



FOAMULAR®

Insulation Family Guide for Residential Applications



WHERE QUALITY AND PERFORMANCE MAKE A HOME

Insulation is a critical feature of any home impacting overall comfort by helping maintain a uniform temperature throughout the house. Owens Corning provides home builders and home buyers with a number of insulation solutions to meet their needs.

Every home is different though. Factors such as architecture, climate and building codes combine to create a wide variety of needs which demand an equally wide range of high-performance insulation solutions.

The FOAMULAR® Extruded Polystyrene (XPS) Insulation family of rigid foam board products is here to offer these solutions. Together with EcoTouch® insulation and housewrap, FOAMULAR® insulation is an integral part of Owens Corning® ResidentialComplete® Wall Systems.

FOAMULAR® XPS INSULATION FAMILY VALUES FOR RESIDENTIAL APPLICATIONS

COMPREHENSIVE LINE OF PRODUCTS.

- Wide choice of sizes, thicknesses and edges for fast installation, less labor.
- Choose the strength you need, from 15 to 100 psi.
- Available unfaced or with film facing for added damage resistance.

LIFETIME LIMITED WARRANTY.*

- For the life of the home or building.
- Maintains at least 90% of its R-value†.
- Covers all product properties - ASTM C578.



* R-value means resistance to heat flow. The higher the R-value the greater the insulating power

† As manufactured, Fiberglas® insulation is resistant to mold growth. However, mold growth can occur on building materials, including insulation, when it becomes contaminated with organic material and when water is present. To avoid mold growth on Fiberglas® insulation, remove any water that has accumulated and correct or repair the source of the water as soon as possible. Insulation that has become wet should be inspected for evidence of residual moisture and contamination, and any insulation that is contaminated should be promptly removed and replaced.

EXCEPTIONAL MOISTURE RESISTANCE.

- Resists moisture† and retains R-value even after exposure to standing water, wet soil and more.
- Resists common acid soils and decay.
- Effectively blocks mildew†, corrosion and rot.

OUTSTANDING INSULATING PROPERTIES.

- High, stable R-value (5 per inch of product thickness).
- Higher R-value than wood fiber, plywood or 1/2" gypsum board products.
- Readily combines with EcoTouch® insulation for greater R-value in walls.
- Used in fire-rated exterior wall assemblies for application in single and multi-family residential buildings, office buildings, schools, shopping centers and more.

INCREDIBLE EASE OF USE.

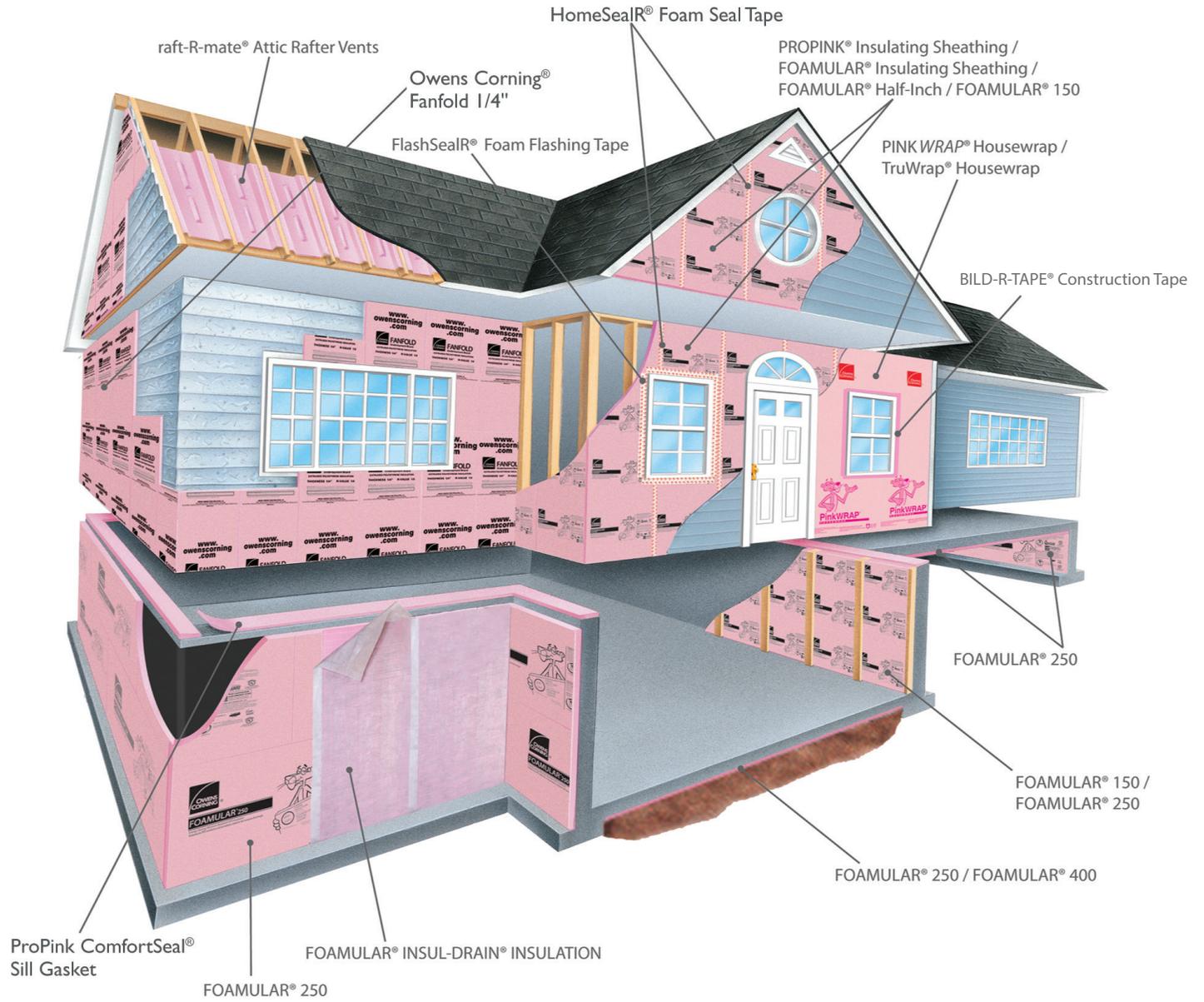
- Easy to handle, score, cut and install; no special tools needed.
- Can be used on either wood or steel framing or concrete walls.
- Compatible with common exterior finishes & claddings.
- Meets all applicable codes and standards.

SUSTAINABLE BENEFITS.

- Foamular is certified to meet indoor air quality standards under the stringent GREENGUARD Gold Certification Program.
- Certified by SCS Global Services to contain pre-consumer recycled content.
- Made with a zero ozone depletion formula.
- Reusable.



THE OWENS CORNING® FOAMULAR® XPS INSULATION FAMILY ALBUM



FOAMULAR® INSULATION PHYSICAL PROPERTIES⁽¹⁾

| PROPERTY | TEST METHOD ² | FOAMULAR® 150 Insulation INSULPINK® Insulating Sheathing | FOAMULAR® 250 Insulation INSUL-DRAIN® Insulation | FOAMULAR® 400 Insulation |
|--|--------------------------|--|---|--|
| Thermal Resistance, R-Value (180 day) ³ , minimum, °F * ft ² * hr/btu (RSI, °C * m ² /W) | ASTM C518 | R-5/inch | R-5/inch | R-5/inch |
| Compressive Strength, minimum psi (kPa) ⁴ | ASTM D1621 | 15 | 25 (172) | 40 (276) |
| Flexural Strength, minimum psi (kPa) ⁵ | ASTM C203 | 40 (276) | 50 (345) | 90 (621) |
| Water Absorption, maximum % by volume ⁶ | ASTM C272 | 0.3 | 0.3 | 0.05 |
| Water Vapor Permeance, maximum perm (ng/Pa/s/m ²) ⁷ | ASTM E96 | 1.5 (86) | 1.5 (86) | 1.1 (63) |
| Dimensional Stability, maximum % linear change | ASTM D2126 | 2.0 | 2.0 | 2.0 |
| Flame Spread ^{8,9} | ASTM E84 | 10 | 10 | 10 |
| Smoke Developed ^{8,9,10} | ASTM E84 | 175 | 175 | 175 |
| Oxygen Index, minimum % by volume ⁸ | 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 x 10 ⁻⁵ (6.3x10 ⁻⁵) | 3.5 x 10 ⁻⁵ (6.3x10 ⁻⁵) | 3.5 x 10 ⁻⁵ (6.3x10 ⁻⁵) |
| Type Classifications | ASTM C578 | Type X | Type IV | Type VI |

- Properties shown are representative values for 1" thick material, unless otherwise specified. Testing modified as needed for products less than 1/2" thickness.
- Modified as required to meet ASTM C578
- 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 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.

- Values at yield or 10% deflection, whichever occurs first. Testing modified as needed for products less than 1/2" thickness.
- Value at yield or 5%, whichever occurs first
- Data ranges from 0.00 to value shown due to the level of precision of the test method
- Water vapor permeance decreases as thickness increases
- These laboratory tests are not intended to describe the hazards presented by this material under actual fire conditions
- Data from Underwriters Laboratories Inc.* classified. See Classification Certificate U-197
- ASTM E84 is thickness-dependent, therefore a range of values is given

THERMAL RESISTANCE R-VALUES[†] FOR TYPICAL FRAMED WALL

| EXTERIOR FINISH | R-VALUE | INSULATING BLANKET THICKNESS (IN.) | DESIGN THERMAL RESISTANCE (R) VALUE (WINTER CONDITIONS) FOR FOAMULAR® THICKNESS ⁽¹⁾ | | |
|----------------------------------|---------|--|---|---------------|-------------|
| | | | 1/2" (R-3) | 3/4" (R-4) | 1" (R-5) |
| 3/4" Wood Siding | 1.05 | 3 1/2" R13 | 18.50 | 19.45 | 20.76 |
| | | 3 1/2" R15 | 20.50 | 21.45 | 22.76 |
| | | 6 1/4" R19 | 24.50 | 25.45 | 26.76 |
| 1/2" Plywood Hardboard Siding | .62 | 3 1/2" R13 | 18.07 | 19.02 | 20.33 |
| | | 3 1/2" R15 | 20.07 | 21.02 | 22.33 |
| | | 6 1/4" R19 | 24.07 | 25.02 | 26.33 |
| Vinyl Siding | .71 | 3 1/2" R13 | 18.16 | 19.11 | 20.42 |
| | | 3 1/2" R15 | 20.16 | 21.11 | 22.42 |
| | | 6 1/4" R19 | 24.16 | 25.11 | 26.42 |
| 4" Face Brick | .44 | 3 1/2" R13 | 18.90 | 19.85 | 21.16 |
| | | 3 1/2" R15 | 20.90 | 21.85 | 23.16 |
| | | 6 1/4" R19 | 24.90 | 25.85 | 27.16 |
| 1" Stucco | .20 | 3 1/2" R13 | 17.65 | 18.60 | 19.91 |
| | | 3 1/2" R15 | 29.65 | 20.60 | 21.91 |
| | | 6 1/4" R19 | 23.65 | 24.60 | 25.91 |

[†] The higher the R-value, the greater the insulation value. Find out why in the Seller's Fact Sheet on R-values.

* Nominal thickness

FOAMULAR® PINK Foam Insulation is produced using the Owens Corning™ patented HYDROVAC® process technology.

Note: (1) resistances are calculated, including Inside/Outside air films, based upon procedures and design values for all components at 75° F mean temperature from current ASHRE Handbook of Fundamentals.

FOAMULAR® XPS INSULATION RESIDENTIAL PRODUCT SELECTION GUIDE

| RESIDENTIAL APPLICATION | PRODUCT | ASTM C578 Type | R-VALUE | THICKNESS (in Inches) | AVAILABILITY | USES |
|--------------------------|--|----------------|--------------------------|----------------------------------|--|---|
| General Purpose | FOAMULAR® 150 15 psi | X | R-5.0 R-7.5 R-10 | 1" 1-1/2" 2" | Square, Scored Square and Tongue & Groove Edges 24"x96", 48"x96" or 108" | For exterior sheathing insulation projects and interior of basement walls in lieu of InsulPink® insulation. |
| | FOAMULAR® 250 25 psi | IV | R-5.0 R-7.5 R-10 | 1" 1-1/2" 2" | Square, Scored Square and Tongue & Groove Edges 24"x96", 48"x96" or 108" | For exterior of foundation walls, underslab for slab foundations or basement foundations and crawlspaces. |
| WALL | | | | | | |
| Sheathing | FOAMULAR® Insulating Sheathing 15 psi | X | R-3.0 R-4.0 R-5.0 | 1/2"* 3/4" 1" | Square and Tongue & Groove Edges Film Faced Both Sides 48"x96" or 108" *Square only | Exterior above grade walls and underneath vinyl siding or other claddings by reducing thermal bridging from wood studs or continuous insulation. |
| | FOAMULAR® PROPINK® Insulating Sheathing 15 psi | X | R-3.0 R-4.0 R-5 | 1/2" 3/4" 1" | Tongue & Groove Reinforced Fill Facing on both sides 48"x96" or 108" | Exterior above grade walls and underneath vinyl siding or other claddings by reducing thermal bridging from wood studs or continuous insulation. Extra strength with its reinforced laminated film. |
| | FOAMULAR® Half-Inch 15 psi | X | R-3 | 1/2" | Square and Shiplap Edges 24"x96", 48"x96" or 108" | For above grade sheathing. |
| RE-SIDING | | | | | | |
| | FOAMULAR® Fanfold Foam Residing Board | | R-1.0 | 1/4" | 4'x50'; folded every 2 feet | For new or replacement siding. Laminated on one side. |
| FOUNDATION | | | | | | |
| Under Slab | FOAMULAR® 400 40 psi | IV IV | R-5 R-10 | 1" 2" | 24"x96" 24", 48" and 96" | For under slab, concrete floors. High load applications. |
| Exterior Wall Foundation | FOAMULAR® 250 25 psi | IV | R-5.0 R-7.5 R-10 | 1" 1-1/2" 2" | Square, Scored Square and Tongue & Groove Edges 24"x96", 48"x96" or 108" | For exterior foundation walls; insulates and protects the waterproofing membrane. |
| | FOAMULAR® INSUL-DRAIN® 25 psi | IV | R-4.4 R-6.9 R-10.6 | 1" 1-1/2" 2-1/4" | 1"x48"x96" 1.5"x48"x96" 2.25"x48"x96" | For exterior foundation walls; provides superior drainage capacity & protection for ground water concerns. |
| ACCESSORIES | | | | | | |
| | HomeSealR® Foam Joint Tape | | | 3" Width | 180' length | Provides reliable adhesion to FOAMULAR® XPS that is both durable and flexible. |
| | FlashSealR® Foam Flashing Tape | | | 4" Width 6" Width 9" Width | 90' length | Provides reliable adhesion to FOAMULAR® XPS and seals the rough openings around windows and doors; durable and flexible. |
| | PINKWRAP® Housewrap | | | | 3'x100' / 9'x100' / 9'x150' / 10'x150' / 9'x195' | Reduces air infiltration through residential exterior side wall construction. |
| | TruWrap® Housewrap | | | | 3'x100' / 4.5'x100'; 9'x100' / 10'x100'; 9'x150' / 10'x150'; 9'x195' / 10'x195' | Reduces air infiltration through residential exterior side wall construction; budget-friendly. |
| | BILD-R-TAPE® Construction Tape | | | 2.375" Width | 72 yards length | Secures the seams of Owens Corning housewrap products and general construction repair. |
| | ProPink ComfortSeal® Sill Gasket | | | 1/4" | Air Infiltration Gasket, 3-1/2", 5-1/2" and 7-1/2" width; 50' length | Helps eliminate drafts around foundations. |
| | raft-R-mate® Attic Rafter Vent | | | | 22-1/2" x 44" Perforated for use between 24" or 16" rafter spacing | Assists in the constant flow of air and increases attic ventilation. |

FOAMULAR® XPS INSULATION PLANT LOCATIONS

FOAMULAR® XPS manufacturing plants provide regionally available material manufactured and sourced within a 500 mile radius of project locations in most areas of the country.



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.

FOAMULAR® Insulation:



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