



POLY SHIELD® FAN-FOLD

Rapidly Installed, Premium Wall Insulation

Cellofoam Poly Shield® Fan-Fold is a wall insulation and underlayment that significantly reduces application labor costs while adding R-value to your exterior walls. Cut in 24" panels along its 4' x 50' expanse, the insulation is easily transported accordion style and then rapidly unfolded flat and attached. Poly Shield Fan-Fold is typically used on exterior walls as an insulative backer board for siding, but may also be used for other applications such as insulating interior or basement walls.



Poly Shield Fan-Fold 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 core EPS is composed of closed cells with excellent dimensional stability, compressive strength, and water resistance. Poly Shield Fan-Fold 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. These include printed polypropylene and polyester facers, as well as a metalized, reflective polypropylene. Properly installed with a dead air space, the reflective facer can provide a significant R-value boost to Poly Shield Fan-Fold's thermal performance (see table). Poly Shield Fan-Fold is bundled accordion style, with each bundle covering 200 ft² or two squares.



ADVANTAGES

Labor & Material Savings: Covering 200 ft² in a light weight bundle, Poly Shield Fan-Fold can be installed far quicker than competing 4 x 8 ft insulation or backer boards.

Code Approvals: Underwriters Laboratory Listed, UL ER7260, for interior and exterior walls (as well as for low slope mechanically attached or ballasted roof systems - see related fan-fold roofing flier). Please consult local building codes and membrane manufacturers 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.

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: Cellofoam Poly Shield Fan-Fold is available in 2 square bundles of 4 x 50 ft, in thicknesses of 1/4", 3/8", 1/2", and 3/4" and ASTM C578 nominal densities of 1.0, 1.25, and 1.5 lb/ft³.

| 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 |
| 1/4" | 25° F | 3.3 | 3.3 | 3.4 |
| | 40° F | 3.2 | 3.3 | 3.3 |
| | 75° F | 3.2 | 3.2 | 3.2 |
| 3/8" | 25° F | 3.8 | 3.9 | 4.0 |
| | 40° F | 3.8 | 3.8 | 3.9 |
| | 75° F | 3.6 | 3.7 | 3.8 |
| 1/2" | 25° F | 4.4 | 4.5 | 4.6 |
| | 40° F | 4.3 | 4.3 | 4.5 |
| | 75° F | 4.1 | 4.2 | 4.3 |
| 3/4" | 25° F | 5.5 | 5.6 | 5.8 |
| | 40° F | 5.3 | 5.4 | 5.6 |
| | 75° F | 5.1 | 5.1 | 5.3 |

*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.



CELLOFOAM®
North America Inc.

POLY SHIELD® FAN-FOLD

| Cellofoam® EPS Typical Physical Properties ¹ | | ASTM Test | ASTM C578 Type | | | |
|---|--------------------|---------------|--|-----------|-----------|-----------|
| | Units | | 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 | 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, unlaminate EPS foam.

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

Conyers, GA
1917 Rockdale Industrial Blvd.
Conyers, GA 30012

Orlando, FL
11237 Astronaut Blvd.
Orlando, FL 32837

Sallisaw, OK
1330 W. Redwood Ave
Sallisaw, OK 74955

Whiteland, IN
150 Crossroads Drive
Whiteland, IN 46184

Winchester, VA
326 McGhee Road
Winchester, VA 22603



800-468-3626

www.Cellofoam.com



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 Fan-Fold 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.