

DuPont™ Styrofoam™ Brand Freezermate™ XPS Insulation

Subfloor Thermal Insulation for Low-Temperature Applications
U.S. HFC Regulation Compliant Formulation

OVERVIEW

Description

DuPont™ Styrofoam™ Brand Freezermate™ XPS Extruded Polystyrene (XPS) Insulation is a closed-cell, extruded polystyrene foam insulation with smooth, high density skins. Available in a compressive strength of 30 psi, **Styrofoam™ Brand Freezermate™ 30 XPS Insulation** features exceptional moisture resistance and R-value retention. All Styrofoam™ Brand Freezermate™ products have excellent insulating characteristics, high resistance to water and water vapor, excellent freeze-thaw resistance, superior compressive strength and long-term durability.

Styrofoam™ Brand Freezermate™ 30 XPS Insulation can also be used in most static and dynamic loading situations for flooring applications. Because the rigid foam insulation boards resist even severe forms of moisture penetration in freezer and cooler construction, they offer long-term R-values superior to other types of thermal insulation.



Features and Benefits

- **High Moisture Resistant:** Excellent freeze-thaw resistance. Offers long-term R-values superior to other types of thermal insulation. Resists even severe forms of moisture penetration in freezer and cooler construction. Smooth and high density skins.
- **Lightweight and Durable:** Easy to handle, cut and install. Helps save time and money on site.

Sustainable Solutions

- Styrofoam™ Brand Freezermate™ XPS Insulation is a reusable, high-performance extruded polystyrene (XPS) foam insulation designed for use in low-temperature applications like subfloor thermal insulation. It utilizes BluEdge™ technology, is HCFC-free, and has zero ozone depletion potential. Additionally, it contains an average of 20% pre-consumer recycled content and certified by UL Environment Inc..

Applications

- Styrofoam™ Brand Freezermate™ XPS Insulation is an ideal solution for the following applications:
- Below Grade floor insulation
- Energy-efficient cold storage flooring

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, R-Values and Edge Treatments for Styrofoam™ Brand Freezermate™ XPS Insulation

Thickness	Width	Length	R-Value	Edge Treatment
3 in.	4 ft.	8 ft.	15	Square Edge

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 Freezermate™ XPS Insulation exhibits the properties and characteristics 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			
UL 723	Test Method for Surface Burning Characteristics of Building Materials	Surface Burning Characteristics	Flame Spread ≤ 25 Smoke Developed ≤ 450
THERMAL			
ASTM C518	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 ¹	5.0 ft ² ·h·°F/Btu, R-value, min.
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	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	2.0% change, max.
STRENGTH			
ASTM D1621	Standard Test Method for Compressive Properties of Rigid Cellular Plastics	Compressive Strength ²	30 psi, min.
ASTM C203	Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation	Flexural Strength	50 psi, min.
WATER			
ASTM C272	Standard Test Method for Water Absorption of Core Materials for Sandwich Construction	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 ³	1.5 perm, max.

¹Values 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.

²Vertical 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.

³Based on 1" thickness.

CODE COMPLIANCE

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

CODE	DESCRIPTION
US Product Listings & Verifications	International Residential Code (IRC) and International Building Code (IBC); see ICC-ES ESR-4755 Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate D-369 DrJ TER 1303-01
Regional Code Listings & Reports	California Std. Reg. #CA T1535

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

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

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.

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.
- Use gloves to protect from mechanical injury.
- 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.

- 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.



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

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Issue Date: 6/9/2025

Print Date: 12/08/2025