FOAMULAR® LT30/LT40
Extruded Polystyrene (XPS) Rigid Foam Insulation

Description

FOAMULAR® LT30 and LT40 extruded polystyrene (XPS) insulation is suitable for cold storage floors. Durable FOAMULAR® XPS 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.

Features

- Excellent long-term stable insulating performance at R-5[1] per inch
- Exceptional moisture resistance, long-term durability
- Lightweight, durable rigid foam panels are easy to handle and install
- Easy to saw, cut or score

1. R means the resistance to heat flow; the higher the R-value, the greater the insulating power.

Technical Information

This product is combustible. A protective barrier or thermal barrier is required as specified in the appropriate building code. For additional information, 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.

Physical Properties[1]

Property	Test Method[2]	LT30	LT40
Thermal Resistance[3], R-Value (180 day) minimum, hr•ft²•°F/Btu (RSI, °C•m²/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 Strength[4], minimum psi (kPa)	ASTM D1621	30 (207)	40 (276)
Flexural Strength[5], minimum psi (kPa)	ASTM C203	75 (517)	115 (793)
Water Absorption[6], maximum % by volume	ASTM C272	0.10	0.10
Water Vapor Permeance[7], maximum perm (ng/Pa•s•m²)	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 Index[8], 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.

Product and Packaging Data

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.

Standards, Codes Compliance

- Meets ASTM C578 Type IV (LT30) and Type VI (LT40)
- UL Classified. A copy of UL Classification Certificate U-197 is available at www.foamular.com
- See UL ER8811-01 at UL.com
- See www.foamular.com for details on listings, constructions and assemblies
- Meets California Quality Standards; HUD UM #71A
- Compliance verification by RADCO (AA-650)

Limited 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.owenscorning.com.

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.com.

Notes

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

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
- Environmental Product Declaration (EPD) has been certified by UL Environment
- Utilizing FOAMULAR® XPS insulation can help builders achieve green building certifications including the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) certification

AVERAGE 20% RECYCLED CONTENT PRE-CONSUMER

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.

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