



1 PRODUCT NAME

STYROFOAM™ CAVITYMATE™ Extruded Polystyrene Insulation

2 Manufacturer

The Dow Chemical Company
Building Solutions
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Midland, MI 48674
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Calgary, AB T2P 3H7
1-866-583-BLUE (2583) (English)
1-800-363-6210 (French)
www.dowstyrofoam.ca/architects

3 Product Description

BASIC USE

STYROFOAM™ CAVITYMATE™ extruded polystyrene 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 CAVITYMATE insulation saves time and money on the job site. Its closed-cell structure provides superior long-term thermal performance and moisture control.

SIZES

IN THE U.S.:

Butt Edge

Width and length:

16" x 96"

Thickness:

1.0", 1.5", 2.0", 3.0"

IN CANADA:

Butt Edge

Width and length:

400 mm x 2,400 mm

Thickness:

40 mm, 50 mm, 61 mm, 75 mm

Width and length:

600 mm x 2,400 mm

Thickness:

75 mm

Shiplap Edge

Width and length:

600 mm x 2,400 mm

Thickness:

50 mm, 75 mm

Not all products are available in all areas. Additional product sizes are available by custom order. Consult your Dow representative about other sizes and lead-time requirements.

4 Technical Data

APPLICABLE STANDARDS

STYROFOAM™ CAVITYMATE™ insulation meets ASTM C578 – Standard Specification for Rigid Cellular Polystyrene Thermal Insulation, which includes:

- 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
- D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics
- CAN/ULC S701 Type 3

CODE COMPLIANCE

STYROFOAM™ CAVITYMATE™ insulation complies with the following codes:

- International Residential Code (IRC) and International Building Code (IBC); see ICC-ES NES NER-699, BOCA-ES RR 21-02
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate D369

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

STYROFOAM CAVITYMATE Extruded Polystyrene Insulation

PHYSICAL/CHEMICAL PROPERTIES

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

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

ENVIRONMENTAL DATA

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

STYROFOAM extruded polystyrene insulation products are reusable in many applications.

FIRE PROTECTION

STYROFOAM™ CAVITYMATE™ insulation is combustible; protect from high heat sources. Local building codes may require a protective or thermal barrier. For more information, consult MSDS, call Dow at 1-866-583-BLUE (2583) or contact your local building inspector.

U.S. PROPERTY CHART

TABLE 1

Physical Properties of STYROFOAM™ CAVITYMATE™ Insulation	
Property and Test Method	Value
Thermal Resistance ⁽¹⁾ per in. ASTM C518 @ 75°F mean temp., ft ² •h•°F/Btu, R-value	5.0
Compressive Strength ⁽²⁾ , ASTM D1621, psi, min.	15
Water Absorption, ASTM C272, % by volume, max.	0.1
Water Vapor Permeance ⁽³⁾ , ASTM E96, perm, max.	1.1
Maximum Use Temperature, °F	165
Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F	3.5 x 10 ⁻⁵
Flexural Strength, ASTM C203, psi, min.	40

- (1) Values are consistent with the criteria of ASTM C578 and the requirements of 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. Ask your seller for the fact sheet on R-value.
- (2) Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first. Since STYROFOAM extruded polystyrene 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.
- (3) Based on 1" thickness.

CANADA PROPERTY CHART

TABLE 2

Physical Properties of STYROFOAM™ CAVITYMATE™ Insulation	
Property and Test	Value
Thermal resistance ⁽¹⁾ per in. (25 mm), ASTM C518, 24°C mean temp., ft ² •h•°F/Btu (m ² •°C/W), R-value (RSI), min.	5.0 (.87)
Compressive Strength ⁽²⁾ , ASTM D1621, psi (kPa), min.	25 (172)
Water Absorption, ASTM D2842, % by volume, max.	<0.7
Water Vapour Permeance ⁽³⁾ , ASTM E96, perm (ng/Pa•s•m ²), max.	1.5 (90)
Maximum Use Temperature, °F (°C)	165 (74)
Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F (mm/mm•°C)	3.5 x 10 ⁻⁵ (6.3 x 10 ⁻²)
Flexural Strength, ASTM C203, psi (kPa) min.	43 (297)

- (1) Values are consistent with criteria of ASTM C578.
- (2) Vertical compressive strength is measured at 10 percent deformation or at yield, whichever comes first. Since STYROFOAM extruded polystyrene 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.
- (3) Based on 1" (25 mm) thickness.

TABLE 3

Chemical Resistance ⁽¹⁾ of STYROFOAM™ CAVITYMATE™ Insulation	
Acid, inorganic, strong	Excellent
Acid, inorganic, weak	Excellent
Acid, organic, strong	Good
Acid, organic, weak	Excellent
Bases	Excellent
Alcohols, including isopropyl alcohol	Excellent
Methyl ethyl ketone	Not recommended
Polyglycols, including propylene glycol	Excellent
Hydrocarbons	Not recommended
Salts	Excellent
Insecticides	Not recommended
Kerosene	Poor
Mineral oil USP	Excellent
Naphtha (VMP)	Not recommended
Turpentine	Not recommended
Beer	Good
Gasoline	Not recommended
Fruit juices	Good

- (1) Explanation of Ratings:
 Excellent = The plastic was unaffected for the duration of the test.
 Good = A very slight clouding or discoloration of the plastic.
 Poor = Considerable change in plastic during exposure.
 Not recommended = Severe attack of the plastic. Became soft and unusable after a few hours of exposure.

NOTE: This table should be used as a guide only. For design purposes, specific test data on the intended application may be needed.

5 Installation

Boards of STYROFOAM™ CAVITYMATE™ insulation are easy to handle, cut and install. Contact a local Dow representative or access the literature library at www.dowstyrofoam.com/architect or www.dowstyrofoam.ca/4architects for more specific instructions.

6 Availability

STYROFOAM™ CAVITYMATE™ 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

A limited warranty is available in the United States that covers the thermal resistance retention of STYROFOAM™ CAVITYMATE™ insulation. Refer to the Dow warranty certificate for complete details.

8 Maintenance

Not applicable.

9 Technical Services

Dow can provide technical information to help address questions when using STYROFOAM™ CAVITYMATE™ 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.dowstyrofoam.com/architect
- www.dowstyrofoam.ca/4architects
- 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

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IN CANADA:

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- For Sales Information (English): **1-800-232-2436**; (French): **1-800-565-1255**

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

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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