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TECHNICAL DATA SHEET

Dow Styrofoam SM Insulation

Manufacturer: DuPont (Dow) Styrofoam

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DuPont™ Styrofoam™ Brand SM30 XPS Insulation

Versatile, Weather-Resistant Insulation for Below-Grade Applications Low-GWP Formulation

OVERVIEW

Description

DuPont™ Styrofoam™ Brand SM30 Extruded Polystyrene (XPS) Insulation is a versatile, multipurpose extruded polystyrene board that fits the needs of the commercial and residential foundation and slab market.

Styrofoam™ Brand SM30 XPS Insulation's closed-cell structure resists water absorption, enabling it to retain a high thermal resistance value over time - a necessary property in below-grade residential foundation applications. It helps to protect foundation damp-proofing and waterproofing, especially during backfilling. It also provides a secondary barrier against groundwater leakage.

With Styrofoam™ Brand SM30 XPS Insulation, the freeze-thaw cycling of the foundation wall is minimized, reducing the possibility of cracking. A warmer foundation wall helps reduce the potential for condensation and adds to the thermal mass of the building.

Features and Benefits

- **Moisture Resistant:** Excellent thermal barrier and helps reduce heat loss. Resistant to moisture infiltration, condensation, and freeze-thaw cycles.
- **Ease of Use:** Compatible with most commercial and residential foundation walls in above- and below-grade installations. Lightweight – easy to handle, cut, and install. Offered in a variety of thicknesses, with multiple surface and edge treatment options. Reusable in many applications.

Applications

- Styrofoam™ Brand SM30 XPS Insulation is an ideal solution for attics, foundations, and crawl spaces.



Warranty

- Styrofoam™ Brand Insulation is backed by a 50-year thermal limited warranty on products 1.5 inches and greater. For thickness less than 1.5 inches, other warranties may apply. For additional warranty information please visit building.dupont.com or contact your DuPont representative.

Standard Sizes

Standard Sizes for DuPont™ Styrofoam™ Brand SM30 XPS Insulation

Thickness	Width	Length	R-Value	Edge Treatment
50 mm.	600 mm.	2400 mm.	9.8	Butt Edge
50 mm.	600 mm.	2400 mm.	9.8	4-sided Shiplap
75 mm.	600 mm.	2400 mm.	14.8	Butt Edge
75 mm.	600 mm.	2400 mm.	14.8	4-sided Shiplap
1.0 in.	2 ft.	8 ft.	5.0	Butt Edge
1.0 in.	2 ft.	8 ft.	5.0	4-sided Shiplap
1 1/2 in.	2 ft.	8 ft.	7.5	Butt Edge
1 1/2 in.	2 ft.	8 ft.	7.5	4-sided Shiplap
2.0 in.	2 ft.	8 ft.	10.0	Butt Edge
2.0 in.	2 ft.	8 ft.	10.0	4-sided Shiplap
2 1/2 in.	2 ft.	8 ft.	12.5	4-sided Shiplap
2.0 in.	4 ft.	8 ft.	10.0	4-sided Shiplap
3.0 in.	2 ft.	8 ft.	15.0	Butt Edge
3.0 in.	2 ft.	8 ft.	15.0	4-sided Shiplap
4.0 in.	2 ft.	8 ft.	20.0	Butt Edge
4.0 in.	2 ft.	8 ft.	20.0	4-sided Shiplap

Note: Please be advised that additional sizes may be available. Availability of all sizes varies by region and is subject to change. For further information, please contact your local DuPont Sales Representative or call us at 1-866-338-7668.

TESTING AND CODE COMPLIANCE

Styrofoam™ Brand SM30 XPS Insulation exhibits physical properties as indicated in the table below when tested as represented. Review all instructions and (Material) Safety Data Sheet ((M)SDS) before use. Please contact DuPont at 1-833-338-7668 when additional guidance is required for writing specifications that include this product.

TEST METHOD	TEST TITLE	PROPERTY	RESULTS
FIRE			
CAN/ULC-S102.2	Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings, and Miscellaneous Materials and Assemblies	Surface Burning Characteristics	Flame Spread - 295 Smoke Developed - 635
THERMAL			
CAN/ULC-S770	Standard Test Method for Determination of Long-Term Thermal Resistance of Closed-Cell Thermal Insulating Foams	Long-Term Thermal Resistance @ 23.8 °C (75°F) mean temp ¹	1.71 m ² · °C/W
ASTM C518 ²	Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus	Thermal Resistance per inch, @ 75°F mean temp.	5.0 ft ² ·h·°F/Btu, R-value min. (0.88 RSI)
ASTM D696	Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30°C and + 30°C with a Vitreous Silica Dilatometer	Coefficient of Linear Thermal Expansion	6.3 x 10-2mm/m· °C (3.5 x 10-5 in/in·°F)
ASTM D2126	Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging	Change in Dimensions	1.5 % linear change, max.
STRENGTH			
ASTM D1621	Standard Test Method for Compressive Properties of Rigid Cellular Plastics	Compressive Strength ⁴	207 kPa (30 psi) , min.
ASTM C203	Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation	Flexural Strength	352 kPa (51 psi), min.
WATER			

ASTM D2842	D2842-Test Method for Water Absorption of Rigid Cellular Plastics	Water Absorption	0.3 % by volume, max.
ASTM E96	Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials	Water Vapor Permeance ⁵	50 ng/Pa·s·m ² (0.87 perm), max.

¹Long-term predicted thermal resistance value for 50 mm thickness.

²Thermal values are consistent with the criteria of ASTM C578 and are not assessed by the CCMC. Depending on the product, a 15-, 30- or 50- year limited thermal warranty is available.

⁴Vertical 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, 5:1 is suggested.

⁵Water vapor permeance varies with product type and thickness. Values are based on the desiccant method, and they apply to insulation 25.4 mm (1.0-inch) in thickness. Thicker products have lower permeance.

CODE COMPLIANCE

Styrofoam™ Brand SM30 XPS Insulation complies with the following codes:

CODE	DESCRIPTION
CAN Product Listings & Verifications	CCMC 04888-L Underwriters Laboratories, Inc. (UL) Classified

HANDLING

Warning

- **WARNING: For Professional Use Only** - Read and follow the entire Safety, Handling, and Storage section carefully before use. The information below is designed to protect the user and allow for safe use and handling of DuPont products.

Due to the critical technical design aspects of many of its applications, DuPont recommends that qualified designers or consultants design your system. Follow all applicable federal, provincials, territories, local and employer regulations.

Precautionary Statements

- **CAUTION:** Styrofoam™ Brand XPS Insulation is combustible. 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 call the DuPont Contact Center at 866-583-2583 or contact your local building inspector. For emergencies contact Chemtrec 800-424-9300, CCN (Contract Number) 7442.
- Fabrication methods which involve cutting into this product may release the blowing agent(s) remaining in the cells. Provide adequate ventilation to assure localized concentrations in release areas are maintained below the lower flammable limit.
- If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air. Mechanical cutting, grinding or sawing can cause formation of dusts. To reduce the potential for dust explosion, do not permit dust to accumulate.
- Rigid foam insulation does not constitute a working walkable surface or qualify as a fall protection product.

Supplemental Information

- The product meets the definition of an article and is exempt from US TSCA and Canadian DSL inventory requirements.

Product Limitations

- 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.

Cleanup & Disposal

- Dispose of any residual DuPont product, coated debris, or solvent in accordance with applicable federal, state, and local government regulations.
- Styrofoam™ Brand XPS Insulation is made of extruded polystyrene (XPS) and can be recycled at facilities that recycle XPS materials. Please check recycling facilities in your area to ensure they can recycle XPS Insulation.

Life & Storage

- In order to prevent buildup of combustible vapors, do not store large quantities of this product in unventilated spaces. Transport bulk shipments of this product in ventilated vehicles. During shipment, storage, installation and use, this material should not be exposed to flame or other ignition sources.

When stored outdoors, keep insulation boards covered with white plastic film or light-colored tarps to protect from weather and weighted down to prevent boards from being blown around by the wind.

Store above standing water.

Compliant with Title 42 Chapter 85 Clean Air Act: Subchapter VII American Innovation and Manufacturing Act of 2020, and Section 612 US EPA Significant New Alternative Policy. Global Warming Potential <150. This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Compliant with CANADIAN ENVIRONMENTAL PROTECTION ACT, 1999, SOR/2016-137, 64.5 (1) Plastic foam or rigid foam product. Global Warming Potential <150.

Handling & Use

- Before installation, substrate must be clean, dry, smooth and free from oil, grease, rust, frost and snow. Since dust would impair the performance of adhesives and finishes, dusty surfaces should be brushed off before products are applied.
- Do not leave Styrofoam™ Brand XPS exposed to direct sunlight for more than 90 days. Consult a DuPont representative if exposure is expected to be longer than 90 days. Prolonged exposure to ultraviolet radiation may cause the surface of Styrofoam™ Brand XPS to become faded and dusty. The surface degradation will have no measurable effect on the insulating value of the foam unless the deterioration is allowed to continue until foam thickness is lost.
- Use gloves to protect from mechanical injury.



**For more information, visit us at
building.dupont.com
or call us at 1-833-338-7668**

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Issue Date: 7/9/2025

Print Date: 10/11/2026