

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 400 has an R-value that never changes over time.

Strength – R-Shield 400 has a compressive strength of 40 psi.

Moisture Resistance – R-Shield 400 is a closed cell polystyrene insulation and is resistant to moisture gain.

Vapor Permeable – R-Shield 400 allows moisture vapor to move through its structure.

Drying Potential – R-Shield 400 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 XIV of ASTM C578, “Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation”.



		
Compressive Strength ^{1,2} @ 10% deformation, min. ASTM D1621	psi (kPa)	40 (276)
R-value ¹ , Thermal Resistance, per inch, ASTM C518	25°F	°F·ft ² ·h/Btu (°K·m ² /W) 5.0 (0.88)
	40°F	°F·ft ² ·h/Btu (°K·m ² /W) 4.8 (0.85)
	75°F	°F·ft ² ·h/Btu (°K·m ² /W) 4.4 (0.77)
k-value Thermal Conductivity ASTM C518	25°F	Btu·in/°F·ft ² ·h (W/°K·m) 0.20 (0.029)
	40°F	Btu·in/°F·ft ² ·h (W/°K·m) 0.21 (0.030)
	75°F	Btu·in/°F·ft ² ·h (W/°K·m) 0.23 (0.033)
Density, Nominal ASTM C303	lb/ft ³ (kg/m ³)	2.5 (40)
Flexural Strength ¹ , min. ASTM C203	psi (kPa)	60 (414)
Water Vapor Permeance ¹ of 1.0 in. thickness, max., perm ASTM E96		2.5
Water Absorption ³ , 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		XIV

¹ Please refer to ASTM C578 specification for complete information.

² 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.

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