



# STYROFOAM™ Brand CAVITYMATE™ SC Extruded Polystyrene Foam Insulation

## 1. PRODUCT NAME

STYROFOAM™ Brand CAVITYMATE™ SC 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

## 3. PRODUCT DESCRIPTION

### Basic Use

STYROFOAM™ Brand CAVITYMATE™ SC Extruded Polystyrene Foam Insulation is a moisture-resistant, durable and lightweight foam board designed specifically for use in wet cavity wall environments. Sized to fit snugly between wall ties, STYROFOAM™ Brand CAVITYMATE™ Insulation saves time and money on the job site. Its closed-cell structure provides exceptional long-term thermal performance and moisture control.

## 4. TECHNICAL DATA

### Applicable Standards

STYROFOAM™ Brand CAVITYMATE™ SC Insulation meets ASTM C578 Type X – Standard Specification for Rigid Cellular Polystyrene 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
- C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
- 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
- D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics
- CAN/ULC S701 Type 2

## Physical Properties

STYROFOAM™ Brand CAVITYMATE™ SC Insulation exhibits the properties and characteristics indicated in Tables 3 and 4 when tested as represented.

Prolonged exposure to ultraviolet radiation may cause the surface of STYROFOAM™ Brand CAVITYMATE™ SC Insulation to become faded and dusty. A lightcolored, opaque protective covering should be used if excessive solar exposure is expected. The surface degradation will have no measurable effect on the insulating value of the plastic foam unless the deterioration is allowed to continue until actual foam thickness is lost. Since the dust would impair the performance of adhesives and finishes, the dusty surface should be brushed off before these products are applied.

## Environmental Data

STYROFOAM™ Brand CAVITYMATE™ SC Insulation is hydrochlorofluorocarbon (HCFC) free with zero ozone-depletion potential. STYROFOAM™ Brand CAVITYMATE™ SC Insulation is reusable in many applications.

## Fire Protection

STYROFOAM™ Brand CAVITYMATE™ SC 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.

## Code Compliances

STYROFOAM™ Brand CAVITYMATE™ SC Insulation complies with the following codes:

- Meets IBC/IRC requirements for foam plastic insulation; see ICC-ES ESR-2142
- BOCA-ES RR 21-02
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate D369
- CCMC listing 12084-L

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

**TABLE 1: U.S. Sizes, R-Values and Edge Treatments for STYROFOAM™ Brand CAVITYMATE™ SC 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                    | 48 x 96          | Shiplap Edge   |
| 2.0  | 10.0                   | 48 x 96          | Shiplap Edge   |

<sup>(1)</sup> Not all product sizes are available in all regions.

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

**TABLE 2: Canadian Sizes, R-Values and Edge Treatments for STYROFOAM™ Brand CAVITYMATE™ SC Extruded Polystyrene Foam Insulation**

| Nominal Board Thickness <sup>(1)</sup> (mm) | R-Value | Board Size (mm) | Edge Treatment |
|---|---------|-----------------|----------------|
| 25  | 5.0     | 600 x 2400      | Shiplap Edge   |
| 38  | 7.5     | 600 x 2400      | Shiplap Edge   |
| 50  | 10.0    | 600 x 2400      | Shiplap Edge   |
| 75  | 15.0    | 600 x 2400      | Shiplap Edge   |
| 25  | 5.0     | 1200 x 2400     | Shiplap Edge   |
| 38  | 7.5     | 1200 x 2400     | Shiplap Edge   |
| 50  | 10.0    | 1200 x 2400     | Shiplap Edge   |

<sup>(1)</sup> Not all product sizes are available in all regions.

## 5. INSTALLATION

Boards of STYROFOAM™ Brand CAVITYMATE™ SC Insulation are easy to handle, cut and install. Contact a local Dow representative or access the literature library at [www.dowbuildingsolutions.com](http://www.dowbuildingsolutions.com) for more specific instructions.

## 6. AVAILABILITY

STYROFOAM™ Brand CAVITYMATE™ SC Insulation is manufactured in several locations across North America and is distributed through an extensive network. For more information, call:  
1-800-232-2436 (English)  
1-800-565-1255 (French)

## 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 about using STYROFOAM™ Brand CAVITYMATE™ SC Insulation. Technical personnel are available to assist with any insulation project. For technical assistance, call:  
1-866-583-BLUE (2583) (English)  
1-800-363-6210 (French)

## 10. FILING SYSTEMS

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

**TABLE 3: Physical Properties (U.S.) of STYROFOAM™ Brand CAVITYMATE™ Extruded Polystyrene Foam Insulation**

| Property and Test Method   | Value                  |
|--|------------------------|
| Thermal Resistance <sup>(1)</sup> per in., ASTM C518 @ 75°F mean temp., ft <sup>2</sup> •h•°F/Btu, R-value | 5.0                    |
| Compressive Strength <sup>(2)</sup> , ASTM D1621, psi, min.  | 15                     |
| Water Absorption, ASTM C272, % by volume, max.   | 0.3                    |
| Water Vapor Permeance <sup>(3)</sup> , ASTM E96, perm, max.  | 1.5                    |
| Maximum Use Temperature, °F  | 165                    |
| Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F   | 3.5 x 10 <sup>-5</sup> |

<sup>(1)</sup> Values are consistent with the criteria of ASTM C578 and the FTC R-value rule (16 CFR Part 460). R means resistance to heat flow. The higher the R-value, the greater the insulating power.

<sup>(2)</sup> Vertical compressive strength is measured at 10 percent deformation or yield, whichever occurs first. Since STYROFOAM™ Brand Extruded Polystyrene Foam Insulations are visco-elastic materials, adequate design safety factors should be used to prevent long-term creep and fatigue deformation. For static loads, 3:1 is suggested. For dynamic loads, 5:1 is suggested. Contact Dow for design recommendations.

<sup>(3)</sup> Based on 1" thickness.

**TABLE 4: Physical Properties (Canadian) of STYROFOAM™ Brand CAVITYMATE™ SC Extruded Polystyrene Foam Insulation**

| Property and Test Method   | Value   |
|--|---|
| Thermal Resistance per in. (25 mm), ASTM C518 @ 75°F (24°C) mean temp., ft <sup>2</sup> •h•°F/Btu (m <sup>2</sup> •°C/W), R-value (RSI)(1), min. | 5.0 (.88)   |
| Compressive Strength(2), ASTM D1621, psi (kPa), min.   | 16 (110)  |
| Water Absorption, ASTM D2842, % by volume, max.  | 1.9   |
| Water Vapour Permeance(3), ASTM E96, perm (ng/Pa•s•m <sup>2</sup> ), max.  | 1.5 (90)  |
| Maximum Use Temperature, °F (°C)   | 165 (74)  |
| Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F (mm/m•°C)   | 3.5 x 10 <sup>-5</sup><br>(6.3 x 10 <sup>-2</sup> ) |

<sup>(1)</sup> Values are consistent with the criteria of ASTM C578.

<sup>(2)</sup> Vertical compressive strength is measured at 10 percent deformation or yield, whichever occurs first. Since STYROFOAM™ Brand Extruded Polystyrene Foam Insulations are visco-elastic materials, adequate design safety factors should be used to prevent long-term creep and fatigue deformation. For static loads, 3:1 is suggested. For dynamic loads, 5:1 is suggested. Contact Dow for design recommendations.

<sup>(3)</sup> Based on 1" (25 mm) thickness.



In the U.S.

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**1-800-363-6210** (French)

For Sales Information:

**1-800-232-2436** (English)  
**1-800-565-1255** (French)

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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 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 Dow can give assurance that mold will not develop in any specific system.

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