



# FOAMULAR® & FOAMULAR® NGX™ C-200 & CODEBORD®

## EXTRUDED POLYSTYRENE (XPS) RIGID FOAM INSULATION

Owens Corning® FOAMULAR® & FOAMULAR® NGX™ C-200 & CodeBord® Extruded Polystyrene (XPS) Insulation are closed-cell, moisture-resistant rigid foam boards well suited to meet the needs of a wide variety of building applications.<sup>1</sup> Both products are great for above-and below-grade residential and commercial applications such as perimeter/foundation, cavity wall, precast concrete, under slab, and other applications.

FOAMULAR® NGX™ C-200 & CodeBord® contain the additional benefit of being manufactured with a blowing agent formulation that delivers a 90% reduction to Global Warming Potential (100 year), including the complete elimination of HFC 134a.<sup>2</sup>

1. Not for use in flat or low slope roofing. For low slope roofing applications, use FOAMULAR®/FOAMULAR® C-200 NGX™ or FOAMULAR®/FOAMULAR® NGX™ 400/600/1000 Extruded Polystyrene (XPS) Rigid Foam Insulation.
2. Compared to previous FOAMULAR® C-200 and CodeBord® blowing agent formulation.

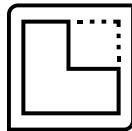
### Product Features



**SUPERIOR  
MOISTURE  
RESISTANCE**



**DURABLE**



**EASY TO CUT,  
FORM & FIT**

### Basic Uses/Related Uses

- Under slabs
- Perimeter/Foundation walls
- Cavity walls
- Precast walls
- Weather-resistant barrier (when joints are sealed)

### Selection Criteria

- Thermal resistance of R5 per inch
- Moisture resistant (hydrophobic), long term durability
- Function as air and weather barrier with sealed joints
- Compatible with common liquid or sheet applied air/moisture barriers
- Saw, cut, or score to size
- Reduces thermal bridging

### Performance Criteria

<b>COMPLIANCE:</b>	CCMC Evaluation Listing No. 13431-L Type 3	CCMC CAN ULC S701.1-17
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### Additional Performance Information

<b>PHYSICAL PROPERTIES:</b>	Compressive Strength <sup>3</sup> : <b>20 psi (140 kPa)</b> Compressive Modulus: <b>1000 psi (6895 kPa)</b> Flexural Strength <sup>4</sup> : <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>-6</sup> in./in.°F (6.3 x 10<sup>-6</sup> mm/mm/°C)</b>	ASTM D1621 ASTM D1621 ASTM C203 ASTM D2126  ASTM E228						
<b>THERMAL<sup>5</sup>:</b>	Thermal Resistance, R-Value, hr-ft <sup>2</sup> ·°F/Btu (RSI, °C·m <sup>2</sup> /W) 5.0 (0.88) @ 24°C (75°F) mean temperature 5.4 (0.95) @ 4.4°C (40°F) mean temperature 5.6 (0.99) @ -3.9°C (25°F) mean temperature	ASTM C518 or C177						
<b>LTTR: (CANADA)</b>	<table border="1"> <tr> <th>FOAMULAR® NGX™</th> <th>FOAMULAR® (Legacy)</th> </tr> <tr> <td>Min. LTTR RSI (m<sup>2</sup>·°C/W) RSI: 0.43 @ 12.5 mm thickness RSI: 0.86 @ 25 mm thickness RSI: 1.27 @ 38 mm thickness RSI: 1.65 @ 51 mm thickness RSI: 2.10 @ 64 mm thickness RSI: 2.47 @ 76 mm thickness RSI: 2.94 @ 89 mm thickness RSI: 3.31 @ 102 mm thickness</td> <td>Min. LTTR RSI (m<sup>2</sup>·°C/W) RSI: 0.43 @ 12.5 mm thickness RSI: 0.85 @ 25 mm thickness RSI: 1.28 @ 38 mm thickness RSI: 1.69 @ 51 mm thickness RSI: 2.18 @ 64 mm thickness RSI: 2.55 @ 76 mm thickness RSI: 3.05 @ 89 mm thickness RSI: 3.44 @ 102 mm thickness</td> </tr> <tr> <td>Min. LTTR R hr-ft<sup>2</sup>·°F/Btu R2.4 @ 0.5 in. thickness R4.9 @ 1 in. thickness R7.2 @ 1.5 in. thickness R9.4 @ 2 in. thickness R11.9 @ 2.5 in. thickness R14.0 @ 3 in. thickness R16.7 @ 3.5 in. thickness R18.8 @ 4 in. thickness</td> <td>Min. LTTR R hr-ft<sup>2</sup>·°F/Btu R2.4 @ 0.5 in. thickness R4.8 @ 1 in. thickness R7.3 @ 1.5 in. thickness R9.6 @ 2 in. thickness R12.4 @ 2.5 in. thickness R14.5 @ 3 in. thickness R17.3 @ 3.5 in. thickness R19.5 @ 4 in. thickness</td> </tr> </table>	FOAMULAR® NGX™	FOAMULAR® (Legacy)	Min. LTTR RSI (m <sup>2</sup> ·°C/W) RSI: 0.43 @ 12.5 mm thickness RSI: 0.86 @ 25 mm thickness RSI: 1.27 @ 38 mm thickness RSI: 1.65 @ 51 mm thickness RSI: 2.10 @ 64 mm thickness RSI: 2.47 @ 76 mm thickness RSI: 2.94 @ 89 mm thickness RSI: 3.31 @ 102 mm thickness	Min. LTTR RSI (m <sup>2</sup> ·°C/W) RSI: 0.43 @ 12.5 mm thickness RSI: 0.85 @ 25 mm thickness RSI: 1.28 @ 38 mm thickness RSI: 1.69 @ 51 mm thickness RSI: 2.18 @ 64 mm thickness RSI: 2.55 @ 76 mm thickness RSI: 3.05 @ 89 mm thickness RSI: 3.44 @ 102 mm thickness	Min. LTTR R hr-ft <sup>2</sup> ·°F/Btu R2.4 @ 0.5 in. thickness R4.9 @ 1 in. thickness R7.2 @ 1.5 in. thickness R9.4 @ 2 in. thickness R11.9 @ 2.5 in. thickness R14.0 @ 3 in. thickness R16.7 @ 3.5 in. thickness R18.8 @ 4 in. thickness	Min. LTTR R hr-ft <sup>2</sup> ·°F/Btu R2.4 @ 0.5 in. thickness R4.8 @ 1 in. thickness R7.3 @ 1.5 in. thickness R9.6 @ 2 in. thickness R12.4 @ 2.5 in. thickness R14.5 @ 3 in. thickness R17.3 @ 3.5 in. thickness R19.5 @ 4 in. thickness	CAN ULC S770-15
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<b>MOISTURE:</b>	Water Absorption, (max. % by volume): <b>0.70</b> Water Vapour Permeance FOAMULAR® NGX™: <b>0.65 Perm (37 ng/Pa.s.m<sup>2</sup>)</b> FOAMULAR® (Legacy): <b>0.81 Perm (47 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 190; smoke developed > 500	CAN/ULC-S114 CAN/ULC-S102.2						
<b>MAX. SERVICE TEMP.:</b>	Max. Service Temp. 74 °C (165 °F)	-						

3. Values at yield or 10% deflection, whichever occurs first.

4. Value at yield or 5%, whichever occurs first.

5. The R-value for FOAMULAR® & FOAMULAR® NGX™ XPS Insulation is provided from testing at mean temperatures of: -4°C (25°F), 4.4°C (40°F), and 24°C (75°F) and aging techniques of 180-day real time aged (as mandated by ASTM C578) and accelerated aging "Long-Term Thermal Resistance" (LTTR) per CAN/ULC S770-15.

## Technical Information

- Deliver products in their original packages, and store in enclosed shelter. Packaging is not UV resistant. Shelter unused packages from the elements.
- 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.
- Prior to use of adhesives, sealants or other similar products with polystyrene boards, verify their compatibility with adhesive manufacturers.
- Caution: This product is combustible. A protective barrier or thermal barrier is required as specified in the appropriate building Code. Do not expose to open flames or any other ignition source during transport, handling, storage or use. 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.
- Carefully adjust insulation boards to obtain tight joints between each board and around electrical service boxes, piping, air ducts and framing passing through; where two layers are required it is preferable to offset all joints. Consult an Owens Corning Canada Technical representative for appropriate fastener and adhesive selections.

## Sizes

THICKNESS	WIDTHS	LENGTHS	EDGES
<b>FOAMULAR® &amp; FOAMULAR® NGX™ C-200 XPS*</b>			
25 mm - 102 mm (1" - 4") in 12.7 mm (1/2") increments	610 mm (24")	2438 mm (96")	Square or Ship Lapped
<b>FOAMULAR® &amp; FOAMULAR® NGX™ CodeBord® XPS</b>			
20 mm - 89 mm (0.8" - 3.5")	610 mm & 1220 mm (24" & 48")	2438 mm, 2743 mm, 3048 mm (96", 108", 120")	Square or Ship Lapped

FOAMULAR® & FOAMULAR® NGX™ C-200 is shipped in units containing four individually shrink-wrapped packages and FOAMULAR® & FOAMULAR® NGX™ CodeBord® is shipped in units containing three individually shrink-wrapped packages.

\*Metric sizes for CMU also available

## Certifications and Sustainable Features

- Certified by SCS Global Services to contain a minimum of 20% recycled content pre-consumer
- GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit [ul.com/gg](http://ul.com/gg)
- Product specific Type 3 UL Environmental Product Declaration (EPD) and Transparency Brief certified by UL Environment
- 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)



## Environmental and Sustainability

Owens Corning is a worldwide leader in building material systems, insulation and composite solutions, delivering a broad range of high-quality products and services. Owens Corning is committed to driving sustainability by delivering solutions, transforming markets and enhancing lives. More information can be found at [www.owenscorning.ca](http://www.owenscorning.ca) or [www.owenscorninglibrary.ca](http://www.owenscorninglibrary.ca).

FOAMULAR® is manufactured with a polystyrene resin and blend of HFC blowing agents that have a global warming potential (100 year) of less than 750.

FOAMULAR® NGX™ is manufactured with a polystyrene resin and a blend of HFO and HFC blowing agents that have a global warming potential (100 year) of less than 80.

### Disclaimer of Liability

Technical information contained herein is furnished without charge or obligation and is given and accepted at recipient's sole risk. Because conditions of use may vary and are beyond our control, Owens Corning makes no representation about and is not responsible or liable for the accuracy or reliability of data associated with particular uses of any product described herein. SCS Global Services provides independent verification of recycled content in building materials and verifies recycled content claims made by manufacturers. For more information, visit [www.SCSglobalservices.com](http://www.SCSglobalservices.com).

LEED® is a registered trademark of the U.S. Green Building Council.

### Notes

For additional information, refer to the Safe Use Instruction Sheet (SUIS) found in the SDS Database via <http://sds.owenscorning.com>.

### Limited Warranty

FOAMULAR® & FOAMULAR® NGX™ XPS insulation limited lifetime warranty maintains 90% of its R-value for the lifetime of the building and covers all CAN/ULC-S701 properties. See FOAMULAR® Extruded Polystyrene Insulation Lifetime Limited Warranty for complete details, limitations, and requirements.

### 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).

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