



STYROFOAM™ Brand Ribbed ROOFMATE™

Extruded Polystyrene Foam Insulation

1. PRODUCT NAME

STYROFOAM™ Brand Ribbed ROOFMATE™
Extruded Polystyrene Foam Insulation

2. MANUFACTURER

The Dow Chemical Company
Dow Building Solutions
200 Larkin Center, 1605 Joseph Drive
Midland, MI 48674
1-866-583-BLUE (2583)
Fax 1-989-832-1465

dowbuildingsolutions.com

3. PRODUCT DESCRIPTION

Basic Use

STYROFOAM™ Brand Ribbed ROOFMATE™ Extruded Polystyrene Foam Insulation is designed for use above waterproofing membrane in protected membrane systems (PMR) that include pavers or patio stones as primary ballast. STYROFOAM™ Brand Ribbed ROOFMATE™ Insulation incorporates ribs on the upper surface that extend the length of the panels. Drainage channels are also incorporated into the lower side edges of the panels. In paver/patio stone applications, it is recommended that a drainage layer, which normally takes the form of a paver/pedestal arrangement, be incorporated between the insulation and ballast to facilitate moisture dissipation. The ribbed configuration eliminates the need for expensive pedestals.

STYROFOAM™ Brand Ribbed ROOFMATE™ Insulation helps the roof membrane maintain a steady temperature, minimizing the harmful effects of freeze-thaw cycles, weathering and physical damage during and after construction.

4. TECHNICAL DATA

Applicable Standards

STYROFOAM™ Brand Ribbed ROOFMATE™ Insulation meets ASTM C578, Type VI – Standard Specification for Rigid Cellular Polystyrene Thermal 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
- D2842 – Standard Test Method for Water Absorption 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
- E84 – Standard Test Method for Surface Burning Characteristics of Building Materials
- D696 – Standard Test Method for Linear Thermal Expansion of Plastics Between -30°C and 30°C With a Vitreous Silica Dilatometer
- C203 – Standard Test Method 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

Code Compliances

STYROFOAM™ Brand Ribbed ROOFMATE™ Insulation complies with the following codes:

- Meets IBC/IRC requirements for foam plastic insulation; see ICC-ES ESR 2142
- ICBO-ES ER-2257
- BOCA-ES RR 21-02
- Underwriters Laboratories, Inc.(UL) Classified, see Classification Certificate D369
- Factory Mutual Approved – Subject to conditions of approval as a roof insulation when installed as described in the current edition of FM Approval Code.

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

PHYSICAL PROPERTIES

STYROFOAM™ Brand Ribbed ROOFMATE™ Insulation exhibits physical properties as indicated in Table 2 when tested as represented.

ENVIRONMENTAL DATA

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

TABLE 1: Sizes, R-values and edge treatments for STYROFOAM™ Brand Ribbed ROOFMATE™ Extruded Polystyrene Foam Insulation

Nominal Board Thickness ⁽¹⁾ , in.	R-Value ⁽²⁾	Board Size, FT	Edge Treatment
2.0	10.0	2X8	Edge Drainage Channel

(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).

FIRE PROTECTION

STYROFOAM™ Brand Ribbed ROOFMATE™ 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.

5. INSTALLATION

STYROFOAM™ Brand Ribbed ROOFMATE™ Insulation is strong, yet lightweight and easy to fabricate into various sizes and shapes to meet specific design needs. However, because of the critical technical design aspects of many of its applications, Dow recommends that qualified designers or consultants design your system. Contact a local Dow representative for more specific instructions.

6. AVAILABILITY

STYROFOAM™ Brand Ribbed ROOFMATE™ Insulation is distributed through an extensive network of roofing distributors. For product availability or for the name of your local Dow sales representative, call 1-800-232-2436.

TABLE 2: Physical properties⁽¹⁾ of STYROFOAM™ Brand Ribbed ROOFMATE™ Insulation

Property and Test Method	Value
Thermal Resistance per inch, ASTM C518 @ 75°F mean temp., ft ² •h•°F/Btu, R-value ⁽¹⁾ , min.	5.0
Compressive Strength ⁽²⁾ , ASTM D1621, psi, min.	40
Water Absorption, ASTM C272, % by volume, max.	0.3
Water Vapor Permeance ⁽³⁾ , ASTM E96, perm, max	1.0
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.	60
Dimensional Stability, ASTM D2126, % linear change, max.	2.0
Surface Burning Characteristics ⁽⁴⁾ , ASTM E84, Flame Spread Index Smoke Developed Index	15 165

(1) R means resistance to heat flow. The higher the R-value, the greater the insulating power.

(2) Vertical compressive strength measured at 10 percent deformation or at yield, whichever occurs first. Adequate design safety factors should be used to prevent long-term creep. Contact Dow for design recommendations. When placing a load over the surface of the product, the compressive strength should be multiplied by 0.52 to account for the surface area lost due to channels cut into the foam surface.

(3) Based on 1" thickness.

(4) This numerical flame spread rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

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 regarding the physical properties of STYROFOAM™ Brand Ribbed ROOFMATE™ Insulation. Technical personnel are available to assist with any insulation project. For technical assistance, call 1-866-583-BLUE (2583).

10. FILING SYSTEMS

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



The Dow Chemical Company

Dow Building Solutions
200 Larkin • Midland, MI 48674

US

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

dowbuildingsolutions.com

NOTICE: No freedom from any infringement of patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other government enactments. The product shown in this literature may not be available for sale and/or available in all geographies where Dow is represented. The claims made may not have been approved for use in all countries or regions. Dow assumes no obligation or liability for the information in this document. References to "Dow" or the "Company" mean the Dow legal entity selling the products to Customer unless otherwise expressly noted. **NO EXPRESS WARRANTIES ARE GIVEN EXCEPT FOR ANY APPLICABLE WRITTEN WARRANTIES SPECIFICALLY PROVIDED BY DOW. ALL IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.**

Dow Polyurethane Foam Insulation and Sealants

CAUTION: When cured, these products are combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F (116°C). For more information, consult (Material) Safety Data Sheet ((M)SDS) 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. When air sealing buildings, ensure that combustion appliances, such as furnaces, water heaters, wood burning stoves, gas stoves and gas dryers are properly vented to the outside. See website: <http://www.epa.gov/iaq/homes/hip-ventilation.html>. In Canada visit: <http://archive.nrc-cnrc.gc.ca/eng/ibp/irc/bsi/83-house-ventilation.html>.

STYROFOAM™ Brand Spray Polyurethane Foam contains isocyanate, hydrofluorocarbon blowing agent and polyol. Read all the instructions and (M)SDS carefully before use. Wear protective clothing (including long sleeves), gloves, goggles and proper respiratory protection. Supplied air or an approved air-purifying respirator equipped with an organic vapor sorbent and a P100 particulate filter is required to maintain exposure levels below ACGIH, OSHA, WEEL or other applicable limits. Provide adequate ventilation. Contents under pressure. STYROFOAM™ Brand SPF should be installed by a trained SPF applicator.

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.