful effects of freeze-thaw cycles, weathering, and physical damage both during and after construction.

Features and Benefits

- » Strong, yet lightweight
- » Easy to handle, cut, and install
- » Easy to fabricate into various sizes and shapes to meet specific design needs
- » Square-edged on four sides to minimize on-site cutting and waste
- » Lined with ½" x ¼" drainage channels on the bottom long edge
- » Reusable

Sustainable Solutions

- » Styrofoam Brand Plazamate ST-100 Insulation is reusable in many applications.
- » Styrofoam Brand Plazamate ST-100 uses BluEdge™ technology. It is hydrochlorofluorocarbon (HCFC) free with zero ozone depletion potential.
- » Contains an average of 20% pre-consumer recycled content certified by UL Environment Inc.

Properties

Styrofoam Brand Plazamate ST-100 Insulation exhibits physical properties as indicated in the table below when tested as represented. Review all instructions and Safety Data Sheet (SDS) before use.

Typical Properties and Characteristics

Physical Property	Test Method	Value
Thermal Resistance per inch	ASTM C 518	75°F mean temp., ft ² •h•°F/Btu, R-value ¹ , min 5.0
Compressive Strength ² psi, min	ASTM D1621	60
Water Absorption % by volume, max.	ASTM C272	0.1
Water Vapor Permeance ³ perm, max	ASTM E96	0.8
Maximum Use Temperature		165°F
Coefficient of Linear Thermal Expansion in/in °F	ASTM D696	3.5 x 10 ⁻⁵
Flexural Strength psi, min.	ASTM C203	75
Dimensional Stability % linear change, max.	ASTM D2126	2.0
Surface Burning Characteristics ⁴	ASTM E84	Class A
Flame Spread ³	ASTM E84	25
Smoke Development	ASTM E84	<450

¹ R means resistance to heat flow. The higher the R-value, the greater the insulating power.

² Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first. Since Styrofoam ST-100 Foam Insulations are visco-elastic materials, adequate design safety factors should be used to prevent long-term creep and fatigue deformation.

³ Based on 1" thickness.

⁴ This numerical flame spread rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

Available Sizes

Available sizes, R-values, and edge treatments for Styrofoam Brand Plazamate ST-100 Insulation can be found in the table below.

Standard Sizes

Nominal Board Thickness ¹ (in.)	R-Value ²	Board Size (in.)	Edge Treatment
1.5	7.5	24 x 96	Square Edge
2.0	10.0	24 x 96	Square Edge
3.0	15.0	24 x 96	Square Edge

¹ Not all product sizes are available in all regions.

² R means resistance to heat flow. The higher the R-value, the greater the insulating power. R-values expressed in ft² •h•°F/Btu. R-value determined by ASTM C518

* Styrofoam Brand Plazamate Extruded Polystyrene (XPS) Foam Insulation is a former product of The Dow Chemical Company.

DuPont Styrofoam Brand Plazamate ST-100 Insulation

Sturdy, Moisture-Resistant Insulation for Commercial Plaza Decks

Testing

Applicable Standards

DuPont Styrofoam Brand Plazamate ST-100 Foam Insulation meets ASTM C578, Type VII – 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
- » **D2842** – Standard Test Method for Water Absorption of Rigid Cellular Plastics Styrofoam Brand Plazamate ST-100 Foam Insulation
- » **C272** – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
- » **E96** – Standard Test Methods for Water Vapor Transmission of Materials
- » **E84** – Standard Test Method for Surface Burning Characteristics of Building Materials
- » **D696** – Standard Test Method for 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

Notice

Styrofoam Brand Plazamate ST-100 Insulation complies with the following codes:

- » Meets IBS/IRC requirements for foam plastic insulation; see ICC-ES ESR-4755
- » Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate D369

Precautions

WARNING: For Professional Use Only – Read and follow the entire Safety, Handling, and Storage section and Safe Handling document on BeyondBlue. DuPont.com 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.

- » Styrofoam Brand Plazamate ST-100 Insulation is combustible; protect from high heat sources. Local building codes may require a protective or thermal barrier.
- » For more information, consult SDS or contact your local building inspector.
- » Dispose of any residual Styrofoam Brand product, coated debris, or solvent in accordance with applicable federal, state, and local government regulations.
- » Cover exposed Styrofoam with a light opaque covering to protect from weather and sunlight. Do not use clear plastic covering.
- » Follow all applicable federal, state, local, and employer regulations.

Shelf Life and Storage

When stored outdoors, keep insulation boards tarped or covered to protect from weather and weighted down to prevent boards from being blown around by the wind. Store above standing water.

