



FOAMULAR® 350 & 350 CVI

Extruded Polystyrene (XPS)

Rigid Foam Board Insulation



Optional with Channels

PRODUCT FEATURES

Description

Extruded polystyrene (XPS) rigid insulation board for protected membrane roofing applications.

Basic Uses/Related Uses

High density continuous insulation for use on commercial flat roof assemblies with option of integrated drainage channels (CVI).

Product Details

Owens Corning developed the FOAMULAR® 350 CVI board with drainage channels on the underside and around the entire perimeter. Compared to a standard board, the CVI board has the additional advantage of facilitating the flow of water infiltrated under the insulating boards to the waterproofing system's surface and drains. This reduces the risk of stagnating water, notably at the following locations: on a low slope roof, around controlled flow roof drains, or because of blockages caused by construction debris left in place following a roof replacement.

The FOAMULAR® 350 CVI board diminishes the boards' tendency to float, the risk of their displacement and, consequently, the opening of the joints when a single board thickness is used. Finally, drainage channels can help dry the membrane and improve the waterproofing system's performance.

Selection Criteria

- Protected membrane roofing applications
- Drainage channels with CVI
- Tapered boards by 3rd party
- Thermal resistance of R5 per inch[†]
- Moisture resistant (hydrophobic), long term durability
- Compatible with modified bituminous, hot applied liquid rubber, thermoplastic, and EPDM waterproofing membranes

Sustainability Criteria

- Recycled content of 20%, pre-consumer (SCS Global Services)
- UL GREENGUARD Gold Certification
- Product specific Type 4 UL Environmental Product Declaration and Transparency Brief
- Silver Material Health Certification (Cradle to Cradle Products Innovation Institute)
- Contributes to credits in green building programs such as LEED® and Green Globes. For further information see documents: LEED® v4 for Building Design and Construction and Owens Corning Impact Study - Leadership in Energy and Environmental Design (LEED® v4).



Applicable Standards

CAN/ULC-S701	Standard for Thermal Insulation, Polystyrene Boards
CAN/ULC-S102.2	Standard Method of Test for Surface Burning Characteristics of Flooring, Floor Coverings and Miscellaneous Materials and Assemblies
ASTM C177	Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate
ASTM C203	Standard Test Method for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
ASTM C518	Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
ASTM E228	Standard Test Method for Linear Thermal Expansion of Solid Materials with a Push-rod Dilatometer
ASTM D1621	Standard Test Method for Compressive Properties of Rigid Cellular Plastics
ASTM D2126	Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
ASTM D2842	Standard Test Method for Water Absorption of Rigid Cellular Plastics
ASTM E96	Test Methods for Water Vapour Transmission of Materials



[†]The LTTR performance for Owens Corning FOAMULAR® insulation products per CAN/ULC S701-17 are as follows: Type 3 products: Minimum LTTR of RSI 1.62 at 50 mm thickness & Type 4 products: minimum LTTR of RSI 1.66 at 50 mm thickness. Please consult local Owens Corning Technical Representative.



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Performance Criteria

Compliance:	Evaluation Listing No. 13430-L Type 4	CCMC CAN/ULC-S701
Physical Properties:	Compressive Strength ¹ : 35 psi (240 kPa) Compressive Modulus: 1480 psi (10204 kPa) Flexural Strength: 80 psi (552 kPa) Dimensional Stability, Maximum, % linear change: 1.5 Linear Coefficient of Thermal Expansion: 3.5 x 10⁻⁵ in./in./°F (6.3 x 10⁻⁵ mm/mm/°C)	ASTM D1621 ASTM D1621 ASTM C203 ASTM D2126 ASTM E228
Thermal:	R5 ft ² hr ² F/BTU per inch (RSI 0.88 m ² C/W per 25 mm)	ASTM C518 or C177
Moisture:	Water Absorption, (max. % by volume): 0.70 Water Vapour Permeance: 0.87 Perm (50 ng/Pa.s.m²) Water Capillarity: None Water Affinity: Hydrophobic Limiting Oxygen Index, min.: 24	ASTM D2842 ASTM E96 - - ASTM D2863
Fire:	Combustible Max. Service Temp. 165 °F (74 °C)	CAN/ULC-S114 -

¹5% deformation or yield, whichever occurs first

Delivery and Storage

Deliver products in their original packages, and store in enclosed shelter. Packaging is not UV resistant. Shelter unused packages from the elements.

Limitations

- Exposure to exterior conditions during normal construction cycles is permitted. During that time some fading of color may begin due to UV exposure, and, if exposed for extended periods of time, some degradation or “dusting” of the polystyrene surface may begin. It is best if the product is covered within 60 days to minimize degradation. Once covered, the deterioration stops, and damage is limited to the thin top surface layers of cells. Cells below are generally unharmed.
- Do not cover insulation either stored (factory wrapped or unwrapped), or partially installed, with dark colored (non-white), or clear (non-opaque) coverings and leave it exposed to the sun. Examples of such coverings include but are not limited to filter fabrics, membranes, temporary tarps, clear polyethylene, etc. If improperly covered, and exposed to the right combination of sun, time and temperature, insulation deformation damage may occur rapidly.
- This product is combustible. A protective barrier or thermal barrier is required to separate this product from interior living or conditioned spaces as specified in the appropriate building code.

- FOAMULAR® XPS insulation limited lifetime warranty maintains 90% of its thermal resistance for the lifetime of the building and covers all CAN/ULC-S701.
- Prior to use of adhesives, sealants or other similar products with polystyrene boards, verify their compatibility with adhesive manufacturers.

Sizes

Thickness	Widths	Lengths	Edges
FOAMULAR® 350 or 350 CVI XPS			
38 mm, 51 mm, 64 mm, 76 mm, 102 mm (1.5", 2", 2.5", 3", 4")	610 mm (24")	1220 mm (48")	Ship Lapped

FOAMULAR® 350 or 350 CVI is shipped in units containing four individually shrink-wrapped packages.

350 CVI board contains one lengthwise and two widthwise grooves: 13 mm wide x 13 mm deep max. (0.5 in. x 0.5 in.). One entire perimeter groove 6.5 mm wide x 13 mm deep max. (0.25 in. x 0.5 in.).

Safety

This product is combustible and may constitute a fire risk if not used or installed properly. Although it contains a fire-suppressing agent, the product will ignite if exposed to a sufficiently intense flame. Do not expose to open flames or any other ignition source during transport, handling, storage or use. For additional information refer to Safe Use Instruction Sheet (SUIS) found in the SDS Database via <http://sds.owenscorning.com>.

PRODUCT PLACEMENT

Installation

Place and adjust FOAMULAR® 350 or FOAMULAR® 350 CVI insulation boards on the roof membrane to obtain tight joints or lapped with two thicknesses of insulation. Make tight joints between each board and around roof drains, air ducts and framing passing through; where two layers are required, overlap all joints. Once insulation boards are installed, cover completely with a filter fabric and ballast (gravel, topsoil, prefabricated pavers or others) having the required weight. Consult an Owens Corning Canada Technical representative for appropriate fastener and adhesive selections.

Technical Services Available

For Canadian Technical inquiries please contact local representative. See Technical territory map via www.specowenscorning.ca/contacttech.





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Current Ed: 2018.09.01
 Previous Ed: 2018.09.01

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OWENS CORNING CANADA LP
 3450 MCNICOLL AVENUE
 SCARBOROUGH, ONTARIO M1V 1Z5

1-800-GET-PINK®
www.owenscorning.ca

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