



FOAMULAR® THERMAPINK® 25

Extruded Polystyrene (XPS)

Rigid Foam Insulation



Description

Owens Corning® FOAMULAR® THERMAPINK® Extruded Polystyrene (XPS) Insulation is a closed cell, moisture-resistant rigid foam board specially designed for roofing applications.

Features

- Exceptional moisture resistance and outstanding insulation for direct-to-deck application in steel deck roofing systems
- Excellent long-term stable insulating performance with an R-value of R-5 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

Standards, Codes Compliance

- Meets ASTM C578 Type IV (THERMAPINK® 25 Insulation)
- UL Classified. A copy of UL Classification Certificate U-197 is available at www.owenscorning.com
- See UL ER8811-01 at UL.com
- UL (Underwriters Laboratories) Roof Deck Constructions, tested in accordance with UL 1256, "Standard for Fire Test of Roof Deck Constructions" including Roof Deck Construction #457
- FM (Factory Mutual) Class 1 Roof Decks
- ASTM E108 Fire Classified Assemblies
- ASTM E119 Fire Resistance Rated Roof/Ceiling Assemblies
- UL and FM Wind Uplift Rated Assemblies
- Meets California Quality Standards and 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.

Physical Properties¹

Property	Test Method ²	Value
Thermal Resistance ³ , R-Value (180 day) minimum, hr•ft ² •°F/Btu (RSI, °C•m ² /W) @ 75°F (24°C) mean temperature	ASTM C518	
1" Thickness		5.0 (0.88)
1½" Thickness		7.5 (1.32)
2" Thickness		10 (1.76)
3" Thickness		15 (2.64)
@ 25°F (3.9°C) mean temperature		
1" Thickness		5.6 (0.99)
1½" Thickness		8.4 (1.48)
2" Thickness		11.2 (1.98)
3" Thickness		16.8 (2.97)
Long Term Thermal Resistance, LTTR-Value ³ minimum°F•ft ² •hr/Btu (RSI, °C•m ² /W) @ 75°F (24°C) mean temperature	CAN/ULC S770-03	
1" Thickness		5.0 (0.88)
1½" Thickness		7.8 (1.37)
2" Thickness		10.6 (1.87)
3" Thickness		16.2 (2.85)
4" Thickness		22.0 (3.87)
Compressive Strength ⁴ , minimum psi (kPa)	ASTM D1621	25 (172)
Flexural Strength ⁵ , minimum psi (kPa)	ASTM C203	75 (517)
Water Absorption ⁶ , maximum % by volume	ASTM C272	0.10
Water Vapor Permeance ⁷ , maximum perm (ng/Pa•s•m ²)	ASTM E96	1.5 (86)
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 x 10 ⁻⁵ (6.3 x 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 Data¹

Material				Packaging				
Extruded polystyrene closed-cell foam panel with continuous skin on face and back surface.				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
1	1 x 48 x 96	4 x 8 x 8	3,072	3,072	8	12	96	Square
1½	1.5 x 48 x 96	4 x 8 x 8	2,048	3,072	8	8	64	
2	2 x 48 x 96	4 x 8 x 8	1,536	3,072	8	6	48	
3	3 x 48 x 96	4 x 8 x 8	1,024	3,072	8	4	32	
4	4 x 48 x 96	4 x 8 x 8	768	3,072	8	3	24	

1. Product availability and lead times vary by region and by product. Consult your local Owens Corning sales representative for availability and lead times.

Flute Span Capability^{1,4,5}

Steel Deck Type ²	THERMAPINK [®] 25	Rib Opening, Width	Rib Depth
A (narrow rib)	1"	1"	1½"
F (intermediate rib)	1"	1¾"	1½"
B (wide rib)	1½"	2⅝"	1½"
3DR (deep rib)	1½"	2¾"	3" and greater
Long Span	1½"	3⅞" 4⅞"	3" and greater
Long Span	2"	6"	3" and greater
Cellular	Not Permitted ¹	Varies	Varies
Acoustical	Not Permitted ¹	Varies	Varies

- See Underwriters Laboratories Roof Deck Construction #457 for full assembly details. Fire tested in accordance with ANSI/UL 1256, Fire Test of Roof Deck Constructions.
- Minimum steel deck depth permitted is 1½". Minimum 22 MSG. Cellular and acoustical decks were not tested, and are therefore not permitted.
- THERMAPINK[®] 400 and 600 insulations were not tested direct to deck and are not included in the UL #457 or building code listings for direct to deck application.
- Data provided is derived from testing in general accordance with FM 4450 and FM 4470 resistance to foot traffic requirements.
- FM Class 1 under deck fire ratings are not achieved by XPS direct to steel deck assemblies.

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



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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.



OWENS CORNING FOAM INSULATION, LLC
ONE OWENS CORNING PARKWAY
TOLEDO, OHIO, USA 43659

1-800-GET-PINK[®]
www.owenscorning.com

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