Owens Corning™ FOAMULAR® Extruded Polystyrene (XPS) Insulation

Overview

Owens Corning FOAMULAR XPS insulation is a closed cell, moisture-resistant rigid foam board ideal for many roofing applications, including single-ply, inverted roof membrane assemblies (PRMA), tapered, vegetative roofs, plaza decks, and recover roofing.

Features and Benefits

- Exceptional moisture resistance, long-term durability
- Will not corrode, rot, or support mold growth
- Zero ozone depletion potential with 70% less global warming potential than the previous formula
- Lightweight, durable rigid foam panels are easy to handle and install
- Easy to saw, cut, or score

Available Products

- THERMAPINK 25 (Type IV)
- FOAMULAR 404 (Type VI)
- FOAMULAR 604 (Type VII)
- FOAMULAR Tapered Products

Application Notes

- Solvent-based adhesives and mastics are not compatible with polystyrene insulations.
- Cover insulation as soon as possible to protect it from excessive exposure to direct sunlight.
- Product should be installed with the printed surface facing downward.
- Additional protection may be required when product is placed near reflective surfaces.
- See Owens Corning Roofing Systems Guide Specifications for details.
- Protective cardboard disc required if used under RhinoBond® System.

Precautions

- Consult Versico for specific instructions regarding the application of its products to Owens Corning FOAMULAR Extruded Polystyrene (XPS) Insulation.
- Keep Owens Corning FOAMULAR XPS panels dry before, during, and after installation. Owens Corning FOAMULAR XPS should not be installed in rain, heavy fog, or any other conditions that deposit moisture on the surface of the board. Apply only as much Owens Corning FOAMULAR XPS as can be covered by the final roof membrane system on the same day. Avoid exposure to moisture from leaks or condensation.
- The plastic or poly packaging applied at the plant to protect the board during transit should be removed upon receipt to prevent condensation or trapping of moisture, which may cause application problems.
- FOAMULAR XPS should be stored flat, off the ground, protected from the weather. If stored outdoors, a breathable, waterproof covering should be used.

Code Approvals

- FOAMULAR and THERMAPINK XPS insulation meets ASTM C578
- ASTM E119 Fire Resistance Rated Roof/Ceiling Assemblies
- Meets California Quality Standards and HUD UM #71a
- Refer to www.ul.com "Certifications" or FM Approval RoofNav for details on listings, constructions, and assemblies

VERSICO ROOFING SYSTEMS

Owens Corning FOAMULAR Extruded Polystyrene (XPS) Insulation

Typical Properties and Characteristics

	Test Method[2]	Foamular Thermapink 25 Durapink®	Foamular 404/404RB Tapered 400	Foamular 604/604RB Tapered 600
Thermal Resistance[3], R-Value (180 day), minimum hr•ft²•°F/Btu (RSI, m²•°C/W)	ASTM C518	R-5/inch	R-5/inch	R-5/inch
Compressive Strength[4], minimum psi (kPa)	ASTM D1621	25 (172)	40 (276)	60 (414)
Flexural Strength[5], minimum, psi (kPa)	ASTM C203	75 (517)	115 (793)	115 (793)
Water Absorption[6], maximum, % by volume	ASTM C272	0.1	0.05	0.05
Water Vapor Permeance[7], maximum perm (ng/Pa•s•m²)	ASTM E96	1.5 (86)	1.1 (63)	1.1 (63)
Dimensional Stability, maximum, % linear change	ASTM D2126	2.0	2.0	2.0
Flame Spread[8,9]	ASTM E84	5	5	5
Smoke Developed[8,9,10]	ASTM E84	45-175	45-175	45-175
Oxygen Index[8], minimum, % by volume	ASTM D2863	24	24	24
Service Temperature, maximum, °F (°C)	—	165 (74)	165 (74)	165 (74)
Linear Coefficient of Thermal Expansion, in/in/°F (m/m/°C)	ASTM E228	3.5×10^{-5} (6.3×10^{-5})	3.5×10^{-5} (6.3×10^{-5})	3.5×10^{-5} (6.3×10^{-5})
Type Classifications	ASTM C578	Type IV	Type VI	Type VII

1. Properties shown are representative values for 1" thick material, unless otherwise specified. Testing modified as needed for products less than ½" thickness.

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. The R-value for FOAMULAR XPS insulation is provided from testing at two mean temperatures, 40°F and 75°F, and 180 day real-time aged (as mandated by ASTM C578). 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. Testing modified as needed for products less than ½" thickness.

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. Smoke developed is thickness-dependent, therefore a range of values is given.