



cellofoam®

# poly shield®

## Heat Laminated Sheathing/Underlayment/Tongue & Groove

Cellofoam's POLY SHIELD heat laminated sheathing, offers tough poly facers for added strength and durability - important in storing, handling and installation.

POLY SHIELD's closed cell EPS core wraps the structure in permanent R-value, retarding radiant heat flow and reducing air-infiltration. POLY SHIELD offers both high efficiency and low cost insulation.

POLY SHIELD is made of Cellofoam Expanded Polystyrene (EPS) rigid insulation, faced with a tough poly laminate or a reflective metallicized film facer. Standard thicknesses are 1/2", 3/4" and 1". Standard density is 1#. Other densities up to 3# pcf and thicknesses up to 4" are also available. If a reflective surface is not desired, poly laminate can be ordered on both sides.



- Lightweight
- Easy to Install
- Abuse Resistant
- Versatile Installation
- Delivers the most R-Value per \$

Because POLY SHIELD is made of millions of closed cells of expanded polystyrene it has an excellent resistance to heat transfer. Not a vapor barrier.

When POLY SHIELD is properly installed it doesn't deteriorate with age, is resistant to mildew, rot, fungus, bacteria, and doesn't require maintenance. The tough facing resists abuse during construction and storage/warehousing.

POLY SHIELD® SE

POLY SHIELD® TG

Straight Edge  
Butt Joint

Tongue & Groove  
- Available in 3/4" & 1" -

### Tongue & Groove

POLY SHIELD tongue-and-groove (T&G) EPS panels form an ideal substrate for siding in conventional and manufactured homes. With high energy costs and green initiatives taking hold across the nation, the high insulating value of this building approach is growing in popularity.

T&G's interlocking joints form a consistent insulation barrier and a smooth surface with seamless joints for the application of siding. The panels are moisture resistant and can absorb building movement while reducing air movement in the wall.

POLY SHIELD T&G is recyclable and environmentally friendly. It contains no CFCs, HFCs, HCFCs or formaldehyde.

**PHYSICAL PROPERTIES OF CELLOFOAM® EXPANDED POLYSTYRENE**

Property	Units	ASTM Test	SPECIAL ORDER ONLY			
			Type I	Type VIII	Type II	Type IX
Nominal Density	pcf	C 303	1.0	1.25	1.5	2.0
Thermal Resistance R Factor at 25°F at 40°F at 75°F	per inch thickness	C 518 or C 177	4.35 4.17 3.85	4.54 4.25 3.92	4.76 4.55 4.17	5.00 4.76 4.35
Coefficient of Thermal expansion	in/(in) (F)	D 696	0.000035	0.000035	0.000035	0.000035
Maximum Service temperature Long Term Intermittent	°F °F	---- ----	167 180	167 180	167 180	167 180
Compressive Strength at 10% deformation	psi	D 1621	10-14	13-18	15-21	25-33
Flexural Strength	psi	C 203	25-30	32-38	40-50	55-75
Capillarity	----	----	none	none	none	none
Water vapor transmission	perm in	E96	2.0-5.0	1.5-3.5	1.0-3.5	0.6-2.0
Water absorption (by volume)	%	C 272	< 4.0	< 3.0	< 3.0	< 2.0
Flame Spread		UL 723	< 20	< 20	< 20	< 20
Smoke Developed		UL 723	150-300	150-300	150-300	150-300

**PHYSICAL PROPERTIES OF POLYSHIELD®**

Compressive Strength at 10% deformation	psi	D 1621	13	16	20	28
Flexural Strength	psi	C 203	33	40	50	70
Water vapor transmission	perm in	E96	< 1.0	< 1.0	< 1.0	< 1.0
Water absorption (by volume)	%	C 272	< 1.0	< 1.0	< 1.0	< 1.0

**R-Value + Dead Airspace\***

Sizes	Thickness	Dead Airspace*			
Regular POLY SHIELD is 4' x 8', 1/2", 3/4" and 1". Other thicknesses are available upon request.	0"	1/2"	3/4"	1-1 1/2"	
	2.0	4.4	4.7	4.4	
	2.9	5.4	5.7	5.4	
	3.9	6.3	6.6	6.3	

\*Dead Airspace R-Value per ASHRAE Thermal Resistances of Plane Air Spaces



**cellofoam®**

EPS MANUFACTURER SINCE 1966

**MANUFACTURING LOCATIONS**

CONYERS, GA

1961 Industrial Blvd. 30012  
(800) 944-8704  
FAX (770) 483-8912

FREDERICKSBURG, VA

16 Baron Park Road 22405  
(800) 288-7663  
FAX (540) 373-6738

ORLANDO, FL

11237 Astronaut Blvd 32837.  
(800) 423-3626  
FAX (407) 888-9464

SALLISAW, OK

1330 West Redwood 74955  
(800) 864-1518  
FAX (918) 775-2870

WHITELAND, IN

150 Crossroads Drive 46184  
(800) 582-9007  
FAX (317) 535-5211

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