

## FOAM CONTROL EPS

Foam-Control® EPS (expanded polystyrene) rigid board foam plastic is for all types of industrial, packaging, and construction uses. Foam-Control EPS is manufactured in conformance with numerous standards.

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

### Foam-Control EPS Properties

Property		ASTM C578							
		Type XI	Type I	Type VIII	Type II	Type IX	Type XIV	Type XV	
Nominal Density	lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	0.75 (12)	1.00 (16)	1.25 (20)	1.50 (24)	2.00 (32)	2.50 (40)	3.00 (48)	
Density <sup>1</sup> , min.	lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	0.70 (12)	0.90 (15)	1.15 (18)	1.35 (22)	1.80 (29)	2.40 (38)	3.00 (48)	
Design Thermal Resistance per 1.0 in. thickness	25°F	°F.ft <sup>2</sup> .h/Btu (°K.m <sup>2</sup> /W)	3.6 (0.63)	4.4 (0.77)	4.6 (0.80)	4.8 (0.84)	5.0 (0.88)	5.0 (0.89)	5.1 (0.90)
	40°F	°F.ft <sup>2</sup> .h/Btu (°K.m <sup>2</sup> /W)	3.4 (0.60)	4.2 (0.73)	4.3 (0.75)	4.6 (0.81)	4.8 (0.84)	4.8 (0.84)	4.9 (0.85)
	75°F	°F.ft <sup>2</sup> .h/Btu (°K.m <sup>2</sup> /W)	3.2 (0.57)	3.9 (0.68)	3.9 (0.69)	4.2 (0.73)	4.4 (0.77)	4.4 (0.77)	4.5 (0.78)
Thermal Resistance <sup>1</sup> , min per 1.0 in. thickness	25°F	°F.ft <sup>2</sup> .h/Btu (°K.m <sup>2</sup> /W)	3.5 (0.61)	4.2 (0.74)	4.4 (0.77)	4.6 (0.81)	4.8 (0.84)	4.8 (0.84)	4.9 (0.86)
	40°F	°F.ft <sup>2</sup> .h/Btu (°K.m <sup>2</sup> /W)	3.3 (0.58)	4.0 (0.70)	4.2 (0.74)	4.4 (0.77)	4.6 (0.81)	4.6 (0.81)	4.7 (0.83)
	75°F	°F.ft <sup>2</sup> .h/Btu (°K.m <sup>2</sup> /W)	3.1 (0.55)	3.6 (0.63)	3.8 (0.67)	4.0 (0.70)	4.2 (0.74)	4.2 (0.74)	4.3 (0.76)
Compressive Strength <sup>1</sup> @ 10% deformation, min.	psi (kPa)	5.0 (35)	10.0 (69)	13.0 (90)	15.0 (104)	25.0 (173)	40.0 (276)	60.0 (414)	
Flexural Strength <sup>1</sup> , min.	psi (kPa)	10.0 (69)	25.0 (173)	30.0 (208)	35.0 (242)	50.0 (345)	60.0 (414)	75.0 (517)	
Water Vapor Permeance <sup>1</sup> of 1.0 in. thickness, max., perm		5.0	5.0	3.5	3.5	2.5	2.5	2.5	
Water Absorption <sup>1</sup> by total immersion, max., volume %		4.0	4.0	3.0	3.0	2.0	2.0	2.0	
Oxygen Index <sup>1</sup> , min., volume %		24	24	24	24	24	24	24	

Foam-Control EPS has a flame spread index of less than 25 and a smoke-developed index of less than 450 when tested in accordance with ASTM E84/UL 723 for densities from 0.7 - 3.0 lb/ft<sup>3</sup>. Please refer to UL certificate for complete information.

<sup>1</sup> See ASTM C578 Standard for test methods and complete information.

## Design Options.

Cost effective design is among the highest priorities for industrial, packaging, and construction applications. Foam-Control EPS products are available in a range of Types necessary to provide control of structural integrity, thermal resistance (R-value), and cost effectiveness.

## Thermal Performance.

The R-value of Foam-Control EPS remains constant and does not suffer from R-value loss. The closed cell structure of Foam-Control EPS contains air and not blowing agents which deplete over time.

## Exposure to Water and Water Vapor.

The mechanical properties of EPS are unaffected by moisture. Exposure to water or water vapor does not cause swelling.

## Temperature Exposure/Flame Retardants.

EPS is able to withstand the rigors of temperature cycling, assuring long-term performance.

Although flame retardants used in the manufacture of EPS provide an important margin of safety, all EPS products must be considered combustible.

The maximum recommended long-term exposure temperature for Foam-Control EPS is 165°F (74°C).

## Adhesives, Coatings, and Chemicals.

Solvents which attack EPS include esters, ketones, ethers, aromatic, and aliphatic hydrocarbons and their emulsions, among others. If EPS is to be placed in contact with materials (or their vapors) of unknown composition, pretest for compatibility at maximum exposure temperature.

Do not install or use EPS with coal tar pitch, highly solvent-extended mastics, or solvent-based adhesives without adequate separation.

## Quality Assurance/Building Code Compliance.

Foam-Control EPS meets or exceeds the requirements of ASTM C578, "Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation." Foam-Control EPS is monitored for Quality Control and Listed by Underwriters Laboratories Inc. The International Code Council Evaluation Service recognizes Foam-Control EPS for building code compliance. Please see ICC ES ESR-1006.



Note: Local Building Codes must be followed regarding thermal barriers.

## Resistance to Termites, Mold, and Mildew.

Foam plastic insulations have been shown to become termite infested under certain exposure conditions. Foam-Control EPS with Perform Guard® provides resistance to termite infestation. Please review literature on Foam-Control EPS with Perform Guard for complete information.



EPS will not decompose and will not support mold or mildew growth. EPS provides no nutrient value to plants or animals.

## Weathering.

Long-term exposure to sunlight causes yellowing and a slight embrittlement of the surface due to ultraviolet light. This has little effect on mechanical properties. If stored outdoors, cover EPS with opaque polyethylene film, tarps, or similar material.

## Warranty.

Foam-Control EPS Licensees offer a product warranty ensuring thermal performance, physical properties, and termite resistance.

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FOAM TECHNOLOGIES

For further information about

Foam-Control EPS

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