



FOAMULAR® LT30/LT40

Extruded Polystyrene (XPS) Rigid Foam Insulation

Product Data Sheet

Energy-Saving, Moisture-Resistant XPS Insulation

For Cold Storage Applications

FOAMULAR® LT30 Insulation:
ASTM C578 Type IV, 30 psi minimum

FOAMULAR® LT40 Insulation:
ASTM C578 Type IV, 40 psi minimum

Description

FOAMULAR® LT30 and LT40 extruded polystyrene (XPS) insulation is suitable for virtually all cold storage insulating needs, including floors, walls and roofs. Durable FOAMULAR® XPS also performs well under cold storage concrete floor slabs. FOAMULAR® XPS insulation's resistance to water absorption and water vapor transmission allows it to maintain low thermal conductivity in the presence of the severe water vapor characteristics of cold storage applications.

FOAMULAR® XPS insulation is a closed-cell insulation made using Owens Corning's exclusive HYDROVAC® manufacturing process. FOAMULAR® extruded polystyrene insulation is manufactured to comply with ASTM C578. See FOAMULAR® Typical Physical Properties table.

Owens Corning offers a variety of FOAMULAR® insulation products for use in cold storage applications depending on the specific needs of the design and engineering process.

Durable LT30 and LT40 insulation products perform well under cold storage concrete floor slabs.

FOAMULAR® XPS insulation has been tested for its ability to retain critical structural properties in a severe freeze/thaw environment.

For more information, refer to FOAMULAR® XPS Insulation Cold Storage Technical Guide, Publication No. 43746-A and FOAMULAR® Foundation Properties for Load Bearing Slab Applications Publication No. 10015706 available on www.foamular.com or www.owenscorningcommercial.com.

Key Features

- Excellent long-term stable insulating performance at R-5¹ per inch
- Exceptional moisture resistance, long-term durability
- Limited lifetime warranty²—maintains 90% of R-value and covers all ASTM C578 properties
- The only XPS foam to be GREENGUARD Children & Schools CertifiedSM
- The only XPS foam with certified recycled content—certified by Scientific Certification Systems (SCS) to contain a minimum 20% recycled content
- Will not corrode, rot or support mold growth
- Zero ozone depletion potential with 70% less global warming potential than our previous formula
- Reusable

- Lightweight, durable rigid foam panels are easy to handle and install
- Easy to saw, cut or score

Technical Information

This product is combustible. A protective barrier or thermal barrier is required as specified in the appropriate building code. For additional information, consult MSDS or contact Owens Corning World Headquarters at 1-800-GET-PINK®.

All construction should be evaluated for the necessity to provide vapor retarders. See current ASHRAE Handbook of Fundamentals.

FOAMULAR® XPS Insulation is a non-structural material and must be installed on framing which is independently braced and structurally adequate to meet required construction and service loading conditions.

FOAMULAR® insulation can be exposed to the exterior during normal construction cycles. 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 and still useful insulation.



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Standards, Codes Compliance

- Meets ASTM C578 Type IV (LT30) and Type IV (LT40)
- UL Classified. A copy of UL Classification Certificate U-197 is available at www.foamular.com
- See ICC-ES ESR-1061 at www.icc-es.org
- See www.foamular.com for details on listings, constructions and assemblies
- Meets California Quality Standards; HUD UM #71A
- Compliance verification by RADCO (AA-650)



Certifications and Sustainable Features of FOAMULAR® XPS Insulation

- FOAMULAR® XPS insulation is reusable
- FOAMULAR® XPS insulation is made with a zero ozone depletion formula
- Certified by Scientific Certification Systems to contain a minimum of 20% pre-consumer recycled polystyrene
- Certified to meet indoor air quality standards under the stringent GREENGUARD Indoor Air Quality Certification ProgramSM, and the GREENGUARD Children & Schools Certification ProgramSM

Typical Physical Properties¹

FOAMULAR® LT30/LT40 Extruded Polystyrene Insulation

Property	Test Method ²	FOAMULAR® Insulation	
		LT30	LT40
Thermal Resistance³ , R-Value (180 day) minimum, hr•ft ² •°F/Btu (RSI, °C•m ² /W) @ 75°F (24°C) mean temperature	ASTM C518		
2" Thickness		10.0 (1.76)	
2½" Thickness		12.5 (2.20)	
3" Thickness		15.0 (2.64)	
@ 40°F (4.4°C) mean temperature			
2" Thickness		10.8 (1.90)	
2½" Thickness		13.5 (2.38)	
3" Thickness		16.2 (2.85)	
Compressive Strength⁴ , minimum psi (kPa)	ASTM D1621	30 (207)	40 (276)
Flexural Strength⁵ , minimum psi (kPa)	ASTM C203	75 (517)	115 (793)
Water Absorption⁶ , maximum % by volume	ASTM C272	0.10	0.10
Water Vapor Permeance⁷ , maximum perm (ng/Pa•s•m ²)	ASTM E96	1.5 (86)	1.1 (63)
Dimensional Stability , maximum % linear change	ASTM D2126		2.0
Flame Spread^{8,9}	ASTM E84		5
Smoke Developed^{8,9,10}	ASTM E84		45-175
Oxygen Index⁸ , minimum % by volume	ASTM D2863		24
Service Temperature , maximum °F (°C)	—	165 (74)	
Linear Coefficient of Thermal Expansion , in/in/°F (m/m/°C)	ASTM E228	3.5 × 10 ⁻⁵ (6.3 × 10 ⁻⁵)	

1. Properties shown are representative values for 1" thick material, unless otherwise specified.
2. Modified as required to meet ASTM C578.
3. R means the resistance to heat flow; the higher the value, the greater the insulation power. This insulation must be installed properly to get the marked R-value. Follow the manufacturer's instructions carefully. If a manufacturer's fact sheet is not provided with the material shipment, request this and review it carefully. R-values vary depending on many factors including the mean temperature at which the test is conducted, and the age of the sample at the time of testing. Because rigid foam plastic insulation products are not all aged in accordance with the same standards, it is useful to publish comparison R-value data. The R-value for FOAMULAR® XPS insulation is provided from testing at two mean temperatures, 40°F and 75°F, and from two aging (conditioning) techniques, 180 day real-time aged (as mandated by ASTM C578) and a method of accelerated aging sometimes called "Long Term Thermal Resistance" (LTTR) per CAN/ULC S770-03. The R-value at 180 day real-time age and 75°F mean temperature is commonly used to compare products and is the value printed on the product.
4. Values at yield or 10% deflection, whichever occurs first.
5. Value at yield or 5%, whichever occurs first.
6. Data ranges from 0.00 to value shown due to the level of precision of the test method.
7. Water vapor permeance decreases as thickness increases.
8. These laboratory tests are not intended to describe the hazards presented by this material under actual fire conditions.
9. Data from Underwriters Laboratories Inc.® classified. See Classification Certificate U-197.
10. ASTM E84 is thickness-dependent, therefore a range of values is given.

- Approved under the National Association of Home Builders (NAHB) Research Center Green Seal of Approval
- Utilizing FOAMULAR® XPS insulation can help builders achieve green building certifications including the Environmental Protection Agency's ENERGY STAR®, the National Association of Home Builders' National Green Building certification, and the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) certification
- FOAMULAR® XPS insulation may qualify for The Buy American provision of the American Recovery and Reinvestment Act (ARRA)



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Product and Packaging Data

FOAMULAR® LT30/LT40 Extruded Polystyrene Insulation

Material		Packaging							
Extruded polystyrene closed-cell foam, Type IV		Shipped in poly-wrapped units with individually wrapped or banded bundles.							
Thickness (in)	Product Dimensions Thickness (in) x Width (in) x Length (in)	Pallet (Unit) Dimensions (typical) Width (ft) x Length (ft) x Height (ft)	Square feet per Pallet	Board feet per Pallet	Bundles per Pallet	Pieces per Bundle	Pieces per Pallet	Edges	
FOAMULAR® LT30 Insulation									
2	2 x 48 x 96	4 x 8 x 8	1,536	3,072	8	6	48	Square Edges	
3	3 x 48 x 96	4 x 8 x 8	1,024	3,072	8	4	32		
FOAMULAR® LT40 Insulation									
2	2 x 48 x 96	4 x 8 x 8	1,536	3,072	8	6	48	Square Edges	
2½	2.5 x 48 x 96	4 x 8 x 8	1,152	2,880	6	6	36		
3	3 x 48 x 96	4 x 8 x 8	1,024	3,072	4	8	32		

1. Available lengths and edge configurations vary by thickness. See www.foamular.com for current offerings. Other sizes may be available upon request. Consult your local Owens Corning representative for availability.

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.sustainability.owenscorning.com.

Warranty

FOAMULAR® XPS insulation limited lifetime warranty maintains 90% of its R-value for the lifetime of the building and covers all ASTM C578 properties. See actual warranty for complete details, limitations and requirements at www.foamular.com or www.owenscorningcommercial.com.

Notes

1. R means the resistance to heat flow; the higher the R-value, the greater the insulating power.
2. See actual warranty for complete details, limitations and requirements.

All products described here may not be available in all geographic markets. Consult your local sales office representative for more information.

For more information on the Owens Corning family of building products, contact your Owens Corning dealer, call 1-800-GET-PINK®, or access our web sites: www.foamular.com and www.owenscorning.com.



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This NAHB Research Center Green Approved mark is your assurance that a product is eligible for points toward National Green Building Certification. Visit www.GreenApprovedProducts.com for details.

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