

## EPS Insulation

EPS INSULATION™

EPS is Dyplast Products' expanded polystyrene rigid foam insulation. It is an unfaced, closed cell, light-weight, resilient, foamed plastic providing a host of unique properties. When insulation or protection is the goal, rely on EPS insulation to lead the way. No other product provides the efficiency, temperature range, damage and moisture control, low flammability rating, or low moisture vapor permeability quite like EPS. Our product's excellent workability characteristics make it easy for one person to handle, shape, and install.

A wide range of core thickness and densities is available for residential, commercial, industrial, or cold storage applications. The quality rigid foam is free of voids and cavities. Available in panels, blocks, tapered board, custom shapes, and loose fill, EPS insulation is very energy efficient, having high R-values, and can yield lower costs and long-term savings. Wood, metal, and/or FRP skins can be readily added, improving maintenance, strength, and integrity. With a compressive strength between 10 and 35 lb/in<sup>2</sup> for most construction applications, EPS insulation can be shaped to meet specific application requirements.

### VERSATILE APPLICATIONS

Where energy efficiency and cost-effectiveness have long been primary design considerations, architects, constructors, and homeowners have made EPS the dominant thermal insulation. With an R-value per inch of 4, it maintains constant insulation value.

- Building construction (roof, wall, and foundation)
  - Cavity wall and drywall base insulation
  - Exterior and interior foundation wall insulation
  - Roof applications (tapered panel and Holey-Board)
- Refrigeration
  - Building and transportation applications
  - Perfect for walk-in coolers, tanks, vessels
  - Will not absorb odors
- Transportation
- Facility construction: pharmaceutical, petrochemical, liquid natural gas, and other facilities
- Marine and Maritime

### WARNING

This product will burn and should not be exposed to fire or flame. Cover with an ignition barrier.

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, ensure 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 our website at [www.dyplastproducts.com](http://www.dyplastproducts.com).**

### COMPLIANCES AND APPROVALS

EPS insulation products have 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 C 578-92
- FM 4450
- Miami-Dade County, Florida Product Control No. 01 1108.09
- UL-R 4812 Vol. 2
- ICBO-ER-3240
- SBCCI-Report #9443
- BOCA 99-57
- U.S. Army Corp of Engineers



### SUSTAINABILITY

Concerned about the environment? So is Dyplast Products! That's why all our products are manufactured in a CFC-free environment. EPS rigid foam insulation is an inert, organic material produced from petroleum and natural gas byproducts. This product does not contain chlorofluorocarbons (CFC's) or hydrochlorofluorocarbons (HCFC's). It provides no nutritive value to plants, animals or microorganisms. It will not rot, is highly resistant to mildew, and is also recyclable.

## EPS INSULATION (Expanded Polystyrene Rigid Foam Insulation)

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	C518		0.26	0.255	0.24	0.23
R-Value: Thermal Resistance (1" thick)		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					
Water Vapor Transmission	E 96	% by Volume	<4.0	<3.0	<3.0	<2.0
Capillarity	-	perm-inch	2.0 to 5.0	1.5 to 3.5	1.0 to 3.5	0.6 to 2.0
Coefficient of Thermal Expansion	D 696	-	none	none	none	none
Maximum Service Temperature		in/in • F	0.000035	0.000035	0.000035	0.000035
Long term exposure		F	167	167	167	167
Intermittent exposure	D 2863		180	180	180	180
Oxygen Index		%	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

EPS 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 assure tight joints, thus eliminating heat loss.

### COST EFFICIENCY

EPS 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 prices based on R-value per inch of thickness for comparable lengths and widths.

### OTHER EPS PRODUCTS

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

- Holey-Board roof insulation for lightweight concrete roof applications
- Architectural shapes for decorative and architectural applications; excellent alternative to wood and concrete
- GeoFoam, a low-cost alternative to soil fills

### LIMITATIONS AND DISCLAIMER OF WARRANTIES AND LIABILITIES

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