

CPC - Vycom CELTEC® Expanded Rigid foam PVC board

Category : Polymer , Thermoplastic , Vinyl (PVC)

Material Notes:

Celtec Displayboard is a foamed polyvinyl chloride (PVC) sheet whose combination of features makes it ideal for signage, exhibits, store displays, POP, Kiosks, screen printing and more. The surface is a smooth matte finish that makes it ideal to paint or laminate to secondary substrates. Celtec also has good screw and staple retention which makes it ideal for stage prop design, cabinetry and other wood replacement projects. Sheets are tough, high-strength and lightweight, and can be ordered in a wide range of sizes, thicknesses and colors. Celtec sheets are free of lead, cadmium, barium and zinc. Celtec is recommended for industrial and commercial signage. It readily accepts virtually any form of graphic overlay (print, paint and photo mounting). Celtec is also easy to cut and shape, making it a strong choice for three-dimensional exhibits, displays and stage sets.

FEATURES AND BENEFITS

Lightweight- Celtec is easy to handle, easy to work with.

Low Flammability- Celtec meets UL94 5V, UL 1975 and has a flame spread of 20 according to ASTM E84. **Water resistant-** Celtec has a closed cell structure and has extremely low water absorption values. **Surface-** Celtecs smooth matte surface is ideal for graphics, printing and laminating. **Weatherability-** Celtec is more color-fast than other foam PVC products. **Strength-** Celtec has an excellent strength to weight ratio as shown in the screw and staple pull test data. **Thermal Conductivity-** Celtec has excellent insulating characteristics. **Safety-** Celtec contains no lead, cadmium or zinc.

Information provided by Compression Polymers Corp - Vycom

Order this product through the following link:

http://www.lookpolymers.com/polymer_CPC-Vycom-CELTEC-Expanded-Rigid-foam-PVC-board.php

Physical Properties	Metric	English	Comments
Density	0.550 g/cc	0.0199 lb/in ³	ASTM D792
	@Thickness 10.0 - 25.0 mm	@Thickness 0.394 - 0.984 in	
	0.700 g/cc	0.0253 lb/in ³	ASTM D792
	@Thickness 1.00 - 6.00 mm	@Thickness 0.0394 - 0.236 in	
Water Absorption	0.15 %	0.15 %	ASTM D570
	@Thickness 10.0 - 25.0 mm	@Thickness 0.394 - 0.984 in	
	0.30 %	0.30 %	ASTM D570
	@Thickness 1.00 - 6.00 mm	@Thickness 0.0394 - 0.236 in	
	0.90 %	0.90 %	ASTM D2842
	@Thickness 1.00 - 6.00 mm	@Thickness 0.0394 - 0.236 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	15.55 MPa	2256 psi	ASTM D638
	@Thickness 10.0 - 25.0	@Thickness 0.394 -	

Mechanical Properties	mm Metric	0.984 in English	Comments
	20.7 MPa	3000 psi	
	@Thickness 1.00 - 6.00 mm	@Thickness 0.0394 - 0.236 in	ASTM D638
Tensile Modulus	0.993 GPa	144 ksi	
	@Thickness 10.0 - 25.0 mm	@Thickness 0.394 - 0.984 in	ASTM D638
	1.60 GPa	232 ksi	
	@Thickness 1.00 - 6.00 mm	@Thickness 0.0394 - 0.236 in	ASTM D638
Flexural Strength	22.95 MPa	3329 psi	
	@Thickness 10.0 - 25.0 mm	@Thickness 0.394 - 0.984 in	ASTM D790
Flexural Modulus	0.9944 GPa	144.2 ksi	
	@Thickness 10.0 - 25.0 mm	@Thickness 0.394 - 0.984 in	ASTM D790
Izod Impact, Notched	0.283 J/cm	0.530 ft-lb/in	
	@Thickness 1.00 - 6.00 mm	@Thickness 0.0394 - 0.236 in	ASTM D256
Charpy Impact, Unnotched	6.10 J	4.50 ft-lb	
	@Thickness 10.0 - 25.0 mm	@Thickness 0.394 - 0.984 in	ASTM D256
	11.0 J	8.10 ft-lb	
	@Thickness 1.00 - 6.00 mm	@Thickness 0.0394 - 0.236 in	ASTM D256
Gardner Impact	11.6 J	8.58 ft-lb	
	@Thickness 10.0 - 25.0 mm	@Thickness 0.394 - 0.984 in	ASTM D4228

Thermal Properties	Metric	English	Comments
CTE, linear	57.6 $\mu\text{m}/\text{m}\cdot\text{°C}$	32.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Thickness 10.0 - 25.0 mm, Temperature 20.0 °C	@Thickness 0.394 - 0.984 in, Temperature 68.0 °F	ASTM D696
	72.0 $\mu\text{m}/\text{m}\cdot\text{°C}$	40.0 $\mu\text{in}/\text{in}\cdot\text{°F}$	
	@Thickness 1.00 - 6.00 mm, Temperature 20.0 °C	@Thickness 0.0394 - 0.236 in, Temperature 68.0 °F	ASTM D696
	0.0840 W/m-K	0.583 BTU-in/hr-ft ² -°F	

Thermal Properties	Metric	English	Comments
	@Thickness 1.00 - 6.00 mm	@Thickness 0.0394 - 0.236 in	ASTM D177
Deflection Temperature at 1.8 MPa (264 psi)	65.6 °C @Thickness 10.0 - 25.0 mm	150 °F @Thickness 0.394 - 0.984 in	ASTM D648
	66.1 °C @Thickness 1.00 - 6.00 mm	151 °F @Thickness 0.0394 - 0.236 in	ASTM D648
Flammability, UL94	V-0 @Thickness 1.00 - 6.00 mm	V-0 @Thickness 0.0394 - 0.236 in	5V
Flame Spread Index	20 @Thickness 10.0 - 25.0 mm	20 @Thickness 0.394 - 0.984 in	ASTM E84
	20 @Thickness 1.00 - 6.00 mm	20 @Thickness 0.0394 - 0.236 in	ASTM E84

Electrical Properties	Metric	English	Comments
Dielectric Strength	11.2 kV/mm @Thickness 1.00 - 6.00 mm	284 kV/in @Thickness 0.0394 - 0.236 in	ASTM D149

Descriptive Properties	Value	Comments
Burning Rate	No burn when flame removed	
Foam Fire	Passed/Classified	UL 1975
Nail Hold, Lbf/in penetration	35	ASTM D1761
Oil Canning; (at 140°F) 10mm - 25mm	Passed	ASTM D648
Screw Hold, Lbf/in penetration	680	ASTM D1761
Staple Hold, Lbf/in penetration	180	ASTM D1761

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