

## Holey-Board

### EPS Insulation for Lightweight Concrete Roofs

Holey-Board is Dyplast Product's expanded polystyrene (EPS) foam insulation specifically designed for use in lightweight concrete roof applications. It is a rigid, closed cell, lightweight, resilient, foamed plastic with excellent physical properties. When structural concrete roofing applications demand high value insulation, Holey-Board leads the way. It cost-effectively provides superior energy efficiency, temperature range, damage and moisture control, low flammability rating, and low moisture vapor permeability.

Dyplast Products' new facility utilizes the latest EPS technology and equipment, producing quality that leads the industry. Holey-Board is lightweight, sturdy, and workable, making it easy enough for one person to handle, shape, and install. Holey-Board is available in either 2'x4' (.61m x 1.2m) or 4'x4' (1.2m x 1.2m) panels, in thicknesses from 1" (25mm) to 12" (305mm). Custom sizes are also available. Strategically placed and sized holes penetrate the panels, providing excellent structural adherence to the concrete slurry beneath the panels, and the lightweight concrete above.

#### DESIGNED TO ENDURE

With an R-value per inch of up to 4.35 for 2 lb/ft<sup>3</sup> density, Holey-Board maintains constant insulation value. Long-lasting, durable Holey-Board is designed to endure through the life of the roof. Holey-Board is the preferred choice for insulated, lightweight concrete roof decks.

- Wind uplift rating of 150 mph meets or exceeds Miami-Dade County, Florida code requirements
- Excellent insulating value
- Endurance over the life of the roof
- Excellent workability and handling (low dust)
- Easily sloped to ensure maximum drainage
- Low moisture absorption, preventing warping, cracking and buckling
- Long-term storage with minimal protection

#### R-VALUE

DENSITY lb/ft <sup>3</sup>	NOMINAL THICKNESS					
	0.75"	1"	2"	3"	4"	5"
1.0# @ 40F @ 75F	3.13 2.89	4.17 3.85	8.30 7.69	12.50 11.49	16.60 15.38	20.80 19.23

# 2 lb/ft<sup>3</sup> density can have considerably higher R-Values

**Dyplast Products** is the preeminent manufacturer of polyisocyanurate and expanded polystyrene rigid foam products, and also offers a variety of complementary products for commercial, industrial, and residential customers. With world-class production facilities in Miami, Florida, we offer our customers unsurpassed responsiveness using a wide range of product configurations. Our customer focused staff, combined with our sound financial footing, ensures we deliver incomparable value to our customers far into the future.

**For more information on Dyplast Products, or additional technical data on this product, visit [WWW.DYPLASTPRODUCTS.COM](http://WWW.DYPLASTPRODUCTS.COM).**

#### COMPLIANCES AND APPROVALS

Holey-Board has been tested and found to meet the requirements of the specifications listed below. A Dyplast Products representative can provide you assistance in determining suitability of these and any unlisted specifications.

##### ASTM Compliance:

- ASTM C 578-01

##### Factory Mutual Compliance:

- FM 4450 approvals for Class 1 fire and 1-150 wind uplift requirements

##### Other Compliances:

- Miami-Dade County, Florida Product Control No. 07-1107.08
- UL Evaluation Report #BRYX.R4812



#### SUSTAINABILITY

Concerned about the environment? So is Dyplast Products! That's why all our products are manufactured in a CFC/HCFC - free environment. Holey-Board, made from our EPS rigid foam, is an inert, organic material produced from petroleum and natural gas byproducts. It provides no nutritive value to plants, animals or micro-organisms. It will not rot, is highly resistant to mildew, and is also recyclable.

Physical Properties <sup>1</sup>	ASTM Method	Units	TYPE I	TYPE VIII	TYPE II	TYPE IX
Density, minimum	D 303 or 1622	lb/ft <sup>3</sup>	0.9	1.15	1.35	1.8
Density Range		lb/ft <sup>3</sup>	0.90 to 1.14	1.15 to 1.34	1.35 to 1.79	1.80 to 2.20
Compressive Strength (10% deformation)	D 1621	lb/in <sup>2</sup>	10 to 14	13 to 18	15 to 21	25 to 33
Shear Strength	C 273	lb/in <sup>2</sup>	18 to 22	23 to 25	26 to 32	33 to 37
Shear Modulus		lb/in <sup>2</sup>	280 to 320	370 to 410	460 to 500	600 to 640
Modulus of Elasticity		lb/in <sup>2</sup>	180 to 220	250 to 310	320 to 360	460 to 500
Tensile Strength	D 1623	lb/in <sup>2</sup>	16 to 20	17 to 21	18 to 22	23 to 27
Flexural Strength	C 203	lb/in <sup>2</sup>	25 to 30	30 to 38	40 to 50	50 to 75
K-Factor: Thermal Conductivity	C 518	BTU-in/hr-ft <sup>2</sup> -F				
25 F			0.23	0.22	0.21	0.20
40 F			0.24	0.235	0.22	0.21
75 F			0.26	0.255	0.24	0.23
R-Value: Thermal Resistance (1" thick)	C 518	hr-ft <sup>2</sup> -F/BTU				
25 F			4.35	4.54	4.73	5.00
40 F			4.17	4.25	4.55	4.76
75 F			3.85	3.92	4.17	4.35
Water Absorption	C 272	% by Volume	< 4.0	< 3.0	< 3.0	< 2.0
Water Vapor Transmission	E 96	perm-inch	2.0 to 5.0	1.5 to 3.5	1.0 to 3.5	0.6 to 2.0
Capillarity	--	--	none	none	none	none
Coefficient of Thermal Expansion	D 696	in/in-F	0.000035	0.000035	0.000035	0.000035
Maximum Service Temperature		F				
Long term exposure			167	167	167	167
Intermittent exposure			180	180	180	180
Oxygen Index	D 2863	%	24	24	24	24

1. These are nominal values obtained from representative product samples, subject to normal manufacturing variances. For additional ranges and specifications, contact Dyplast Products.

### FABRICATION AND INSTALLATION

Holey-Board insulation is easily fabricated during manufacture to meet specific design and dimensional requirements. Further, because of its light weight, it is easily stored, handled, and installed on the job site. It can be cut to shape with ordinary tools to ensure tight joints, thus eliminating heat loss.

### COST EFFICIENCY

Holey-Board insulation typically costs less than other rigid board insulations when compared on the basis of R-value. When evaluating the cost efficiency of rigid insulations, compare the price of equal lengths and widths

### OTHER EPS PRODUCTS:

Visit [www.dyplastproducts.com](http://www.dyplastproducts.com) for other EPS and Polyiso products. Additional EPS products include:

- EPS panel, block, tapered board, or custom shape insulation for industrial, commercial, and residential applications
- Architectural shapes for decorative and architectural applications; excellent alternative to wood and concrete

### LIMITATIONS AND DISCLAIMER OF WARRANTIES AND LIABILITIES

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