

EPS FOAM PROPERTIES

EPS (expanded polystyrene) rigid board foam plastic is cost-effective, durable, and energy efficient solution for all types of Architectural and insulation applications.

Typical applications for EPS Foam include but not limited to:

- Architectural Moldings, Shapes & Columns
- Interior & Exterior wall insulation
- EIFS & Stucco Insulation
- Freezer & Cold Storage Insulation
- Architectural Concrete Formliners
- Foundation, Perimeter, Slabs & Basement Insulation
- Single-Ply Roof Insulation
- Below-Grade Insulation

All our manufacturing sources produce EPS Foam in conformance with various standers such as

- ASTM C 578 (Thermal Insulation)
- ASTM E 2430 (EIFS boards)
- ICC ES AC12 (Foam Plastic Insulation).

The R-value of EPS Foam will remain stable over its entire service life. The closed cell structure of EPS contains air and not blowing agents which deplete over time.

PHYSICAL PROPERTY REQUIREMENTS OF EPS FOAM

PER-ASTM C578	Units	Type XI	Type I	Type VIII	Type II	Type IX	Type XIV	Type XV	
Nominal Density	lb/ft ³	0.75	1.00	1.25	1.50	2.00	2.50	3.00	
Density ¹ , min.	lb/ft ³	0.70	0.90	1.15	1.35	1.80	2.40	2.85	
Compressive Resistance ¹ min. @ 10% deformation	PSI	5.0	10.0	13.0	15.0	25.0	40.0	60.0	
Flexural Strength ¹ min.	PSI	10.0	25.0	30.0	35.0	50.0	60.0	75.0	
Flame Spread	ASTM E84	<25	<25	<25	<25	<25	<25	<25	
Smoke Developed	ASTM E84	<450	<450	<450	<450	<450	<450	<450	
Water Absorption ¹ by total immersion, max.,	Volume %	4.0	4.0	3.0	3.0	2.0	2.0	2.0	
Water Vapor Permeance ¹ of 1.0 in. thickness, max., perm		5.0	5.0	3.5	3.5	2.5	2.5	2.5	
Design Thermal Resistance per 1.0 in. Thickness	25°F	°F.ft ² .h/Btu	3.6	4.4	4.6	4.8	5.0	5.0	5.1
	40°F	°F.ft ² .h/Btu	3.4	4.2	4.3	4.6	4.8	4.8	4.9
	75°F	°F.ft ² .h/Btu	3.2	3.9	3.9	4.2	4.4	4.4	4.5
Thermal Resistance ¹ min per 1.0 in. Thickness	25°F	°F.ft ² .h/Btu	3.5	4.2	4.4	4.6	4.8	4.8	4.9
	40°F	°F.ft ² .h/Btu	3.3	4.0	4.2	4.4	4.6	4.6	4.7
	75°F	°F.ft ² .h/Btu	3.1	3.6	3.8	4.0	4.2	4.2	4.3

*Please refer to ASTM C578 specification for complete information.

**Compressive strength is measured at 10 percent in accordance with ASTM C578. A safety factor is required to prevent long-term creep for sustained loads. For static loads, a safety factor of 3:1 is recommended.

"Foam Concepts is the distributor of EPS Foam and does provide technical advice for its use and applications.

However, it is the responsibility of the user to determine if EPS Foam is suitable for the use and application."