

Styrobar® Rigid Insulation Solutions

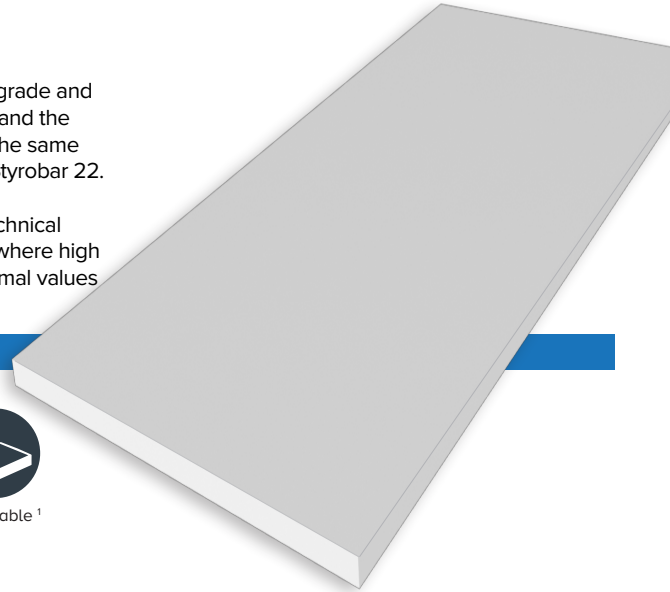
Styrobar is a rigid insulation product made from closed cell expanded polystyrene (EPS).

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

Styrobar 22 is suitable for interior and exterior 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 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 22.

Styrobar 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



Permeable ¹

Environmental & Sustainability

- Styrobar 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 products are non-toxic, will not irritate skin on exposure and contains no nutrients for pests or mould.

Performance Criteria

| Performance Criteria | | | | Styrobar 16 Type I | Styrobar 22 Type II | Styrobar 28 Type IX | Styrobar HS-40 Type XIV | Styrobar 16 Type 1 | Styrobar 22 Type 2 | Styrobar 28 Type 3 | Styrobar HS-40 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 | 10 psi | 16 psi | 25 psi | 40 psi ² | | 70 kPa | 110 kPa | 140 kPa | 276 kPa ² | | | | |
| | Flexural Resistance Min. | ASTM C203 | 30 psi | 35 psi | 50 psi | 60 psi | | 170 kPa | 240 kPa | 300 kPa | | | | | |
| | Dimensional Stability Max. | ASTM D2126 | 2% | | | | 1.5% | | | | | | | | |
| MOISTURE | Water Vapor Permeance Max. | ASTM E96 | 5 perms | 3.5 perms | 2.5 perms | | 300 ng/Pa-s-m ² | 200 ng/Pa-s-m ² | 130 ng/Pa-s-m ² | | | | | | |
| | Water Absorption Max. | ASTM C272 | 4% | 3% | 2% | | 6% | 4% | 2% | | | | | | |
| FIRE | Flame Spread Index, Max. | ASTM E84 (CAN/ULC S102.2) | < 25 (< 230) | | | | | | | | | | | | |
| | Smoke Developed Index, Max. | | < 450 (> 500) | | | | | | | | | | | | |
| | Max Thickness | | 4" (102 mm) | | | | | | | | | | | | |
| | Density, Max. | | 2.2 pcf (32 kg/m ³) | | | | | | | | | | | | |
| | Oxygen Index, Min. | ASTM D2863 | 24% | | | | | | | | | | | | |

1. Permeance is dependent on insulation thickness. The thicker the insulation the lower the permeance. For more information contact your local Styrobar representative.
 2. Styrobar HS-40 has been shown to have a compressive resistance at 10% deformation of 276 kPa (40 psi), as tested by QAI Laboratories.

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

Please contact the AMC order desk for all custom inquires.

Packaging

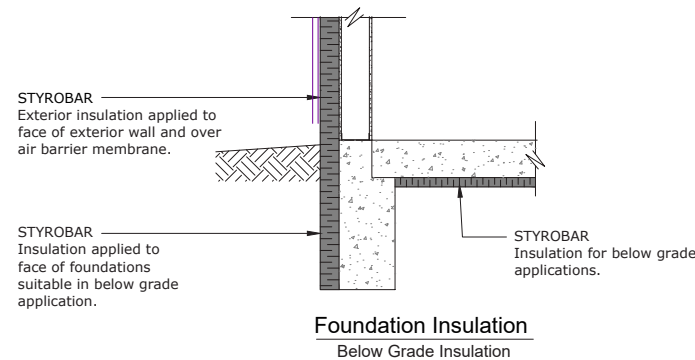
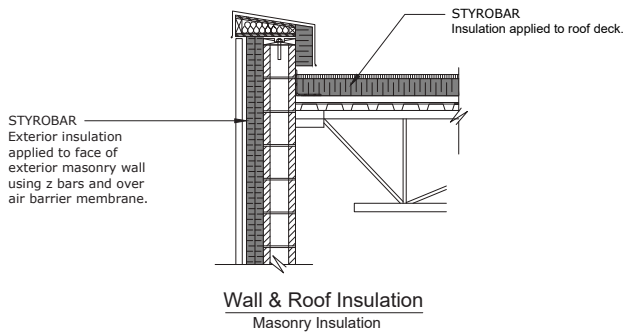
Styrobar 16, 22 and 28 are packaged in bundles measuring 4' x 8' x 2'.

HS40 Styrobar 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



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. |

Disclaimer of Liability

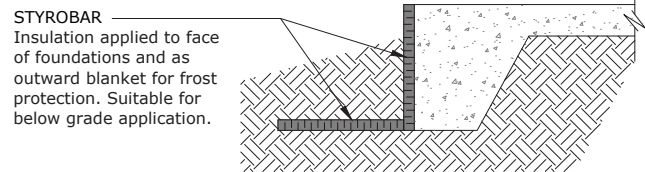
The manufacturer and distributors of this building product shall not be liable for any loss, costs, or damage resulting from uses of this product in systems which are not constructed in the strict compliance with the most exacting design and construction standards (Including appropriate venting, drainage, 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 inquires please contact AMC Foam at 1-877-789-7622 or by email at info@amcfoam.com

Code Evaluation Approvals

Styrobar 16 CCMC Listing No. 13217-L
Styrobar 22 CCMC Listing No. 13218-L
Styrobar 28 CCMC Listing No. 14033-L
Styrobar HS-40 CCMC Listing No. 14034-L
QAI Certification Listing No. B1088-1



Slab Thickening Detail
Frost Protection Insulation

