DuPont™ Styrofoam™ Brand Square Edge XPS Foam Insulation

Water-Resistant Insulation for Attics, Foundations and Crawl Spaces

FEATURES/BENEFITS

Description
DuPont™ Styrofoam™ Brand Square Edge Extruded Polystyrene (XPS) Foam Insulation* is an extruded polystyrene foam (XPS) insulation board that meets the needs of the commercial foundation and building floor slab market and can also be used for attics, foundations/slabs and crawl spaces in residential applications.

With more than 60 years of proven performance in wet environments, the closed-cell structure of Styrofoam™ Brand Square Edge Insulation resists water pickup, enabling it to retain a high R-value** over time – a necessary property in wet, below-grade commercial foundation applications.

Styrofoam™ Brand Square Edge Insulation is classified as a Type IV product when tested in accordance with ASTM C578 and provides a long term insulating performance of R-5 per inch.

Sustainable Solutions
• Styrofoam™ Brand Square Edge Insulation is reusable in many applications.
• Styrofoam™ Brand Square Edge Insulation uses BluEdge™ technology. It is hydrochlorofluorocarbon (HCFC) free with zero ozone depletion potential.
• Styrofoam™ Brand insulation products produced in North America contain an average of 20% pre-consumer recycled content certified by UL Environment Inc.

Available Sizes
• Width and length: 2’ x 8’ and 4’ x 8’
• Thickness: .75”, 1”, 1.5”, 2”, 2.5”, 3”, 4”

Ease of Use
Styrofoam™ Brand Square Edge Insulation boards:
• are easy to handle, cut using a utility knife or serrated blade, and install
• provide a weather resistant barrier to enhance the building’s resistance to air and moisture penetration
• can be used in a number of applications like sheathing, foundation walls, masonry cavity walls, attics, crawl spaces, and more
• come in a wide selection of sizes and thicknesses
• have a minimum compressive strength of 25 psi and a flexural strength of 50 psi
• are designed to ensure energy efficiency and minimize on-site cutting and waste
• are resistant to degradation from soil components and will retain insulating performance characteristics after prolonged exposure to moisture
• provide a secondary barrier against groundwater leakage
• help protect foundation dampproofing and waterproofing, especially during backfilling
• minimize the freeze-thaw cycling of the foundation, reducing the potential for cracking
• warm the foundation, reducing the potential for condensation
• will not corrode, rot or support mold growth
• are compliant with international building codes and standards

See Table 1 for product and packaging data. Available lengths and edge configurations vary by thickness. Not all product sizes are available in all parts of the country. Contact your local DuPont representative for details.

* Styrofoam™ Brand Square Edge Insulation is a former product of The Dow Chemical Company
DuPont™ Styrofoam™ Brand Square Edge Extruded Polystyrene (XPS) Foam Insulation exhibits physical properties as indicated in Table 2 when tested as represented. Review all instructions and (Material) Safety Data Sheet ((M)SDS) before use. Please contact DuPont at 1-866-583-2583 when additional guidance is required for writing specifications that include this product.

**TABLE 2: Physical Properties of Styrofoam™ Brand Square Edge XPS Foam Insulation**

<table>
<thead>
<tr>
<th>Test Method</th>
<th>Property</th>
<th>Typical Value</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>ASTM C518</td>
<td>Thermal Resistance¹ per inch @ 75°F mean temp., @ 40°F mean temp., @ 25°F mean temp.</td>
<td>5.0 5.4 5.6</td>
<td>ft²•h•°F/Btu, R-value, min.</td>
</tr>
<tr>
<td>ASTM D1621</td>
<td>Compressive Strength²</td>
<td>25</td>
<td>psi, min.</td>
</tr>
<tr>
<td>ASTM C272</td>
<td>Water Absorption</td>
<td>0.1</td>
<td>% by volume, max.</td>
</tr>
<tr>
<td>ASTM E96</td>
<td>Water Vapor Permeance³</td>
<td>1.5</td>
<td>perm, max.</td>
</tr>
<tr>
<td>–</td>
<td>Maximum Use Temperature</td>
<td>165</td>
<td>°F</td>
</tr>
<tr>
<td>ASTM D696</td>
<td>Coefficient of Linear Thermal Expansion</td>
<td>3.5 x 10⁻⁵</td>
<td>in/in•°F</td>
</tr>
<tr>
<td>ASTM C203</td>
<td>Flexural Strength</td>
<td>50</td>
<td>psi, min.</td>
</tr>
<tr>
<td>ASTM E84</td>
<td>Surface Burning Characteristics for both foam core and finished product</td>
<td>Class A 25 &lt;450</td>
<td></td>
</tr>
</tbody>
</table>

¹ R-values are consistent with criteria of ASTM C578 and the requirements of the FTC R-value rule (16 CFR Part 460).
² Vertical compressive strength is measured at 10 percent deformation or at yield, whichever occurs first.
³ Maximum use temperature is 165°F.

**INSTALLATION**

**Use Conditions**

Styrofoam™ Brand Square Edge Insulation can be used against commercial interior walls and exterior foundation walls in above- and below-grade applications. Styrofoam™ Brand Square Edge can be used under the slab or over the deck or subfloor and is suitable for use in pervious, semi-pervious and practically impervious soils.

**Preparation**

It is recommended that any masonry irregularities or jagged surfaces on the foundation wall or slab be removed prior to installation. Below-grade walls should be protected from moisture leakage and dampness prior to installation of Styrofoam™ Brand Square Edge Insulation. Code-approved drainage systems should be installed. Ensure foundation drainage meets local codes.

**Application**

- Use a polystyrene-compatible adhesive to hold the boards in place during backfilling.
- Apply caulk or mastic to the top of the board to prevent water infiltration behind the insulation.
- To complete the installation, parget the above-grade portions of Styrofoam™ Brand Square Edge Insulation to protect from solar radiation.
TESTING

Applicable Standards
DuPont™ Styrofoam™ Brand Square Edge Extruded Polystyrene (XPS) Foam Insulation meets ASTM C578, Type IV – Standard Specification for Rigid Cellular Polystyrene Thermal Insulation. Applicable standards include:

- 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 Construction

Notice
Styrofoam™ Brand Square Edge Insulation complies with the following codes:

- International Residential Code (IRC) and International Building Code (IBC), see ESR-2142
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate D369
- Calif. Std. Reg. # CA T064 Florida Building Code FL 3835
- Factory Mutual Approved – Subject to conditions of approval as a roof insulation when installed as described in the current edition of the FM Approval Guide

Warranty
In the United States, a 50-year thermal limited warranty is available on Styrofoam™ products 1.5 inches and greater. For thickness less than 1.5 inches, other warranties may apply. Warranties are available as described at building.dupont.com/warranties.

HANDLING

WARNING: For Professional Use Only. Read and follow the entire Safety, Handling, and Storage section and the Safety Data Sheets (SDSs, formerly MSDSs or Material Safety Data Sheets) carefully before use. The information below is designed to protect the user and allow for safe use and handling of DuPont products. Follow all applicable federal, state, local and employer regulations.

Precautionary Statements
Styrofoam™ Brand Square Edge Insulation is combustible; protect from high heat sources. A protective barrier or thermal barrier may be required as specified in the local building codes. For more information, consult the SDS, call DuPont at 1-866-583-2583 or contact your local building inspector.
NOTICE: No freedom from any patent owned by DuPont 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 DuPont is represented. The claims made may not have been approved for use in all countries or regions. DuPont assumes no obligation or liability for the information in this document. References to “DuPont” or the “Company” mean the DuPont 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 DUPONT. ALL IMPLIED WARRANTIES INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED. The buyer assumes all risks as to the use of the material. Buyer's exclusive remedy or any claim (including without limitations, negligence, strict liability, or tort) shall be limited to the refund of the purchase price of the material. Failure to strictly adhere to any recommended procedures shall release DuPont Specialty Products USA, LLC or its affiliates, of all liability with respect to the materials or the use thereof. The information herein is not intended for use by non-professional designers, applicators or other persons who do not purchase or utilize this product in the normal course of their business.

DuPont™ Styrofoam™ Brand Extruded Polystyrene Foam Insulation

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 (Material) Safety Data Sheet (MSDS), call DuPont at 1-866-583-2583 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 DuPont can give assurance that mold will not develop in any specific system.

For more information visit us at styrofoam.com or call 1-866-583-2583