



**250**  
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**TECHDATA**

**Film-Faced Molded Polystyrene Insulation.**

ThermaFoam R-Control ThermaShield is a film-faced air barrier and weather resistive insulation used for all types of construction applications. Typical applications for ThermaFoam R-Control ThermaShield 100 include commercial roofing, exterior sheathing, building perimeters, under concrete slabs, garage doors, coolers and freezers, industrial piping and tanks, and protective packaging.

**Proven to meet, or exceed, building codes.**

ThermaFoam 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. ThermaFoam R-Control ThermaShield complies with Building Code requirements for:



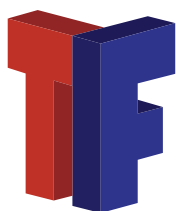
- ASTM C578, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation
- ASTM E331, Standard Test Method for Water Penetration of Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform Static Air Pressure Difference
- ASTM E2178, Standard Test Method for Air Permeance of Building Materials.

**Advantages.**

- Film-faced for toughness
- Air Barrier
- Weather Resistive Barrier
- Superior moisture resistance
- Low water vapor permeability
- No CFC, HCFC, HFC, or formaldehyde
- No long-term R-value loss or thermal drift.

**Stands up to the weather.**

When tested in accordance with ASTM C1512, "Standard Test Method for Characterizing the Effect of Exposure to Environmental Cycling on Thermal Performance of Insulation Products," EPS maintains its R-value and strength after severe exposure to freeze-thaw cycles.



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Compressive Strength <sup>1,2</sup> @ 10% deformation, min. ASTM D1621	psi (kPa)	25 (173)
R-value <sup>1</sup> , Thermal Resistance, per inch, ASTM C518	25°F	°F·ft <sup>2</sup> ·h/Btu (°K·m <sup>2</sup> /W) 5.0 (0.88)
	40°F	°F·ft <sup>2</sup> ·h/Btu (°K·m <sup>2</sup> /W) 4.8 (0.85)
	75°F	°F·ft <sup>2</sup> ·h/Btu (°K·m <sup>2</sup> /W) 4.4 (0.77)
k-value Thermal Conductivity ASTM C518	25°F	Btu·in/°F·ft <sup>2</sup> ·h (W/°K·m) 0.20 (0.029)
	40°F	Btu·in/°F·ft <sup>2</sup> ·h (W/°K·m) 0.21 (0.030)
	75°F	Btu·in/°F·ft <sup>2</sup> ·h (W/°K·m) 0.23 (0.033)
Density, min., ASTM C303	lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	1.80 (29)
Flexural Strength <sup>1</sup> , min. ASTM C203	psi (kPa)	50 (345)
Water Vapor Permeance <sup>1</sup> of 1.0 in. thickness, max., perm ASTM E96		0.3
Water Absorption <sup>1</sup> by total immersion, max., volume % ASTM C272		<1.0
Flame Spread Index ASTM E84		<25
Smoke Developed Index ASTM E84		<450
Maximum long term use temperature		165°F (74°C)
ASTM C578 Compliance, Type		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.

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