



# 1 PRODUCT NAME

## STYROFOAM CAVITYMATE SC Insulation

### 2 Manufacturer

The Dow Chemical Company  
Building Materials  
200 Larkin  
Midland, MI 48674  
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Fax 1-989-832-1465

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Building Materials  
1086 Modeland Road  
Sarnia, ON N7T 7K7  
English: 1-800-268-4840  
French: 1-800-363-6210

www.dowbuildingmaterials.com

### 3 Product Description

#### BASIC USE

STYROFOAM\* CAVITYMATE\* SC extruded polystyrene insulation is an extruded polystyrene foam rigid board insulation with shiplap edges. It is designed for use as an exterior sheathing on steel stud walls in new commercial and residential high-rise buildings. It is also ideally suited for thermally upgrading existing structures.

#### SIZES

Thickness: 1", 1.5", 2" and 2.5"  
Length: 96" Nominal  
Width: 24" (Canada) or 48" (U.S./Canada) Nominal

### 4 Technical Data

#### APPLICABLE STANDARDS

ASTM International

- ASTM C518 – Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission

- Properties by Means of the Heat Flow Meter Apparatus
- ASTM D1621 – Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- ASTM C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
- ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials
- ASTM D696 – Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics
- ASTM C578, Type X – Standard Specification for Rigid, Cellular Polystyrene Insulation

- ASTM D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics
- CAN/ULC S701-97 Type 2

#### PHYSICAL/CHEMICAL PROPERTIES

STYROFOAM CAVITYMATE SC insulation exhibits the properties and characteristics indicated in Tables 1 and 2 when tested as represented.

Prolonged exposure to ultra-violet radiation may cause the surface of STYROFOAM CAVITYMATE SC insulation to become yellow and dusty. A light-colored, opaque protective covering should be used if

#### U.S. PROPERTY CHART

TABLE 1

Physical Properties of STYROFOAM CAVITYMATE SC 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 min., R-value <sup>2</sup>	5.0
Compressive Strength <sup>3</sup> , ASTM D1621, psi, min.	16
Water Absorption, ASTM C272, % by volume, max.	0.1
Water Vapor Permeance, ASTM E96, perms, max.	1.1
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> Based on 1" thickness.

<sup>2</sup> R means resistance to heat flow. The higher the R-value, the greater the insulating power.

<sup>3</sup> Vertical compressive strength at 10 percent deformation or at yield, whichever occurs first.

#### CANADA PROPERTY CHART

TABLE 2

Physical Properties of STYROFOAM CAVITYMATE SC 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 (m <sup>2</sup> •°C/W) min., R-value (RSI) <sup>2</sup>	5.0 (.88)
Compressive Strength, ASTM D1621, min., at 10% deflection or yield; whichever comes first, psi (kPa)	16 (110)
Water Absorption, ASTM D2842, % by volume, max.	0.9
Water Vapour Permeance, ASTM E96, perms, (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> (6.3 x 10 <sup>-5</sup> )

<sup>1</sup> Based on 1" (25.4 mm) thickness.

<sup>2</sup> R means resistance to heat flow. The higher the R-value or RSI, the greater the insulating power.

STYROFOAM CAVITYMATE SC Insulation

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<sup>†</sup>A business unit of The Dow Chemical Company and its subsidiaries

TABLE 3

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.

For chemical resistance properties of STYROFOAM CAVITYMATE SC insulation see Table 3.

**ENVIRONMENTAL DATA**  
STYROFOAM CAVITYMATE SC insulation is manufactured with HCFC blowing agents, which have 94 percent less ozone depletion potential than standard CFC blowing agents.

STYROFOAM CAVITYMATE SC insulation is reusable in many applications and can be recycled.

Chemical Resistance of STYROFOAM CAVITYMATE SC Insulation			
Acid, inorganic	Good	Gases, carbon hydroxide (CH <sub>4</sub> )	Good
Acid, organic	Good	Gases, chlorofluorocarbons	Good
Alcohol	Good	Gases, dioxide (O <sub>2</sub> )	Good
Asphalts, water-based	Good	Gases, nitrous hydroxide (NH <sub>3</sub> )	Good
Bases (caustics)	Good	Gases, sulfur dioxide (SO <sub>2</sub> )	Good
Bleach	Good	Mineral oil USP	Excellent
Brines and other salts	Good	Paints, alcohol-based	Good
Cements and mortar	Good	Paints, water-based	Good
Gases, carbon dioxide (CO <sub>2</sub> )	Good	Water	Good

## 5 Installation

Boards of STYROFOAM CAVITYMATE SC insulation are easy to handle, cut and install.

Contact a local Dow representative or access the literature library at [www.dowbuildingmaterials.com](http://www.dowbuildingmaterials.com) for more specific instructions.

## 6 Availability

STYROFOAM CAVITYMATE SC insulation is distributed through an extensive network. For product availability or for the name of your local Dow sales representative, call:

U.S.: 1-866-583-BLUE (2583)

Canada: English – 1-800-232-2436

French – 1-800-565-1255

## 7 Warranty

Not applicable.

## 8 Maintenance

Not applicable.

## 9 Technical Services

Dow can provide technical information to help address questions about using STYROFOAM CAVITYMATE SC insulation. Technical personnel are available at Dow sales offices to assist with any insulation project. For product literature and technical information, please call our Customer Information Center.

U.S.: 1-866-583-BLUE (2583)

Canada: English – 1-800-268-4840

French – 1-800-363-6210

## 10 Filing Systems

- [www.dowbuildingmaterials.com](http://www.dowbuildingmaterials.com)
- [www.SpecSource.com](http://www.SpecSource.com)
- [www.CMDFirstSource.com](http://www.CMDFirstSource.com)
- [www.sweets.com](http://www.sweets.com)

### IN THE U.S.:

- For Technical Information: **1-866-583-BLUE (2583)**
- For Sales Information: **1-800-232-2436**

### THE DOW CHEMICAL COMPANY

- Building Materials • 200 Larkin • Midland, MI 48674
- [www.dowbuildingmaterials.com](http://www.dowbuildingmaterials.com)

### IN CANADA:

- For Technical Information (English): **1-800-268-4840**; (French): **1-800-363-6210**
- For Sales Information (English): **1-800-232-2436**; (French): **1-800-565-1255**

### DOW CHEMICAL CANADA INC.

- Building Materials • 1086 Modeland Rd. • Sarnia, ON N7T 7K7
- [www.dowbuildingmaterials.com](http://www.dowbuildingmaterials.com)

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COMBUSTIBLE: Protect from high heat sources. For more information, consult MSDS and/or call Dow at 1-866-583-BLUE (2583) in the U.S. or 1-800-268-4840 in Canada. In an emergency, call Dow (U.S.: 1-989-636-4400) (Canada: 1-519-339-3711). Local building codes may require a protective or thermal barrier. Contact your local building inspector for more information.



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