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
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

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 Protection
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.

Code Compliances
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 11420-L

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

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.

### Table 1: U.S. Sizes, R-Values and Edge Treatments for STYROFOAM™ Brand CAVITYMATE™ Extruded Polystyrene Foam Insulation

<table>
<thead>
<tr>
<th>Nominal Board Thickness (1) (in.)</th>
<th>R-Value (2)</th>
<th>Board Size (ft.)</th>
<th>Edge Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0</td>
<td>5.0</td>
<td>16 x 96</td>
<td>Butt Edge</td>
</tr>
<tr>
<td>1.5</td>
<td>7.5</td>
<td>16 x 96</td>
<td>Butt Edge</td>
</tr>
<tr>
<td>2.0</td>
<td>10.0</td>
<td>16 x 96</td>
<td>Butt Edge</td>
</tr>
<tr>
<td>3.0</td>
<td>15.0</td>
<td>16 x 96</td>
<td>Butt Edge</td>
</tr>
</tbody>
</table>

(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

<table>
<thead>
<tr>
<th>Nominal Board Thickness (1) (mm)</th>
<th>R-Value (2)</th>
<th>Board Size (mm)</th>
<th>Edge Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>7.9</td>
<td>400 x 2400, 600 x 2400</td>
<td>Butt Edge</td>
</tr>
<tr>
<td>50</td>
<td>10.0</td>
<td>400 x 2400, 600 x 2400</td>
<td>Butt Edge</td>
</tr>
<tr>
<td>61</td>
<td>12.0</td>
<td>400 x 2400, 600 x 2400</td>
<td>Butt Edge</td>
</tr>
<tr>
<td>75</td>
<td>15.0</td>
<td>400 x 2400, 600 x 2400</td>
<td>Butt Edge</td>
</tr>
<tr>
<td>100</td>
<td>20.0</td>
<td>100 x 600 x 2400</td>
<td>Butt Edge</td>
</tr>
<tr>
<td>50</td>
<td>10.0</td>
<td>400 x 2400, 600 x 2400</td>
<td>Shiplap</td>
</tr>
<tr>
<td>75</td>
<td>15.0</td>
<td>400 x 2400, 600 x 2400</td>
<td>Shiplap</td>
</tr>
<tr>
<td>100</td>
<td>20.0</td>
<td>100 x 600 x 2400</td>
<td>Shiplap</td>
</tr>
</tbody>
</table>

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

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)

10. FILING SYSTEMS

www.dowbuildingsolutions.com

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

<table>
<thead>
<tr>
<th>Property and Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Resistance(1) per in., ASTM C518 @ 75°F mean temp., ft•h•°F/Btu, R-value</td>
<td>5.0</td>
</tr>
<tr>
<td>Compressive Strength(2), ASTM D1621, psi, min.</td>
<td>15</td>
</tr>
<tr>
<td>Water Absorption, ASTM C272, % by volume, max.</td>
<td>0.3</td>
</tr>
<tr>
<td>Water Vapor Permeance(2), ASTM E96, perm, max.</td>
<td>1.5</td>
</tr>
<tr>
<td>Maximum Use Temperature, °F</td>
<td>165</td>
</tr>
<tr>
<td>Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F</td>
<td>3.5 x 10⁻⁵</td>
</tr>
<tr>
<td>Flexural Strength, ASTM C203, psi, min.</td>
<td>40</td>
</tr>
</tbody>
</table>

(1) Values are consistent with the criteria of ASTM C578 and the requirements of the FTC R-value rule (16 CFR Part 480). 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

<table>
<thead>
<tr>
<th>Property and Test Method</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal Resistance(1) per in. (25 mm), ASTM C518, 24°C mean temp., ft•h•°F/Btu (m²•°C/W), R-value (RSI), min.</td>
<td>5.0 (0.87)</td>
</tr>
<tr>
<td>Compressive Strength(2), ASTM D1621, psi (kPa), min.</td>
<td>25 (170)</td>
</tr>
<tr>
<td>Water Absorption, ASTM D2842, % by volume, max.</td>
<td>&lt;0.7</td>
</tr>
<tr>
<td>Water Vapour Permeance(3), ASTM E96, perm (ng/Pa•s•m²), max.</td>
<td>1.5 (90)</td>
</tr>
<tr>
<td>Maximum Use Temperature, °F (°C)</td>
<td>165 (74)</td>
</tr>
<tr>
<td>Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F (mm/mm•°C)</td>
<td>3.5 x 10⁻⁵ (6.3 x 10⁻³)</td>
</tr>
<tr>
<td>Flexural Strength, ASTM C203, psi (kPa) min.</td>
<td>43 (300)</td>
</tr>
</tbody>
</table>

(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”(25mm) thickness.

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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 codes. 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.

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