

# CertiFoam® product guide

072000/DFP



## CertiFoam 15

48" x 96" x 1", 1½", 2"  
48" x 108" x 1"

CertiFoam 15 is rigid extruded polystyrene insulation suitable for applications where higher compression resistance is not required. The continuous closed cell structure and extruded skin surface provides excellent moisture resistance and thermal performance. CertiFoam 15 meets or exceeds ASTM C578 Type X and FMVSS 302.

CertiFoam 15 is machined square edge and scored on 16" and 24" centers.



## CertiFoam Drainage Board

Drainage Board is CertiFoam 25 or CertiFoam 40 with drainage channels for use with waterproofing membranes in protected membrane roofs, plazas or other applications requiring channels to help promote drainage. Channel options include 96" edges only, all four edges or 96" channels 12" o.c. See CertiFoam 25 or CertiFoam 40 for specifications.

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**\*Limited Availability. Contact your DiversiFoam Products representative for information.**

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For additional information regarding the use of CertiFoam with dark colored membranes or coverings see the CertiFoam Roofing Brochure.

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## CertiFoam 25 SE & SL

CertiFoam 25 SE (square edge)  
48" x 96" x ¾", 1", 1½", 2", 2½", 3"  
\*24" x 96" x 1", 1½", 2", 2½", 3"  
\*16" x 96" x 1", 1½", 2", 2½", 3"  
CertiFoam 25 SL (ship-lap edge)  
48" x 96" x ¾", 1", \*1½", \*2"  
48" x 108" x ¾", 1"

CertiFoam 25 SE & SL are rigid extruded polystyrene foam boards suitable for most common residential, commercial roofing and industrial insulation applications. The continuous closed cell structure and extruded skin surface provide superior moisture resistance, high compressive strength and excellent long term thermal performance. CertiFoam 25 meets or exceeds ASTM C578 Type IV, FMVSS 302 and AASTHO M230 Type IV.

CertiFoam 25 SE is stocked machine square on all edges and scored on 16" and 24" centers for flexible trimming on cavity and other wall applications.

CertiFoam 25 SE is available without scoring. Be sure to order No Score for this option.



## CertiLite Drainage Board

48" x 48" x \*1", \*1½", \*2", \*2½", \*3"  
CertiLite Drainage Board is rigid extruded polystyrene foam board with drainage channels 12" on center in both directions to protect, insulate and facilitate drainage with waterproofing membranes, particularly in horizontal applications. When used in conjunction with RayLite EPS insulation below a roof membrane, CertiLite provides a superior yet economical protected membrane system. CertiLite meets or exceeds ASTM C578 Type IV.

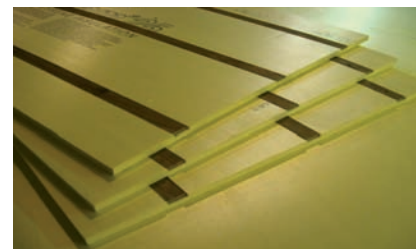


## CertiFoam 40

48" x 96" x 2", 3"

CertiFoam 40 is rigid extruded polystyrene insulation board used in applications requiring higher compressive strengths than are available with CertiFoam 25 or CertiFoam 15. Geotechnical insulation, freezer floors, in-floor heat systems, green roofs and plazas are a few of the applications that may require the additional compressive strength of CertiFoam 40.

CertiFoam 40 is machined square on all edges. CertiFoam 40 meets or exceeds ASTM C578 Type VI, FMVSS 302 and ASSHTO M230 Type VI.



## CertiStud

48" x 96" x 1", 1½", 2"

CertiStud pre-furred wall insulation is rigid extruded polystyrene foam board with furring strips imbedded in the foam board to help eliminate thermal shorts through the foam for a more energy efficient application. CertiStud meets or exceeds ASTM C578 Type IV.

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CertiFoam 60, which meets or exceeds ASTM C578 Type VII, is currently available as a special order only. Contact your DiversiFoam Products representative for additional information.

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Need special products, sizes, custom fabrication or lamination? Call us, **WE DO MORE!**

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## Typical properties of CertiFoam brand insulation<sup>1</sup>

	ASTM test method	CertiFoam 15	CertiFoam 25 SE, SL	CertiLite System Board	CertiFoam 40
<b>Insulation Properties</b>					
Thermal Conductivity, k (Btu/hr. sq. ft.°F)	C 177-76e <sup>2</sup> or				
5-Year Aged (Design) Values <sup>3</sup>	C 518-76e <sup>2</sup>				
@ 25°F mean		0.178	0.178	0.178	0.178
@ 40°F mean		0.185	0.185	0.185	0.185
@ 75°F mean		0.200	0.200	0.200	0.200
6-Month Aged Values <sup>4</sup>					
@ 75°F mean		0.192	0.192	0.192	0.192
<b>Water Resistant Properties</b>					
Water Absorption (% by volume)	D 2842-69 <sup>6</sup> C272-76 <sup>7</sup>	1.0 < 0.1	1.0 < 0.1	1.0 < 0.1	1.0 < 0.1
Water Vapor Permeance (perm) Maximum	E 96-80 <sup>8</sup>	1.0	1.0	1.0	1.0
<b>Mechanical Properties</b>					
Compressive Strength (lb./sq. in.)	D 1621-73	20 <sup>9</sup>	40 <sup>9</sup>	40 <sup>9</sup>	50 <sup>10</sup>
Minimum (Specification) Value		15	25	25	40
<b>Miscellaneous Properties</b>					
Maximum Recommended Use Temperature (°F)		165	165	165	165
Linear Coefficient of Thermal Expansion (in./in. °F)	D696	3.5x10 <sup>-5</sup>	3.5x10 <sup>-5</sup>	3.5x10 <sup>-5</sup>	3.5x10 <sup>-5</sup>

## Notes:

- <sup>1</sup> Typical property values shown are based principally on most recent production audit and sampling data. For specific property ranges and bounds, contact your DiversiFoam Products representative.
- <sup>2</sup> Because of ongoing technical discussions regarding the complete application of test methods C117-76 and C518-76, traditional industry methods for determining the thermal conductivity of low density insulations are used. Test uncertainty of thicker foam insulations is expected to be less than 5 percent from listed values.
- <sup>3</sup> Recommended typical design values after five-year aging at 75°F.
- <sup>4</sup> Partially aged values after six-month aging at 75°F or three-month aging at 140°F. These values are not recommended for use in design calculations.
- <sup>6</sup> Test precision is plus or minus 1.0 percent by volume.
- <sup>7</sup> Values will be between 0.0 and the value shown.
- <sup>8</sup> Desiccant method. For all CertiFoam products one inch or greater in thickness.
- <sup>9</sup> Vertical compressive strength at 10% deformation or yield, whichever occurs first. Structural applications involving high continuous loads, high temperatures, or non-uniform loads may require higher safety factors based on minimum specification values.
- <sup>10</sup> Vertical compressive strength at 5% deformation or yield, whichever occurs first. To minimize viscoelastic deformation with time in load-bearing applications, higher safety factors are recommended: 3:1 for dead loads, and 5:1 for live or combined loads. Elevated temperatures may also require higher safety factors.

## Thermal resistance (R-value) of five-year aged CertiFoam

Nominal Thickness (in.)	@ 25°F Mean Temperature	@ 40°F Mean Temperature	@ 75°F Mean Temperature
1/2	2.8	2.7	2.5
3/4	4.2	4.1	3.8
1	5.6	5.4	5.0
1-1/2	8.4	8.1	7.5
2	11.2	10.8	10.0
2-1/2	14.0	13.5	12.5
3	16.9	16.2	15.0

## ASTM C578-10 specifications for rigid cellular polystyrene thermal insulation

This standard supercedes Federal Specifications HH-I-524 B, HH-I-524 C, and ASTM C578-08

	Type I	Type VIII	Type II	Type IX	Type XIV	Type X	Type IV	Type VI	Type VII
<b>Insulation Material</b>									
Expanded polystyrene (EPS)	EPS	EPS	EPS	EPS	EPS	XEPS	XEPS	XEPS	XEPS
Extruded polystyrene (XEPS)									
<b>Physical Properties</b>									
Density, minimum lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	0.9 (15)	1.15 (18)	1.35 (22)	1.8 (29)	2.4 (38)	1.30 (21)	1.55 (26)	1.8 (29)	2.2 (35)
Thermal resistance of 1.00 in. (25.4 mm) thickness, minimum °F-ft <sup>2</sup> -h/Btu (k-m <sup>2</sup> /W) at mean temperature:									
40°F (4.4°C)	4.0 (.70)	4.2 (0.74)	4.4 (.77)	4.6 (0.81)	4.6 (0.81)	5.4 (.95)	5.4 (.95)	5.4 (.95)	5.4 (.95)
75°F (23.9°C)	3.6 (.63)	3.8 (.67)	4.0 (.70)	4.2 (0.74)	4.2 (0.74)	5.0 (.88)	5.0 (.88)	5.0 (.88)	5.0 (.88)
Compressive resistance at yield or 10% deformation, whichever occurs first (with skins intact), minimum, psi (kPa)	10.0 (69)	13.0 (90)	15.0 (104)	25.0 (173)	40.0 (276)	15.0 (104)	25.0 (173)	40.0 (276)	60.0 (414)
Flexural strength, minimum, psi (kPa)	25.0 (173)	30.0 (208)	35.0 (240)	50.0 (345)	60.0 (414)	40.0 (276)	50.0 (345)	60.0 (414)	75.0 (517)
Water vapor permeance of 1.00 in. (25.4mm) thickness, max, perm (ng/Pa-s-m <sup>2</sup> )	5.0 (287)	3.5 (201)	3.5 (201)	2.0 (115)	2.5 (143)	1.5 (86)	1.1 (.63)	1.1 (.63)	1.1 (.63)
Water absorption by total immersion, maximum, volume %	4.0	3.0	3.0	2.0	2.0	0.3	0.3	0.3	0.3
Dimensional stability, (change in dimensions), maximum, %	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Oxygen index, minimum, volume %	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0	24.0
<b>Product meets or exceeds Type:</b>									
CertiFoam 15						X			
CertiFoam 25 SE, SL							X		
CertiLite Drainage Board							X		
CertiFoam 40								X	
CertiFoam 60									X

