

# 1 PRODUCT NAME

## STYROFOAM™ Scoreboard Extruded Polystyrene Insulation

### 2 Manufacturer

The Dow Chemical Company  
Building & Construction  
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Midland, MI 48674  
1-866-583-BLUE (2583)  
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### 3 Product Description

STYROFOAM™ Scoreboard insulation is an extruded polystyrene insulation board that is scored longitudinally on 16" and 24" centers, making it easy to size to commonly used widths. STYROFOAM Scoreboard has excellent insulating characteristics, high resistance to water and water vapor, superior compressive strength and long-term durability.

#### BASIC USE

STYROFOAM™ Scoreboard insulation is designed for use in exterior cavity wall and foundation applications. Like all STYROFOAM extruded polystyrene products, STYROFOAM Scoreboard insulation resists moisture to deliver a stable R-value\* over the long term.

#### SIZES

##### Width and length:

48" x 96", scored at 16" and 24" centers

##### Thickness:

.75", 1", 1.5", 2", 2.5", 3"

##### Edge treatment:

Square

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

### 4 Technical Data

#### APPLICABLE STANDARDS

STYROFOAM™ Scoreboard meets ASTM C578, Type IV. ASTM C578 Standard Specification for Rigid Cellular Polystyrene Thermal Insulation 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
- C272 – Standard Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions
- E96 – Standard Test Methods for Water Vapor Transmission of Materials

- 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

#### CODE COMPLIANCE

STYROFOAM™ Scoreboard insulation complies with the following codes:

- International Residential Code (IRC) and International Building Code (IBC) for foam plastic insulation; see ICC-ES NES NER report 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 and local building code requirements and related acceptances.

### PHYSICAL/CHEMICAL PROPERTIES

STYROFOAM™ Scoreboard insulation exhibits the properties and characteristics indicated in Table 1 when tested as represented.

For chemical resistance properties of STYROFOAM Scoreboard insulation, see Table 2.

Exposure to ultraviolet radiation in sunlight for several weeks will cause the surface of STYROFOAM Scoreboard insulation to become yellow and dusty. A light-colored, opaque protective covering should be used if excessive solar exposure is expected. The surface degradation will have no measurable effect on the insulating value of the plastic foam unless the deterioration is allowed to continue until actual foam thickness is lost. Since the dust would impair the performance of adhesives and finishes, the dusty surface should be brushed off before these products are applied.

### ENVIRONMENTAL DATA

STYROFOAM™ Scoreboard insulation is chlorofluorocarbon (CFC) free. It is manufactured with HCFC blowing agents, which have ozone depletion potentials 94 percent less than standard CFC blowing agents.

STYROFOAM extruded polystyrene insulation products are reusable in many applications and are recyclable.

### FIRE PROTECTION

STYROFOAM™ Scoreboard 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

Physical Properties of STYROFOAM™ Scoreboard Extruded Polystyrene Insulation	
Property and Test Method	Value
Thermal Resistance per inch, ASTM C518 @ 75°F mean temp., ft <sup>2</sup> •h•°F/Btu, min., R-value	5.0
Compressive Strength <sup>(1)</sup> , ASTM D1621, psi, min.	25
Water Absorption, ASTM C272, % by volume, max.	0.1
Water Vapor Permeance <sup>(2)</sup> , max., ASTM E96, perm	1.1
Maximum Operating Temperature, °F	165
Coefficient of Linear Thermal Expansion, ASTM D696, in/in•°F	3.5 x 10 <sup>-5</sup>
Flexural Strength, ASTM C203, psi, min.	50
Dimensional Stability, ASTM D2126, % linear change, max.	2.0
Flame Spread <sup>(3)</sup> , ASTM E84	5
Smoke Developed <sup>(3)</sup> , ASTM E84	165

(1) 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.

(2) Based on 1" thickness.

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

TABLE 2

Chemical Resistance <sup>(1)</sup> of STYROFOAM™ Scoreboard 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.

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## 5 Installation

STYROFOAM™ Scoreboard insulation is easy to handle, cut and install. Contact a local Dow representative or access the literature library at [www.dowstyrofoam.com/architect](http://www.dowstyrofoam.com/architect) for more specific instructions.

## 6 Availability

STYROFOAM™ Scoreboard 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

A limited warranty is available in the United States that covers the thermal retention of STYROFOAM™ Scoreboard 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™ Scoreboard insulation. Technical personnel are available to assist with any insulation project. For technical assistance, call 1-866-583-BLUE (2583).

## 10 Filing Systems

- [www.dowstyrofoam.com/architect](http://www.dowstyrofoam.com/architect)
- [www.sweets.com](http://www.sweets.com)

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**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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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. In an emergency, call 1-989-636-4400.

Building and/or construction practices unrelated to insulation 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.

