



STYROFOAM™ Z-MATE™ EXTRUDED POLYSTYRENE FOAM INSULATION

1. PRODUCT NAME

STYROFOAM™ Z-MATE™ 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™ Z-MATE™ Extruded Polystyrene Foam insulation is a moisture-resistant, durable and lightweight foam board designed specifically for use beneath drywall in interior masonry wall applications. Sized to fit snugly between Z-furring channels placed on 24" centers, STYROFOAM™ Z-MATE™ insulation saves time and money on the job site. Its closed-cell structure provides superior long-term thermal performance and moisture control.

4. TECHNICAL DATA

APPLICABLE STANDARDS

STYROFOAM™ Z-MATE™ insulation meets ASTM C578, Type X – 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
- 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

TABLE 1: SIZES, THICKNESS AND EDGE TREATMENTS FOR STYROFOAM™ Z-MATE™ EXTRUDED POLYSTYRENE FOAM INSULATION

NOMINAL BOARD THICKNESS ⁽¹⁾ , IN.	R-VALUE ⁽²⁾	BOARD SIZE, IN.	EDGE TREATMENT
1.5	7.5	23.875" x 96"	Square Edge
2.0	10.0	23.875" x 96"	Square Edge

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

(2) R means resistance to heat flow. The higher the R-value, the greater the insulating power. R-values are expressed in ft²•h•°F/Btu. R-value determined by ASTM C518.

- 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
- C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
- D2842 – Standard Test Method for Water Absorption of Rigid Cellular Plastics

CODE COMPLIANCES

STYROFOAM™ Z-MATE™ 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

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

PHYSICAL PROPERTIES

STYROFOAM™ Z-MATE™ insulation exhibits the properties and characteristics indicated in Table 2 when tested as represented.

ENVIRONMENTAL DATA

STYROFOAM™ Brand Z-MATE™ insulation is manufactured using blowing agent technology that is hydrochlorofluorocarbon (HCFC) free with zero ozone-depletion potential.

STYROFOAM™ Brand Z-MATE™ Insulation is reusable in many applications.

FIRE INFORMATION

STYROFOAM™ Z-MATE™ 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.

5. INSTALLATION

Boards of STYROFOAM™ Z-MATE™ 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™ Z-MATE™ insulation is manufactured in several locations across North America and is distributed through an extensive network. For more information, call 1-800-232-2436.

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 when using STYROFOAM™ Z-MATE™ insulation. Technical personnel are available at Dow to assist with any insulation project. For technical assistance, call 1-866-583-BLUE (2583).

10. FILING SYSTEMS

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

TABLE 2: PHYSICAL PROPERTIES OF STYROFOAM™ Z-MATE™ EXTRUDED POLYSTYRENE FOAM INSULATION

PROPERTY AND TEST METHOD	VALUE
Thermal Resistance ⁽¹⁾ per inch, ASTM C518 @ 75°F mean temp., ft ² •h•°F/Btu, R-value, min.	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 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.

(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.

(3) Based on 1" thickness.

www.dowbuildingsolutions.com

Technical Information

1-866-583-BLUE (2583)

Sales Information

1-800-232-2436

IN THE U.S.

THE DOW CHEMICAL COMPANY

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Midland, MI 48674

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CAUTION: 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.

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