

## Expanded Polystyrene Insulation.

R-Shield® expanded polystyrene insulation is a cost effective, durable, and energy efficient solution for all types of insulation applications. R-Shield Insulation is an insulation manufactured to provide architects, specifiers, distributors, and contractors all the features and benefits inherent in a quality insulation.

**R-value** – R-Shield 250 has an R-value that never changes over time.

**Strength** – R-Shield 250 has a compressive strength of 25 psi.

**Moisture Resistance** – R-Shield 250 is a closed cell polystyrene insulation and is resistant to moisture gain.

**Vapor Permeable** – R-Shield 250 allows moisture vapor to move through its structure.

**Drying Potential** – R-Shield 250 rapidly releases absorbed moisture.

## Applications.


- Cavity Wall
- Wall Sheathing
- Precast Concrete Core
- Flat/Tapered Roofing
- Plaza Deck/Vegetative Green Roof
- Perimeter/Underslab
- Drainage Board
- Waterproofing Protection

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

R-Shield insulation is manufactured under an industry leading quality control program monitored by UL and further recognized in UL Evaluation Report UL ER40361-01 and ICC ESR-4743.



R-Shield insulation meets Type IX of ASTM C578, “Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation”.

		
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, Nominal ASTM C303	lb/ft <sup>3</sup> (kg/m <sup>3</sup> )	2.0 (32)
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		2.5
Water Absorption <sup>3</sup> , volume % ASTM C272		0.3
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.

<sup>3</sup> ASTM C272 24 hour immersion followed by 24 hour storage in 75°F/50%RH air.