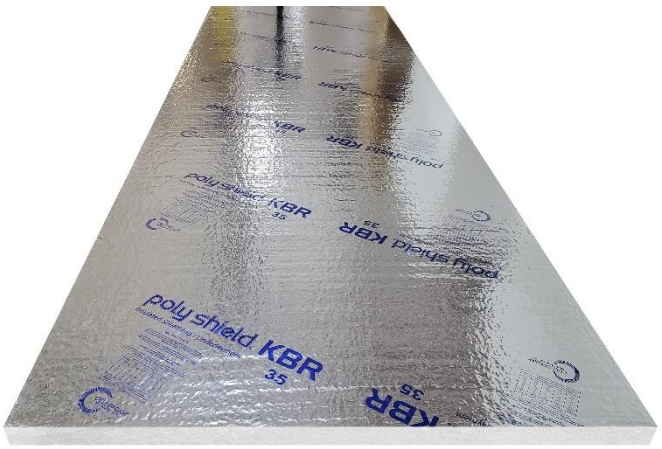
CELLOFOAM® North America Inc.

Poly Shield® KBR

Premium Expanded Polystyrene (EPS) Insulated Sheathing / Underlayment with Kraft Back Reflective Facers

Poly Shield® KBR Insulated Sheathing / Underlayment is widely used for roofing applications for mobile / manufactured homes and roofing and sheathing for warehouses and agricultural buildings. Poly Shield® KBR is comprised of an expanded polystyrene (EPS) insulation foam core that is faced on both sides by a metalized polyester laminated to either a 35# (KBR 35) or 60# (KBR 60) Kraft paper. The laminations make KBR more durable and damage resistant during product storage and installation than plain EPS insulation. Providing high R-values at an economical cost, Poly Shield® KBR 35 and KBR 60 are superior thermal insulation options.

The core of Poly Shield® KBR 35 and Poly Shield® KBR 60 is made of premium expanded polystyrene rigid insulation, composed of closed cells with excellent dimensional stability, compressive strength, and water resistance. The core EPS meets or exceeds the requirements of ASTM C578, *Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*. When combined in a wall or roof design with dead air space, the reflective metalized facer may add a significant R-value increment to help keep your building warmer in the winter and cooler in the summer.



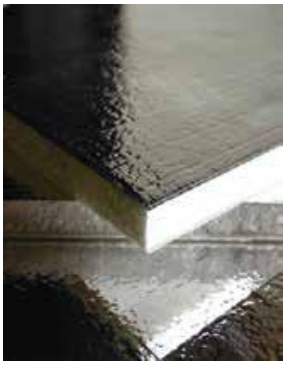
ADVANTAGES

Applications: This product is recommended for Manufactured Home Roofing Insulation, Warehouses, Agricultural Buildings, and other building insulation applications allowed by pertinent building codes. Install to applicable CFR and/or building codes.

Premium Quality: The EPS cores of Poly Shield® KBR 35 and Poly Shield® KBR 60 meets or exceeds ASTM C578 specs, with excellent dimensional stability & compressive strength. When combined in a wall or ceiling design facing dead air space, our reflective metalized facer may increase R-value significantly.

High, Stable R-value: The R-value of Poly Shield® KBR is permanent. Unlike Polyiso or XPS whose blowing agents outgas, EPS R-values do not degrade over decades of use.

Code Approvals: The expanded polystyrene (EPS) foam plastic insulation core of Poly Shield® KBR 35 and KBR 60 Insulated Sheathing / Underlayment is Underwriters Laboratory listed (UL ER7260), meets ASTM Standard Specification C578, and complies with HUD 24 CFR § 3280.208. Please consult appropriate building codes.



Mold and Mildew Resistant: per ASTM C1338 testing.

Moisture Resistant: Cellofoam EPS is quick drying and does not readily absorb moisture from the air. Its closed-cell structure reduces the absorption and migration of moisture. Thermal and mechanical properties are unaffected by freeze-thaw cycling.

Environmentally Friendly: Cellofoam EPS contains no formaldehyde or ozone-depleting CFCs or HCFCs. Its EPS core is 100% recyclable and may contain recycled material.

Manufactured to Your Needs: Poly Shield® KBR 35 and 60 are available in 4 ft wide boards in lengths from 8 to 16 ft, in thicknesses of 1 to 6 inches, and in ASTM C578 nominal densities of 1.0, 1.25, 1.5, and 2.0 lb/ft^3.

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Laminated Facer Typical Physical Properties for Poly Shield® KBR

Cellofoam's Poly Shield® KBR utilizes a 0.48 gauge metalized polyester laminated to either a 35# or 60# Kraft paper with 1.0 mil of extrusion coating for industrial applications requiring radiative thermal resistance and strength.

Physical Property*	Units	KBR 35 Typical Values	KBR 60 Typical Values	Test Method
Thickness (± 5%)	mil (.001")	5.0	7.5	--
Yield	in^2/lb	6,990	4,900	--
Heat Seal Range	^oF	250 - 300	250 - 300	Approximate
Coeficient of Friction (face-to-face static)	--	0.4 - 0.5	0.4 - 0.5	ASTM D1894
Tensile Strength	lb/in^2			ASTM D882
MD (machine direction)		27,000	27,000	
TD (transverse direction)		28,500	28,500	
Elongation	%			ASTM D882
MD		90	90	
TD		80	80	

* Typical physical properties are based on data provided by facer manufacturer. These properties should not be construed as specifications.

EPS Core Typical Physical Properties for Poly Shield® KBR

Cellofoam® EPS Typical Physical Properties[1]	Units	ASTM Test	ASTM C578 Type I	Type VIII	Type II	Type IX
Density (Nominal)	lb/ft^3	C303 or D1622	1.0	1.25	1.5	2.0
Density (Minimum)	lb/ft^3		0.90	1.15	1.35	1.80
Thermal Resistance						
R-Value [2] **at 25° F**	($^oF\ ft^2\ hr$) / Btu per inch	C177 or C518	4.35	4.54	4.76	5.00
at 40° F			4.17	4.25	4.55	4.76
at 75° F			3.85	3.92	4.17	4.35
Compressive Strength at 10% deformation	psi	D1621	10 - 14	13 - 18	15 - 21	25 - 33
Flexural Strength	psi	C203	25 - 30	30 - 38	40 - 50	50 - 75
Water Vapor Permeance 1.0 in. thickness	perm.	E96	2.0 - 3.0	1.5 - 2.8	0.9 - 2.5	0.6 - 1.5
Water Absorption by total immersion	volume %	C272 or C1763	< 1.5	< 1.5	< 1.5	< 1.5
Capillarity	--	--	none	none	none	none
Dimensional Stability maximum	change %	D2126	< 0.5	< 0.5	< 0.5	< 0.5
Coefficient of Thermal Expansion	$in/(in\ ^oF)$	D696	0.000035	0.000035	0.000035	0.000035
Fungus & Bacterial Resistance	-	C1338	Will not support bacterial or fungus growth; no food value			

[1] Typical physical properties are based on data provided by resin manufacturer, independent test agencies, and Cellofoam North America Inc. All data is for plain, unlaminated EPS foam.

[2] R means resistance to heat flow. The higher the R value, the greater the insulating power.

Warning: This product is combustible and if exposed to a fire of sufficient heat and intensity may burn rapidly. It should not be left exposed or inadequately protected. Long-term (several months or more) exposure to ultraviolet radiation will cause discoloration. Protect EPS from exposure to hydrocarbons, coal tar pitch, solvents, and solvent fumes. Consult specific instructions and applicable building codes for use of this product.

The performance data herein reflects Cellofoam's expectation based on tests conducted in accordance with recognized standard methods from both internal and independent test laboratories.

Manufacturing Locations:
Conyers, GA
Orlando, FL
Sallisaw, OK
Whiteland, IN
Winchester, VA

800-468-3626 **www.cellofoam.com**

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Cellofoam North America Inc. is an expanded polystyrene foam manufacturer and not an engineering consulting firm. Thus, it is beyond our scope to provide design services on the specific use for our products. Users of our EPS products should consult with appropriate engineering experts to determine the exact type and specifications required for their project to meet structural and other design requirements. The sale of these products shall be subject to Terms and Conditions of Sale, including those limiting warranties as set forth in Cellofoam's invoices. No agent, employee, or representative of Cellofoam North America Inc. or its subsidiary or affiliated companies is authorized to modify this disclaimer.

EPS Industry Alliance Member