STYROFOAM™ Brand CAVITYMATE™ Extruded Polystyrene Foam Insulation

1. PRODUCT NAME

STYROFOAM™ Brand CAVITYMATE™ 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

Dow Chemical Canada ULC
Dow Building Solutions
450 – 1st St. SW, Suite 2100
Calgary, AB T2P 5H1
1-866-583-BLUE (2583) (English)
1-800-363-6210 (French)

www.dowbuildingsolutions.com

3. PRODUCT DESCRIPTION

BASIC USE

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

- International Residential Code (IRC) and International Building Code (IBC); see ICC-ES ESR 2142, BOCA-ES RR 21-02
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate D369
- CCMC Evaluation Listing 12084-L

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

PHYSICAL PROPERTIES

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

ENVIRONMENTAL DATA

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

FIRE INFORMATION

STYROFOAM™ Brand 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.

TABLE 1: U.S. SIZES, R-VALUES AND EDGE TREATMENTS FOR STYROFOAM™ BRAND CAVITYMATE™ EXTRUDED POLYSTYRENE FOAM INSULATION

NOMINAL BOARD THICKNESS(1), IN.	R-VALUE(2)	BOARD SIZE, IN	EDGE TREATMENT
1.0	5.0	16 x 96	Butt Edge
1.5	7.5	16 x 96	Butt Edge
2.0	10.0	16 x 96	Butt Edge
3.0	15.0	16 x 96	Butt Edge

(1) Not all product sizes are available in all regions.
(2) Aged R-value at 1" of cured foam @ 75°F mean temperature. R-value expressed in ft²•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™ EXTRUDED POLYSTYRENE FOAM INSULATION

NOMINAL BOARD THICKNESS(1), MM	R-VALUE	BOARD SIZE, MM	EDGE TREATMENT
40	7.9	400 x 2400, 600 x 2400	Butt Edge
50	10.0	400 x 2400, 600 x 2400	Butt Edge
61	12.0	400 x 2400, 600 x 2400	Butt Edge
75	15.0	400 x 2400, 600 x 2400	Butt Edge
50	10.0	400 x 2400, 600 x 2400	Shiplap
75	15.0	400 x 2400, 600 x 2400	Shiplap

(1) Not all product sizes are available in all regions.

5. INSTALLATION

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

6. AVAILABILITY

STYROFOAM™ Brand CAVITYMATE™ Insulation is distributed through an extensive network. For product availability or for the name of your local Dow sales representative, 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™ 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)

TABLE 3: PHYSICAL PROPERTIES (U.S.) OF STYROFOAM™ BRAND CAVITYMATE™ EXTRUDED POLYSTYRENE FOAM INSULATION

PROPERTY AND TEST METHOD	VALUE
Thermal Resistance(1) per in., ASTM C518 @ 75°F mean temp., ft²•h•°F/Btu, R-value	5.0
Compressive Strength(2), ASTM D1621, psi, min.	15
Water Absorption, ASTM C272, % by volume, max.	0.3
Water Vapor Permeance(3), ASTM E96, perm, max.	1.5
Maximum Use Temperature, °F	165
Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F	3.5×10^{-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™ 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, 10:1 is suggested.
(3) Based on 1" thickness.

TABLE 4: PHYSICAL PROPERTIES (CANADIAN) OF STYROFOAM™ BRAND CAVITYMATE™ EXTRUDED POLYSTYRENE FOAM INSULATION

PROPERTY AND TEST METHOD	VALUE
Thermal Resistance(1) per in. (25 mm), ASTM C518, 24°C mean temp., ft²•h•°F/Btu (m²•°C/W), R-value (RSI), min.	5.0 (.87)
Compressive Strength(2), ASTM D1621, psi (kPa), min.	25 (170)
Water Absorption, ASTM D2842, % by volume, max.	<0.7
Water Vapour Permeance(3), ASTM E96, perm (ng/Pa•s•m²), max.	1.5 (90)
Maximum Use Temperature, °F (°C)	165 (74)
Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F (mm/mm•°C)	3.5×10^{-5} (6.3×10^{-2})
Flexural Strength, ASTM C203, psi (kPa) min.	43 (300)

(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™ 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, 10:1 is suggested.
(3) Based on 1" (25 mm) thickness.

10. FILING SYSTEMS

- www.dowbuildingsolutions.com
- www.sweets.com

www.dowbuildingsolutions.com
Technical Information
1-866-583-BLUE (2583) (English)
1-800-363-6210 (French)

Sales Information
1-800-232-2436 (English)
1-800-565-1255 (French)

IN THE U.S.
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200 Larkin
Midland, MI 48674

IN CANADA
DOW CHEMICAL CANADA ULC
450 – 1st St. SW . Suite 2100
Calgary, AB T2P 5H1

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.

ENERGY STAR PARTNER

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