

Product Comparison

Fiberglass Reinforced Panels vs. Multiwall Polycarbonate Panels



Fiberglass sandwich panel photographed side-by-side with a Wasco 40mm multiwall polycarbonate panel.

2¾" Fiberglass Sandwich Panel Systems

40mm Multiwall Polycarbonate Systems

Performance:

U-value	.29	.30 Opal; .28 Opal IR; .27 Clear IR (NFRC Certified)
Light transmission	20% – 30%	25% Opal; 22% Opal IR; 35% Clear IR (NFRC Certified)
SHGC	.23 White/White; .28 Crystal/White	.33 Opal; .21 Opal IR; .31 Clear IR (NFRC Certified)
Impact resistance	UL 972	UL 972
		ASTM 822-92 Hail Impact
Flame Spread	50 Flame, UL 723	0 Flame, ASTM E-84 / UL 723
Smoke Development	250 Smoke, UL 723	120 Smoke, CC1 Rated, Class A, Class 1
Color change	30 CIE Units after 5 years – ASTM 2244 (Paints / Coatings)	Less than 10 pts after 10 years – ASTM 1925
Deflection	L/60	L/175

Design:

Fiberglass exterior and interior face sheets are adhered to an aluminum grid core. The grid core can also be thermally broken. The typical .23 U-Value panel is insulated with fiberglass. Interior and exterior panels are fastened to the grid core with adhesives and the system is installed with exposed fasteners.

The fiberglass facers have a coating for UV protection, which is subject to weathering away resulting in color change. The absence of the coating will cause the fiberglass to “fiberbloom”. This is common with older panels and leads to additional discoloration with the added retention of dirt. The fiberglass warranty calls for on-going UV maintenance by reapplying coatings.

There is a potential for the dew point to fall within the panels between the faces. Moisture on the fiberglass insulation can lead to mold development, contributing to discoloration.

Wasco’s 40mm multiwall polycarbonate system—LumiWall—is constructed with fully fabricated, lightweight, interlocking tongue and groove multiwall polycarbonate panels. It is a dry glaze system requiring no sealants on the panels and offers optional polyurethane thermal breaks in the frame for improved thermal performance. Two separate assembly points create a tight attractive corner with no exposed fasteners.

LumiWall has a coextruded layer of UV inhibitor to a depth of 50 microns and requires no maintenance. Polycarbonate is not made of fibers that will deteriorate, which allows it to maintain its shape, color, and strength even when exposed to UV light.

Lumiwall has no adhered faces and is constructed with a sloped sill nose with recessed weeps for maximum drainage.



A 2¾" Fiberglass Sandwich Panel System



Wasco's V-Series LumiWall 40mm Multiwall Polycarbonate System