



# LAMINATED FLUTE FILL COMBO BOARD

## Labor Saving Combination of Premium EPS on Top of Flute Fill, with Either a Fire Retardant (FR) or Polyester Facer

Cellofoam® Laminated Flute Fill Combo Board is made from a premium expanded polystyrene (EPS) foam insulation that is cut to fit nearly any metal deck or steel roof profile, with additional insulation above the flutes. It has two laminate options, a fire rated, coated-glass fiber mat facer (FR) or a polyester laminate, allowing a direct overlay of roofing membranes. This single layer system effectively combines void fill leveling provided by flute filler with additional insulation and a facer, negating the need for a separate, expensive, and heavy coverboard or an FR slip sheet. By dramatically reducing the number of separate pieces handled per square, Laminated Flute Fill Combo Board may reduce material and labor costs by 30%.

### Why handle 20 pieces per square when only 4 are needed?

Cellofoam Laminated Flute Fill Combo Board is used in metal retrofit roof applications that employ mechanically attached single-ply membrane systems, and may be part of Class A fire rated roof assembly. The core of Combo Board is a premium, rigid, modified EPS with closed cells molded in a range of densities and sizes to meet project specifications & requirements. The fire-resistant laminate enhances the overall fire performance of many conventional commercial roof systems, and the polyester laminate allows direct application of PVC roofing membranes. Cellofoam Laminated Flute Fill Combo Board is a premium product, and is produced to meet or exceed ASTM C578, *Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*.



*Laminated Flute Fill Combo Board with an FR facer (above) and a polyester facer (below), over which a PVC roofing membrane was directly installed.*



## ADVANTAGES

**Labor & Material Savings:** With factory laminated facers, Cellofoam Laminated Flute Fill Combo Board combines the flute fill, insulation, and the cover board or slip sheet to save installation time and labor costs.

**Code Approvals:** Underwriters Laboratory Listed, UL Classified TGFU.R7260, UL ER7260, for low slope mechanically attached or ballasted roof systems. Part of a Class A assembly over noncombustible decks. Please consult local building codes and membrane manufacturers for system requirements.

**Stable R-value:** The R-value of Cellofoam Laminated Flute Fill Combo Board is permanent because EPS contains only air. Unlike Polyiso or XPS whose blowing agents outgas, 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.

**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. It is 100% recyclable and may contain recycled material.

**Manufactured to your Needs:** Cellofoam Laminated Flute Fill Combo Board is CNC hot wire cut to fit your flute profile. It is available in 4 x 8 ft. boards up to 6 in. thick, with a minimum thickness above the rib of 1.5 in., and ASTM C578 nominal densities of 1.0, 1.25, 1.5, and 2.0 lb/ft<sup>3</sup>. Ends are ship-lapped to reduce thermal bridging, and other lengths may be ordered.



**CELLOFOAM®**  
North America Inc.

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Cellofoam® EPS Typical Physical Properties <sup>1</sup>		Units	ASTM Test	ASTM C578 Type			
				Type I	Type VIII	Type II	Type IX
Density (Nominal)		lb/ft <sup>3</sup>	C303 or D1622	1.0	1.25	1.5	2.0
Density (Minimum)		lb/ft <sup>3</sup>		0.90	1.15	1.35	1.80
<b>Thermal Resistance</b>							
R-Value <sup>2</sup>	at 25° F	(°F ft <sup>2</sup> 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			
<sup>1</sup> 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. <sup>2</sup> R means resistance to heat flow. The higher the R value, the greater the insulating power.							

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**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 Laminated Flute Fill Combo Board 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.