



# STYROFOAM™ BRAND PLAZAMATE™ EXTRUDED POLYSTYRENE FOAM INSULATION

## 1. PRODUCT NAME

STYROFOAM™ Brand  
PLAZAMATE™ Extruded  
Polystyrene Foam Insulation

## 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

### BASIC USE

STYROFOAM™ Brand  
PLAZAMATE™ Extruded  
Polystyrene Foam Insulation is designed for installation above waterproofing membranes in plaza deck applications.

STYROFOAM™ Brand  
PLAZAMATE™ Insulation helps the roof membrane maintain a steady temperature, minimizing the harmful effects of freeze-thaw cycles, weathering and physical damage during and after construction.

## 4. TECHNICAL DATA

### APPLICABLE STANDARDS

STYROFOAM™ Brand  
PLAZAMATE™ 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

- 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

### CODE COMPLIANCES

STYROFOAM™ Brand  
PLAZAMATE™ Insulation complies with the following codes:

- Meets IBC/IRC requirements for foam plastic insulation; see ICC-ES ESR 2142
- ICBO-ES ER-2257
- BOCA-ES RR 21-02
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate D369
- Factory Mutual Approved – Subject to conditions of approval as a roof insulation when installed as described in the current edition of FM Approval Guide

## PHYSICAL PROPERTIES

STYROFOAM™ Brand  
PLAZAMATE™ Insulation exhibits physical properties as indicated in Table 2 when tested as represented.

## ENVIRONMENTAL DATA

STYROFOAM™ Brand  
PLAZAMATE™ Insulation is hydrochlorofluorocarbon (HCFC) free with zero ozone-depletion potential. STYROFOAM™ Brand PLAZAMATE™ Extruded Polystyrene Foam Insulation is reusable in many applications.

## FIRE PROTECTION

STYROFOAM™ Brand  
PLAZAMATE™ Insulation 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 MSDS, call Dow at 1-866-583-BLUE (2583) or contact your local building inspector.

## 5. INSTALLATION

STYROFOAM™ Brand  
PLAZAMATE™ Insulation is strong, yet lightweight and easy to fabricate into various sizes and shapes to meet specific design needs. Because of the critical technical design aspects of many of its applications, Dow recommends that qualified designers or consultants design your system. Contact a local Dow representative or access the literature library at [www.dowbuildingsolutions.com](http://www.dowbuildingsolutions.com) for more specific instructions.

**TABLE 1: SIZES, R-VALUES AND EDGE TREATMENTS FOR STYROFOAM™ BRAND PLAZAMATE™ EXTRUDED POLYSTYRENE FOAM INSULATION**

NOMINAL BOARD THICKNESS <sup>(1)</sup> , IN.	R-VALUE <sup>(2)</sup>	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 are expressed in ft<sup>2</sup>•h•F/Btu. R-value determined by ASTM C518.

**TABLE 2: PHYSICAL PROPERTIES OF STYROFOAM™ BRAND PLAZAMATE™ EXTRUDED POLYSTYRENE FOAM INSULATION**

PROPERTY AND TEST METHOD	VALUE
Thermal Resistance per inch, ASTM C518 @ 75°F mean temp., ft <sup>2</sup> •h•°F/Btu, min., R-value <sup>(1)</sup> , min.	5.0
Compressive Strength <sup>(2)</sup> , ASTM D1621, psi, min.	60
Water Absorption, ASTM C272, % by volume, max.	0.3
Water Vapor Permeance <sup>(3)</sup> , ASTM E96, perm, max.	0.8
Maximum Use Temperature, °F	165
Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F	3.5 x 10 <sup>-5</sup>
Flexural Strength, ASTM C203, psi, min.	75
Dimensional Stability, ASTM D2126, % linear change, max.	2.0
Surface Burning Characteristics <sup>(4)</sup> , ASTM E84, Flame Spread <sup>(3)</sup> , ASTM E84	15
Smoke Development, ASTM E84	165

(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™ Extruded Polystyrene 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.

**6. AVAILABILITY**

STYROFOAM™ Brand PLAZAMATE™ Insulation is distributed through an extensive network of roofing distributors. For product availability or for the name of your local Dow sales representative, call 1-800-232-2436.

**7. WARRANTY**

In the United States, a 50-year thermal limited warranty is available on STYROFOAM™ Insulation products 1.5 inches and greater. For thickness less than 1.5 inches, other warranties may apply. Warranties are available as described at <http://building.dow.com/na/en/tools/warranty.htm>

**8. MAINTENANCE**

Not applicable.

**9. TECHNICAL SERVICES**

Dow can provide technical information to help address questions when using STYROFOAM™ Brand PLAZAMATE™ Insulation. Technical personnel are available to assist with any insulation project. For technical assistance, call 1-866-583-BLUE (2583).

**10. FILING SYSTEMS**

- [www.dowbuildingsolutions.com](http://www.dowbuildingsolutions.com)
- [www.sweets.com](http://www.sweets.com)

**[www.dowbuildingsolutions.com](http://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

Dow has manufactured STYROFOAM™ Brand Extruded Polystyrene Foam Insulation for use in construction and specialty applications for more than 60 years. Its dense closed-cell structure gives STYROFOAM™ Brand Extruded Polystyrene Foam Insulation excellent moisture resistance, long-term thermal performance and compressive strength. STYROFOAM™ Brand Extruded Polystyrene Foam Insulation is reusable in many applications.

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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, 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.

