



# FOAMULAR® Cel-Drain®

## Extruded Polystyrene (XPS) Rigid Foam Board Insulation



### PRODUCT FEATURES

#### Description

Extruded polystyrene (XPS) rigid insulation board that provides continuous thermal resistance, drains moisture, and protects above grade portion of foundation.

#### Basic Uses/Related Uses

Continuous exterior insulation for concrete or concrete block foundation walls with manufactured drainage channels to direct moisture to weeping tile systems. The drainage surface with the 6 mm (1/4") x 19 mm (3/4") grooves is installed directly against the damp-proofed face of the foundation wall with the drainage grooves in the vertical position.

#### Selection Criteria

- Certified drainage layer as per building Code
- Thermal resistance of R5 per inch<sup>†</sup>
- Moisture resistant (hydrophobic), long term durability
- Saw, cut or score to size

#### Sustainability Criteria

- Recycled content of 20%, pre-consumer (SCS Global Services)
- UL GREENGUARD Gold Certification
- Product specific Type 3 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

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

### Performance Criteria

<b>Compliance:</b>	Evaluation Listing No. 13387-R Type 3	CCMC CAN/ULC-S701
<b>Physical Properties:</b>	Compressive Strength <sup>1</sup> : <b>20 psi (140 kPa)</b> Compressive Modulus: <b>1000 psi (6895 kPa)</b> Flexural Strength: <b>70 psi (483 kPa)</b> Dimensional Stability, Maximum, % linear change: <b>1.5</b> Linear Coefficient of Thermal Expansion: <b>3.5 x 10<sup>-5</sup> in./in./°F (6.3 x 10<sup>-5</sup> mm/mm/°C)</b>	ASTM D1621 ASTM D1621 ASTM C203 ASTM D2126  ASTM E228
<b>Thermal:</b>	R5 ft <sup>2</sup> hr°F/BTU per inch (RSI 0.88 m <sup>2</sup> C/W per 25 mm)	ASTM C518 or C177
<b>Moisture:</b>	Water Absorption, (max. % by volume): <b>0.70</b> Water Vapour Permeance: <b>0.90 Perm (52 ng/Pa.s.m<sup>2</sup>)</b> Water Capillarity: <b>None</b> Water Affinity: <b>Hydrophobic</b> Limiting Oxygen Index, min.: <b>24</b>	ASTM D2842 ASTM E96 - - ASTM D2863
<b>Fire:</b>	Combustible Flame spread 90; smoke developed >350 Max. Service Temp. 165 °F (74 °C)	CAN/ULC-S114 CAN/ULC-S102.2 -

<sup>1</sup>10% deformation or yield, whichever occurs first



<sup>†</sup>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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### Rigid Foam Board Insulation

#### 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.
- 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.
- In soils that may contain hydrocarbons and other petroleum derivatives, and all other products that may cause corrosion and deterioration of the polystyrene boards. Consult soils investigation reports and an Owens Corning regional technical support representative.
- 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
76 mm, 89 mm, 102 mm (3", 3.5", 4")	610 mm (24")	2438 mm (96")	Ship Lapped

Other sizes available upon request.

Grooved drainage channels measure 6 mm (1/4") depth x 19 mm (3/4") wide x 50 mm (2") o.c. spacing.

FOAMULAR® Cel-Drain® is shipped in units containing four individually shrink-wrapped packages.

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#### Disclaimer of Liability

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#### 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

Refer to NRC Evaluation Report CCMC 13387-R for complete installation instructions. 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](http://www.specowenscorning.ca/contacttech).



**OWENS CORNING CANADA LP**  
3450 MCNICOLL AVENUE  
SCARBOROUGH, ONTARIO M1V 1Z5  
**1-800-GET-PINK®**  
[www.owenscorning.ca](http://www.owenscorning.ca)

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