



**A choice of products for all insulating sheathing applications.**

FOAMULAR Insulating Sheathing (IS), FOAMULAR 150, and FOAMULAR 250 are ideal for either wood or metal framing construction, and suit a variety of exterior finishes. These strong, lightweight, rigid foam panels with a film face offer greater impact resistance than competitive products. In addition, Owens Corning's patented process technology makes FOAMULAR insulation highly resistant to moisture. This permits the product to retain its initial R-value, year after year – even after prolonged exposure to water leakage, humidity, condensation and freeze/thaw cycling. FOAMULAR insulation products offer these benefits:

- High R-value (R-5 per inch of product thickness) is better than wood fiber, plywood or ½" gypsum panels.
- Readily combines with blanket-type insulation for greater R-value.
- Used in fire-rated exterior wall assemblies for application in office buildings, schools, shopping centers and more.
- Available with tough film facers for added damage-resistance.
- Easy to handle, cut and install without the difficulties of foil facing.
- Available in 4' x 8' or 4' x 9' sizes for faster installation and less labor.
- Effectively impedes mildew, corrosion and rot.
- Meets building codes and standards.



## Product Data

FOAMULAR extruded polystyrene is a closed-cell foam panel with clear film facers on both sides of Insulating Sheathing (IS) and natural skin surfaces on other products.

Aged R-value [thermal resistance] ASTM Test Method C518	FOAMULAR IS 1/2"	FOAMULAR 250 FOAMULAR IS 3/4"	FOAMULAR 150 FOAMULAR 250 FOAMULAR IS 1"
@ 75°F mean temperature	3.0	3.8	5.0
@ 40°F mean temperature	3.2	4.1	5.4
<b>Size</b>	4' x 8' [or 9']	4' x 8' [or 9']	4' x 8' [or 9']
<b>Edge</b>	Square	T&G	T&G
<b>Weight</b> [approx per 1000 ft <sup>2</sup> ]	110 lb	140 lb	150 lb
<b>Packaging</b> [4' x 8']			
Pieces per bundle	20	16	12
Bundles per unit†	8	8	8
Pieces per unit	160	128	96
Square feet per bundle	640	512	384
Square feet per unit	5,120	4,096	3,072
Square feet per truck	61,440	49,152	36,864
Units per truck	12	12	12
† 9' bundles per unit (10 units per truck)	10	10	10

\*Nominal Thickness



# FOAMULAR® Insulating Sheathing

## Product Application

- Used as sheathing over all exterior walls in wood or metal framing construction, FOAMULAR insulation creates an effective insulating envelope over the entire structure
- For re-siding applications, FOAMULAR insulation can be installed directly over the existing siding to reduce air infiltration and create a smooth siding surface for the new siding.

## Technical Information

- FOAMULAR insulation is a non-structural material, and must be installed on framings that are independently structurally adequate to meet required construction and service loading conditions.
- FOAMULAR insulation is practical for all buildings under normal temperature conditions but should not be used in contact with chimneys, heater vents, steam pipes or other surfaces where temperatures exceed 165°F. It is not recommended for applications where sustained temperatures exceed 150°F.
- All constructions should be evaluated for necessity of providing vapor retarders. See the current ASHRAE Handbook of Fundamentals.

For more technical information and installation directions, consult the FOAMULAR Tech Guide, Sweets catalog or product packaging.

## Typical Physical Properties<sup>(1)</sup>

Property (units)	ASTM Method <sup>(2)</sup>	Product/Values			
		FOAMULAR 250	FOAMULAR 150	FOAMULAR IS	FOAMULAR Half-inch
Thermal conductivity max. K- [Btu x in/ft <sup>2</sup> x hr x °F max.] <sup>(3)</sup>					
@ 75°F mean temperature	C518	0.20	0.20	0.20	0.20
@ 40°F mean temperature		0.18	0.18	0.18	0.18
Flexural strength <sup>(4)</sup>					
Average min.	C203	75	60	65	80
Water absorption (Max. % by volume) <sup>(5)</sup>	C272	0.1	0.1	0.1	0.05
Water vapor permeance (Max. perm.) <sup>(6)</sup>	E96	1.1	1.1	0.2	1.2
Water affinity	-	hydrophobic			
Water capillarity	-	none			
Dimensional stability (Max. % change) <sup>(7)</sup>	D2126	2.0	2.0	2.0	2.0
Maximum service Temperature, °F	-	165	165	165	165
Flame spread <sup>(8)(9)</sup>	E84	5	5	5	5
Smoke developed <sup>(8)(9)(10)</sup>	E84	45-175	45-175	45-145	45-145
Oxygen index <sup>(8)</sup> (min.)	D2863	24	24	24	24
Thermal expansion	-	2.7 x 10 <sup>-5</sup>	2.7 x 10 <sup>-5</sup>	2.7 x 10 <sup>-5</sup>	2.7 x 10 <sup>-5</sup>

Notes: (1) Properties listed are representative values based upon most recent product quality audit data. Based on 1" thickness except for FOAMULAR Half-inch. For specification range limits, consult your sales representative. (2) Modified as required to meet ASTM C578. (3) Thermal resistance (R) of 1" thickness: 5.0 (at 75°F mean temperature), 5.4 (at 40°F [hr. x ft<sup>2</sup> x °F/Btu]). (4) Value at yield or 5% deflection. (5) Data ranges from 0.00 to value shown due to the level of precision of the test method. (6) Based on one-inch thick specimens. Consideration of the permeance data is preferred. (7) Data ranges from 0.0 to 2.0. (8) These laboratory tests are not intended to describe the hazard presented by this material under actual fire conditions. (9) Data from Underwriters Laboratories, Inc.® classified. See Classification Certificate U-197. (10) Thickness- and density-dependent, therefore a range of values is given.

### Caution

Combustible. This product will ignite if exposed to fire of sufficient heat and intensity. This product should be installed only with a gypsum board on the interior side of the wall. During shipping, storage, installation and use, this product should not be exposed to open flame or other ignition sources.

### Note

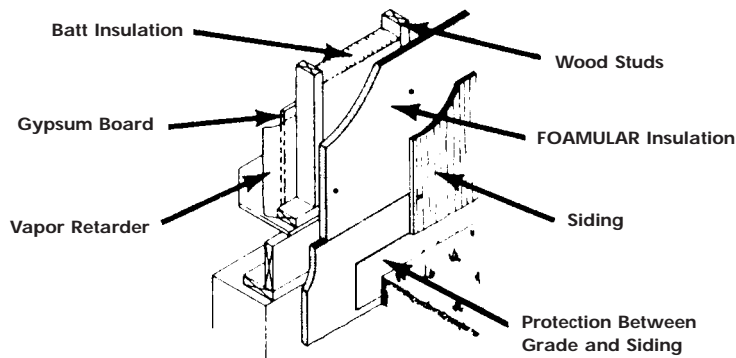
All products described here may not be available in all geographic markets. Consult your local sales office representative for more information.

## Thermal Resistance R-values for Typical Frame Walls

Exterior Finish	Insulating Blanket Thickness (in)		Design Thermal Resistance R-value for FOAMULAR Insulation Thickness <sup>(1)</sup>		
			1/2" (R-3)	3/4" (R-4)	1" (R-5)
3/4" Wood siding (R-1.05)	3 1/2"	R13	18.50	19.45	20.76
	6"	R19	24.50	25.45	26.76
1/2" Plywood/hardboard siding (R-.62)	3 1/2"	R13	18.07	19.02	20.33
	6"	R19	24.07	25.02	26.33
Vinyl siding (R-.71)	3 1/2"	R13	18.16	19.11	20.42
	6"	R19	24.16	25.11	26.42
4" Face brick (R-.44)	3 1/2"	R13	18.90	19.85	21.16
	6"	R19	24.90	25.85	27.16
1" Stucco (R-.20)	3 1/2"	R13	17.65	18.60	19.91
	6"	R19	23.65	24.60	25.91

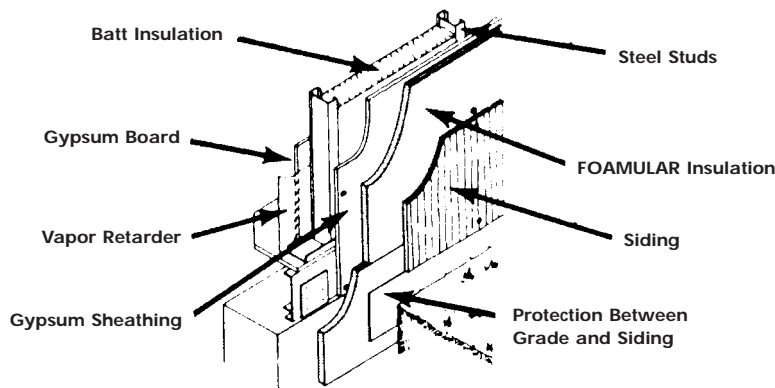
Note: (1) Resistances are calculated, including Inside/Outside air films, based upon procedures and design values for all components at 75°F mean temperature from 1997 ASHRAE Handbook of Fundamentals.

### FOAMULAR Insulation Used with Wood Stud Framing Application (Shown in 1-hour fire-rated assembly. Design No. U330)



### FOAMULAR Insulation Used with Metal Frame Application (Shown in 1-hour fire-rated assembly. Design No. U460)

FOAMULAR Insulation used with steel stud framing application.



## Standards and Code Compliance

- Accepted by code authorities under the following research reports: BOCAI 91-54; ICBO 3628 and SBCCI & ESI 9727.
- Meets HUD/FHA Use of Materials Bulletin No. 71 for sheathing and ASTM C-578
- Underwriters Laboratories, Inc.® classified; see Certificate U-197.

### Fire Rated Stud Wall Assemblies

For fire rated wall assembly construction, refer to current edition of Underwriter's Laboratories, Inc. Fire Resistance Directory, Design No.'s U326, U330 (wood studs); U460, V414 (steel studs); U902, U912 (masonry).

## Customer Order Centers

- Illinois: Rockford (800) 255-4646  
FAX: (800) 553-7465
- Ohio: Tallmadge (800) 221-7888  
FAX: (800) 238-8760
- Washington: Tacoma (800) 255-4646

**Technical information:**  
(800) 828-7155

**Export sales office:**  
(330) 633-1105

FOAMULAR insulation is produced by Owens Corning's patented HYDROVAC® process technology.

For more information on the Owens Corning family of home building products, contact your Owens Corning dealer, call 1 - 8 0 0 - G E T - P I N K or access our Web site:  
[www.owenscorning.com](http://www.owenscorning.com)



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