

Styrobar plus®

Laminated Rigid Insulation Solutions

Styrobar Plus is a rigid insulation product made of closed cell expanded polystyrene (EPS), laminated with a clear or reflective polypropylene film on both sides, which greatly increases the flexural strength, job site durability and moisture barrier properties of Styrobar products.

Styrobar Plus 16 is suitable for exterior and interior above-grade sheathing applications, including roofing applications.

Styrobar Plus 28 is suitable for all above-grade and below-grade applications in Canada and the United States. These would include the same below-grade applications noted for Styrobar Plus 22.

Styrobar Plus 22 is suitable for exterior and interior sheathing above-grade, and below-grade applications in Canada such as; under-slab, grade beam, perimeter, radiant floor heating, frost shield protection and back fill.

Styrobar Plus HS-40 is suitable for geotechnical and other below-grade applications where high compressive strengths and high thermal values are needed.



Product Features



Stable long term thermal resistance (LTTR)



Environmentally responsible



Cost-effective insulation



Water-resistant



Durable



Low permeance

Environmental & Sustainability

- Styrobar Plus products are produced without the use of chlorofluorocarbon (CFCs), hydrochlorofluorocarbon (HCFCs) or formaldehyde. As a result, Styrobar® products will not produce harmful emissions to the environment.
- Styrobar Plus products are non-toxic, will not irritate skin on exposure and contains no nutrients for pests or mould.

Performance Criteria

Performance Criteria				Styrobar Plus 16 Type VIII	Styrobar Plus 22 Type II	Styrobar Plus 28 Type IX	Styrobar Plus HS-40 Type XIV	Styrobar Plus HS-60 Type XIV	Styrobar Plus 16 Type 1	Styrobar Plus 22 Type 2	Styrobar Plus 28 Type 3	Styrobar Plus HS-40 Type 3	Styrobar Plus HS-60 Type 3	
				COMPLIANCE		ASTM C578					CAN/ULC S701-11			
THERMAL RESISTANCE	Min. at 1" (25 mm) Thickness,	ASTM C518	75°F (24°C)	R-3.85	R-4	R-4.2			RSI 0.68	RSI 0.70	RSI 0.74			
			40°F (4.4°C)	R-4.2	-			RSI 0.74	-					
PHYSICAL	Compressive Strength at 10% deformation, Min.	ASTM D1621	13 psi	16 psi	25 psi	40 psi ¹	See Table 2	70 kPa	110 kPa	140 kPa	276 kPa ¹	See Table 2		
	Flexural Resistance Min.	ASTM C203	30 psi	35 psi	50 psi	60 psi	> 60 psi	170 kPa	240 kPa	300 kPa		> 300 kPa		
	Dimensional Stability Max.	ASTM D2126	2%					1.5%						
MOISTURE	Water Vapor Permeance Max.	ASTM E96	< 0.5 perms					< 30 ng/Pa-s-m ²						
	Water Absorption Max.	ASTM C272	3%		2%		< 2%	6%	4%	2%		< 2%		
FIRE	Flame Spread Index, Max.	ASTM E84 (CAN/ULC S102.2)	< 25 (< 230)				N/A	< 25 (< 230)				N/A		
	< 450 (> 500)				< 450 (> 500)									
	4"(102 mm)				4"(102 mm)									
	2.2 pcf (32 kg/m³)				2.2 pcf (32 kg/m³)									
	Oxygen Index, Min.	ASTM D2863	24%											

Table 2: Styrobar Plus HS-60 Compressive Strength

			COMPRESSIVE STRENGTH		
COMPLIANCE	DENSITY MINIMUM	TYPE	1% DEFORMATION	5% DEFORMATION	10% DEFORMATION
ASTM D6817-17	3.2 lb/ft ³ (51 kg/m ³)	EPS39	25.0 psi (172 kPa)	71.1 psi (491 kPa)	78.3 psi (540 kPa)

1. Styrobar HS-40 has been shown to have a compressive resistance at 10% deformation of 276 kPa (40 psi), as tested by QAI Laboratories.

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Technical Information

- EPS should not be exposed to volatile hydrocarbons such as fuel oils, gasoline, and some alcohols. Anhydrous acids such as sulfuric and formic acid may also attack EPS.
- Styrobar Plus products contain flame retardants. This, however, will not prevent burning when the material is exposed to a large fire source or intense heat.
- Observe normal fire precautions and good housekeeping methods during application, and provide a protective barrier, such as a thermal barrier, to protect from high heat sources, as required by local building codes.

Sizes

Styrobar Plus products are available in thicknesses from 3/4" - 4 1/2", in 4' x 8' or 2' x 8' sheets. Styrobar Plus products are manufactured with a standard butt edge. Shiplap, or tongue and groove is available upon special order.

Packaging

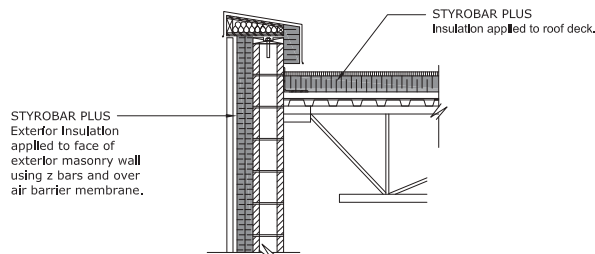
Styrobar Plus 16, 22 and 28 are packaged in bundles measuring 4' x 8' x 2'.

HS40 Styrobar Plus are packaged in bundles measuring 4' x 8' x 1'.

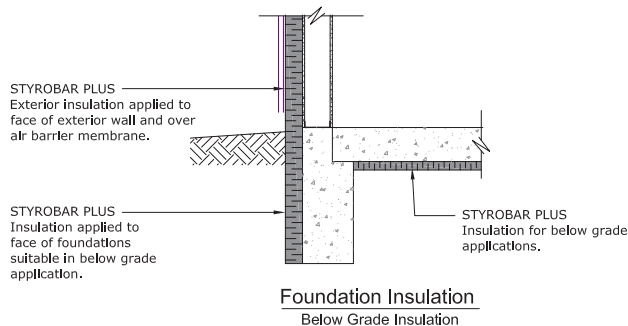
Manufacturer

AMC Foam Technologies Inc.
35 Headingley St.
Headingley Manitoba, R4H 0A8
877-789-7622

Applications



Wall & Roof Insulation
Masonry Insulation



Foundation Insulation
Below Grade Insulation

Applicable Standards

ASTM C578	Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.
ASTM C518	Standard Test Method for Steady-state Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
ASTM D1621	Standard Test Method for Compressive Properties of Rigid Cellular Plastics.
ASTM D1622	Standard Test Method for Apparent Density of Rigid Cellular Plastics.
ASTM D2842	Standard Test Method for Water Absorption of Rigid Cellular Plastics.
ASTM E96	Standard Test Methods for Water Vapor Transmission of Materials.
ASTM C203	Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation.
ASTM D2863	Standard Test Method for Measuring the Minimum Oxygen Concentration to Support Candle-Like Combustion of Plastics (Oxygen Index).
CAN/ULC-5701	Standard for Thermal Insulation, Polystyrene, Boards and Pipe Covering.
ASTM D6817	Standard Specification for Rigid Cellular Polystyrene Geofoam

Disclaimer of Liability

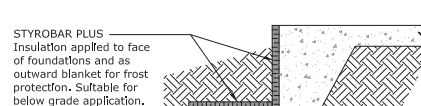
The manufacturer and distributors of this building product shall not be liable for any loss, costs, or damage resulting from uses of this product in systems which are not constructed in the strict compliance with the most exacting design and construction standards (including appropriate venting, drainage, flashing, etc.) contemplated by the National building Code of Canada or by the more rigorous practices or standards enforced at the place of use.

Technical Support

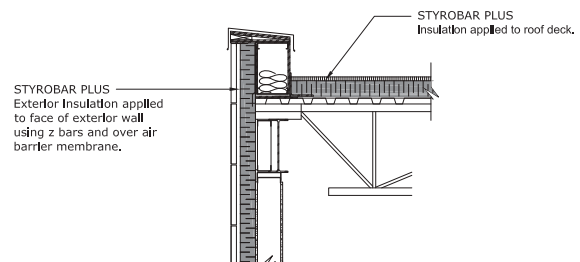
For North American technical inquiries please contact AMC Foam at 1-877-789-7622 or by email at info@amcfoam.com

Code Evaluation Approvals

Listing No. 13217-L
QAI Certification Listing No. B1088-1



Slab Thickening Detail
Frost Protection Insulation



Wall & Roof Insulation
Steel Stud / Wood Frame Insulation

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