



FOAMULAR® NGX™

400/600/1000

HIGH DENSITY EXTRUDED POLYSTYRENE (XPS) RIGID FOAM INSULATION

Owens Corning® FOAMULAR® NGX™ 400/600/1000 High Density 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. Designed for use in building envelope and civil engineering applications requiring additional load-bearing capability such as under slab, concrete floors, flat roofs, foundations, roadways and rail beds, plaza and parking decks and cold storage installations.

FOAMULAR® NGX™ 400/600/1000 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.¹

¹ Compared to FOAMULAR® 400/600/1000 products.

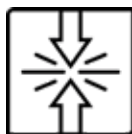
Product Features



**SUPERIOR
MOISTURE
RESISTANCE**



DURABLE



**COMPRESSIVE
STRENGTH**

Basic Uses/Related Uses

- Under slab/concrete floors
- Flat roofs
- Foundations
- Roadways/Parking Decks
- Cold Storage

Selection Criteria

- High compressive load applications
- 40, 60, 100 psi compressive strengths
- Moisture resistant (hydrophobic), long term durability

Performance Criteria

COMPLIANCE	CCMC Evaluation Listing No. 13430-L Type 4	CCMC CAN/ULC-S701.1-17
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Additional Performance Information

PROPERTY	VALUE	TEST METHOD
Thermal Resistance ³	RSI, °C·m ² /W (R-Value, hr·ft ² ·°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 (m ² °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	F-400: 40 psi (275 kPa) F-600: 60 psi (415 kPa) F-1000: 100 psi (690 kPa)	ASTM D1621
Compressive Modulus (typical)	F-400: 2000 psi (13789 kPa) F-600: 2700 psi (18616 kPa) F-1000: 3700 psi (25510 kPa)	ASTM D1621
Flexural Strength ⁵ (typical)	F-400: 115 psi (793 kPa) F-600: 140 psi (965 kPa) F-1000: 150 psi (1034 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): 0.30	ASTM D2842
Water Vapour Permeance (typical)	0.3 Perms (17 ng/Pa.s.m ²)	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.

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.
- 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 Area Sales Manager.
- 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.
- Ensure surfaces to be covered with insulation boards have been inspected, notably; substrate solidity and level - fill and others; and subsurface mechanical, electrical and telecommunication service lines penetrating or in proximity to insulation boards.
- Carefully adjust insulation boards to obtain tight joints between each board; where two layers are required, overlap all joints. Backfill insulation boards or use wood or steel pegs to avoid their displacement due to wind or flotation on water puddles generated by the rain or during subsurface work or near watercourses. Where required, adhere insulation boards together temporarily using an adhesive.

Availability

PRODUCT	THICKNESS	WIDTHS	LENGTHS	EDGES
FOAMULAR® NGX™ 400 XPS	25 mm, 38 mm, 51 mm, 76 mm, 102 mm (1", 1.5", 2", 3", 4")	610 mm (24")	2438 mm (96")	Square
FOAMULAR® NGX™ 600 XPS	25 mm, 38 mm, 51 mm, 76 mm (1", 1.5", 2", 3")	610 mm (24")	2438 mm (96")	Square
FOAMULAR® NGX™ 1000 XPS	38 mm, 51 mm, 76 mm (1.5", 2", 3")	610 mm (24")	2438 mm (96")	Square

FOAMULAR® NGX™ 400/600/1000 High Density is shipped in units containing four individually shrink-wrapped packages.

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
- Product specific Type 4 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 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.

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.

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>.

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