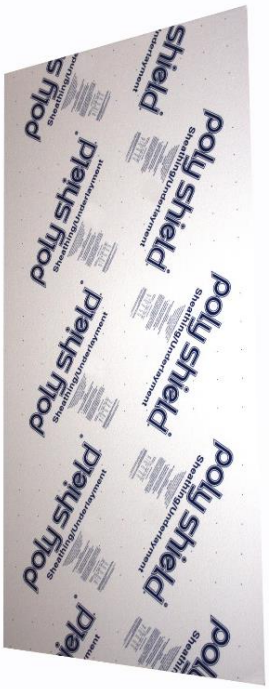
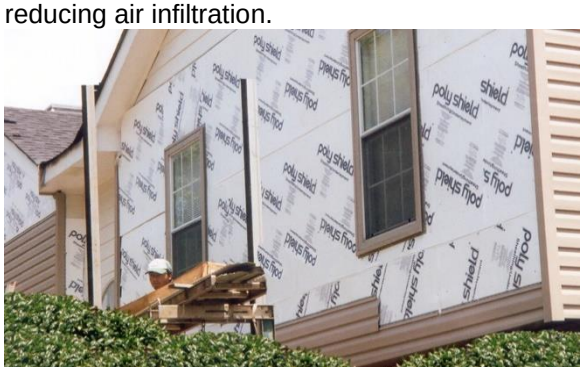
CELLOFOAM® North America Inc.

POLY SHIELD®

Premium Exterior Wall Insulation Board



Cellofoam Poly Shield® Exterior Wall is a heat-laminated insulation board that significantly reduces energy costs by adding R-value to your exterior walls. Designed for both commercial and residential interior wall applications, Poly Shield wraps the structure in permanent thermal protection, retarding heat flow and reducing air infiltration.



Poly Shield is made of premium expanded polystyrene (EPS) rigid insulation that meets or exceeds the requirements of *ASTM C578, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.* The EPS is composed of closed cells with excellent dimensional stability, compressive strength, and water resistance.

Poly Shield is faced with tough polymeric laminates on both sides for added strength and durability in storing, handling, and installation. Several different poly facer options are provided to meet project needs, including clear, printed polypropylene and polyester facers, as well as metalized, reflective polypropylene. Properly installed with a dead air space, the reflective facer can provide a significant R-value boost to Poly Shield's thermal performance (see table).

ADVANTAGES

Cost Savings: EPS reduces energy costs and offers the highest R-value per dollar of any foam insulation board. Poly Shield is lightweight and easy to install.

Code Approvals: Underwriters Laboratory Listed, UL ER7260, for interior and exterior walls. Please consult local building codes for system requirements.

Stable R-value: The R-value of EPS is permanent because the only gas in EPS is air. Unlike Polyiso or XPS whose blowing agents outgas and therefore lose R-value, EPS R-values do not degrade over decades of use.

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, and the facers surfaces are nearly impervious to moisture. Not a vapor barrier.

Premium Quality: Meets or exceeds ASTM C578 specs, with excellent dimensional stability & compressive strength. When properly installed it does not deteriorate with age, and is resistant to mildew, rot, fungus, and bacteria.

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

Effective R-Values
for Poly Shield EPS Insulation with a Reflective Facer and Dead Air Space*

Insulation Thickness	Design Temperature	Effective R-Value			
		Type I	Type VIII	Type II	Type IX
1/2"	25° F	4.4	4.5	4.6	4.7
	40° F	4.3	4.3	4.5	4.6
	75° F	4.1	4.2	4.3	4.4
3/4"	25° F	5.5	5.6	5.8	6.0
	40° F	5.3	5.4	5.6	5.8
	75° F	5.1	5.1	5.3	5.5
1"	25° F	6.6	6.7	7.0	7.2
	40° F	6.4	6.5	6.8	7.0
	75° F	6.1	6.1	6.4	6.6
1.5"	25° F	8.7	9.0	9.3	9.7
	40° F	8.5	8.6	9.0	9.3
	75° F	8.0	8.1	8.5	8.7
2"	25° F	10.9	11.3	11.7	12.2
	40° F	10.5	10.7	11.3	11.7
	75° F	9.9	10.0	10.5	10.9

*For horizontal heat flow through a vertical wall with a 3/4" dead air space. See American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Handbook and Cellofoam Technical Note #105, Incremental R-Value for Cellofoam Poly Shield EPS Insulation with a Reflective Facer, for details.

Manufactured to your Needs: Cellofoam Poly Shield is available in a wide variety of lengths and widths, in thicknesses of 1/2 to 6 inches, and ASTM C578 nominal densities of 1.0, 1.25, 1.5, 2.0, 2.5, and 3.0 lb/ft^3.

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Cellofoam® EPS Typical Physical Properties[1]		Units	ASTM Test	ASTM C578 Type I	ASTM C578 Type VIII	ASTM C578 Type II	ASTM C578 Type IX
Density (Nominal)		lb/ft³	C303 or D1622	1.0	1.25	1.5	2.0
Density (Minimum)		lb/ft³		0.90	1.15	1.35	1.80
Thermal Resistance							
R-Value [2]	**at 25° F**	(°F ft² 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 °F)	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.

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Orlando, FL 32837

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Whiteland, IN 46184

Winchester, VA
326 McGhee Road
Winchester, VA 22603

EPS Industry Alliance Member

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CLASSIFIED UL

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. Protect Cellofoam expanded polystyrene from exposure to hydrocarbons, coal tar pitch, solvents, and solvent fumes. Consult specific instructions and applicable building codes for use of this product.

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 such as Poly Shield should consult with appropriate engineering and code experts to determine the exact type and specifications of EPS required for their project. 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.

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