MasterFormat 07 21 13.13 - Foam Board Insulation

FOAMULAR® NGX® C-300

EXTRUDED POLYSTYRENE (XPS) RIGID FOAM INSULATION

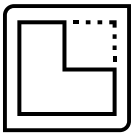
Owens Corning® FOAMULAR® NGX® C-300 Extruded Polystyrene (XPS) Insulation is a closed-cell, moisture-resistant rigid foam board well suited to meet the needs of a wide variety of building applications.[1] Great for above-and below-grade residential and commercial applications such as wall assemblies and under slab (≤ 30 psi).

1 Not for use in flat or low slope roofing. For low slope roofing applications, use FOAMULAR® C-200 NGX® or FOAMULAR® NGX® 400/600/1000 Extruded Polystyrene (XPS) Rigid Foam Insulation.

Product Features

SUPERIOR MOISTURE RESISTANCE

DURABLE



EASY TO CUT, FORM & FIT

80% GLOBAL WARMING REDUCTION[2]

2 Impact measured over 100-year time horizon, as compared to legacy FOAMULAR® insulation. EPD can be found in the "Environmental and Sustainability" section on Page 2.

Basic Uses/Related Uses

- Under slabs (≤ 30 psi)
- Perimeter/Foundation walls

Selection Criteria

- 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

COMPLIANCE	CCMC Evaluation Listing No. 13430-L Type 4	CCMC CAN/ULC-701.1-17

Additional Performance Information

PROPERTY	VALUE	TEST METHOD
Thermal Resistance[3]	RSI, °C•m²/W (R-Value, hr•ft²•°F/Btu) 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
LTTR: (Canada)	Min. LTTR RSI (m² °C/W) RSI: 0.86 @ 25.4 mm thickness RSI: 1.28 @ 38.1 mm thickness RSI: 1.70 @ 50.8 mm thickness RSI: 2.13 @ 63.5 mm thickness RSI: 2.59 @ 76.2 mm thickness RSI: 3.05 @ 88.9 mm thickness RSI: 3.52 @ 101.6 mm thickness	CAN/ULC-S770-15
Compressive Strength[4]	30 psi (210 kPa)	ASTM D1621
Compressive Modulus (typical)	1350 psi (9308 kPa)	ASTM D1621
Flexural Strength[5] (typical)	75 psi (517 kPa)	ASTM C203
Dimensional Stability, Maximum	% linear change: 1.5	ASTM D2126
Linear Coefficient of Thermal Expansion	6.3 x 10^{-5} mm/mm/°C (3.5 x 10^{-5} in./in./°F)	ASTM E228
Water Absorption	(max % by volume): 0.40 (max % by volume): 0.30	ASTM D2842 ASTM C272[6]
Water Vapour Permeance (typical)	0.54 Perms (31 ng/Pa.s.m²)	ASTM E96
Water Capillarity	None	-
Water Affinity	Hydrophobic	-
Limiting Oxygen Index	min.: 24	ASTM D2863
Non-combustibility	Combustible	CAN/ULC-S114
Surface Burning Characteristics	Flame Spread 190, Smoke Developed > 500	CAN/ULC-S102.2
Max. Service Temperature	74 °C (165 °F)	-

3 The R-value for FOAMULAR® NGX® XPS Insulation is provided from testing at mean temperatures of: -3.9 °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).
4 Values at yield or 10% deflection, whichever occurs first.
5 Value at yield or 5%, whichever occurs first.
6 Per method described in ASTM C578

Technical Information

- Deliver FOAMULAR® NGX® XPS insulation products in their original factory-wrapped packaging.
- 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.

Availability

PRODUCT	THICKNESS	WIDTHS	LENGTHS	EDGES
FOAMULAR® NGX® C-300 XPS^	25 mm - 102 mm (1" - 4") in 12.7 mm (½") increments	610 mm (24")	2438 mm (96")	Square or Ship Lapped

FOAMULAR® NGX® C-300 is shipped in units containing four 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 #SCS-RC-01132.
- GREENGUARD Certified products are certified to GREENGUARD standards for low chemical emissions into indoor air during product usage. For more information, visit https://www.ul.com/gg
- Environmental Product Declaration (EPD) has been certified by SCS Global Services. EPD #SCS-EPD-09753.
- UL CERTIFIED — See Bulk Shipment Certificate U-197 available at www.owenscorning.com/U197.
- 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 or www.owenscorninglibrary.ca.

FOAMULAR® NGX® XPS insulation uses blowing agents with zero ozone depletion potential.

Detailed environmental information on the lifecycle of this product can be found in product's Environmental Product Declaration.

Technical Services Available

For Canadian Technical inquiries, please contact our technical team at www.owenscorning.ca/contacttech.

Limited Warranty

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® NGX® Extruded Polystyrene Insulation Lifetime Limited Warranty for complete details, limitations, and requirements.

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

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

1-800-GET-PINK®
www.owenscorning.ca

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