


PowerFoam R-Control ThermaShield is a film-faced air barrier and weather resistive insulation used for all types of construction applications. PowerFoam R-Control ThermaShield conforms to ASTM C578, “Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation”.

PowerFoam R-Control ThermaShield is manufactured under an industry leading quality control program monitored by UL and further recognized in UL Evaluation Report UL ER40338-01.



PRODUCT						
		100	130	150	250	
Compressive Strength <sup>1,2</sup> @ 10% deformation, min. ASTM D1621		psi (kPa)	10 (69)	13 (90)	15 (104)	25 (173)
R-value <sup>1</sup> , Thermal Resistance, per inch, ASTM C518	25°F <sup>3</sup>	°F·ft <sup>2</sup> ·h/Btu (°K·m <sup>2</sup> /W)	4.4 (0.77)	4.5 (0.80)	4.8 (0.84)	5.0 (0.88)
	40°F <sup>4</sup>	°F·ft <sup>2</sup> ·h/Btu (°K·m <sup>2</sup> /W)	4.2 (0.74)	4.3 (0.76)	4.6 (0.81)	4.8 (0.85)
	75°F <sup>5</sup>	°F·ft <sup>2</sup> ·h/Btu (°K·m <sup>2</sup> /W)	3.9 (0.69)	3.9 (0.69)	4.2 (0.74)	4.4 (0.77)
Density, min., ASTM C303		lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	0.90 (15)	1.15 (18)	1.35 (22)	1.80 (29)
Flexural Strength <sup>1</sup> , min. ASTM C203		psi (kPa)	25 (173)	30 (208)	35 (242)	50 (345)
Water Vapor Permeance <sup>1</sup> of 1.0 in. thickness, max., perm ASTM E96			0.3	0.3	0.3	0.3
Water Absorption <sup>1</sup> by total immersion, max., volume % ASTM C272			<1.0	<1.0	<1.0	<1.0
Flame Spread ASTM E84			<25	<25	<25	<25
Smoke Developed ASTM E84			<450	<450	<450	<450
ASTM C578 Compliance, Type			I	VIII	II	IX

<sup>1</sup> Please refer to ASTM C578 specification for complete information.

<sup>2</sup> 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.

<sup>3</sup> Recommended for design in EXTREME COLD climates.

<sup>4</sup> Recommended for design in COLD climates.

<sup>5</sup> Recommended for design in WARM climates.

### **Thermal Performance.**

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

### **Exposure to Water and Water Vapor.**

The mechanical properties of PowerFoam R-Control ThermaShield are unaffected by moisture. Exposure to water or water vapor does not cause swelling.

### **Temperature Exposure/Flame Retardants.**

PowerFoam R-Control ThermaShield is able to withstand the rigors of temperature cycling, assuring long-term performance.

Although flame retardants used in the manufacture of PowerFoam R-Control ThermaShield provide an important margin of safety, all PowerFoam R-Control ThermaShield products must be considered combustible.

The maximum recommended long-term exposure temperature for PowerFoam R-Control ThermaShield is 165°F (74°C).

### **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 PowerFoam R-Control ThermaShield with opaque polyethylene film, tarps, or similar material.

### **Termite Resistant.**

Foam plastic insulations have been shown to become termite infested under certain exposure conditions. PowerFoam R-Control ThermaShield with borate provides resistance to termite infestation. Please review literature on PowerFoam R-Control ThermaShield with borate for complete information.

### **Resistance to Mold and Mildew.**

PowerFoam R-Control ThermaShield will not decompose and will not support mold or mildew growth. PowerFoam R-Control ThermaShield provides no nutrient value to plants or animals.

### **Adhesives, Coatings, and Chemicals.**

Solvents which attack PowerFoam R-Control ThermaShield include esters, ketones, ethers, aromatic, and aliphatic hydrocarbons and their emulsions, among others. If PowerFoam R-Control ThermaShield 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 PowerFoam R-Control ThermaShield with coal tar pitch, highly solvent-extended mastics, or solvent-based adhesives without adequate separation.

### **Warranty.**

PowerFoam offers a product warranty ensuring thermal performance, physical properties, and termite resistance.

**NEED INFORMATION OR A QUOTE**



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