

AEROSPACE

**CELLITE™
– SANDWICH
PANELS**




Quality,
Performance,
Innovation

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ABOUT US

We believe that by reducing the weight of aircraft by developing lightweight composite solutions for a range of interior products, we can reduce energy consumption.

We do this because we are passionate about the environment and we want to model what innovative, responsible manufacturing looks like.

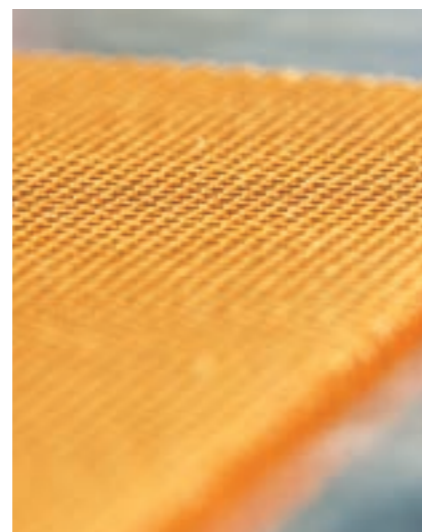
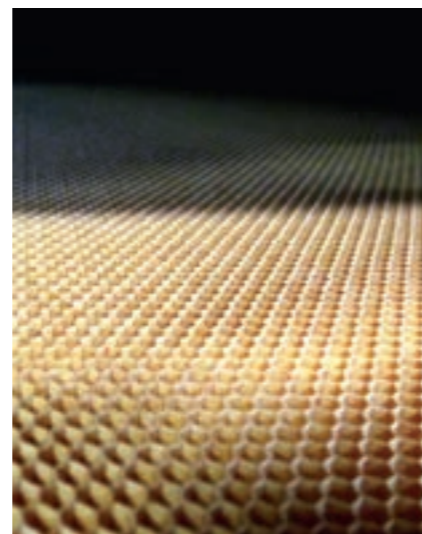
SANDWICH PANELS

Cellite™ 830, 840, 850 & 860 phenolic epoxy systems have been specifically designed by TRB aerospace engineers to provide a lightweight, high-performance panel for aircraft interiors.

The sandwich panels are approved to FAR25.853 and are suitable for decorative and nonstructural requirements right up to vestibule and aisle flooring.

The Cellite™ range of Sandwich Panels has been used over many years to manufacture bonded assemblies, lightweight structures and composite components for the aerospace industry. Panels can be machined, fabricated and assembled into various structures for a wide range of applications in many different industries.

The unique characteristics of Sandwich Panels are derived from a combination of core and facing skins, bonded with high-performance adhesive. By tailoring the separate elements to suit individual criteria, the resulting advantages can be used for numerous applications where high stiffness and low weight are particular requirements.



	Cellite™ 830		Cellite™ 840		Cellite™ 850		Cellite™ 860	
Facings	2 ply 300 gsm 7781 E-glass, Phenolic resin 40%		2 ply 300 gsm 7781 E-glass, Phenolic 40%		2 Ply 250 gsm UD Epoxy Resing System		2 Ply 250 gsm UD Epoxy Resing System	
Core	Aramid fibre Honeycomb, 3.2-48-12.7		Aramid fibre Honeycomb, 3.2-64-12.7		Aramid fibre Honeycomb, 3.2-80-9.53		Aramid fibre Honeycomb, 3.2-144-9.53	
Applications	Panels suitable for decorative and non-structural requirements (eg: Dividers)		Panels suitable for decorative and non-structural requirements (eg: Galleys)		Panels suitable for flooring (eg: under seat flooring)		Panels suitable for flooring (eg: aisle and vestibule flooring)	
Cell size	3.2		3.2		3.2		3.2	
Density in kg/m3	48		64		80		144	
Core thickness	12.7		12.7		9.53		9.53	
Property	Test method	Result	Test method	Result	Test method	Result	Test method	Result
Areal Weight (kg/m²)		2.62		2.87		2.63		3.13
Thickness (mm)		13.4		13.3		10.2		10.2
Long Beam Comp Transverse (N)	ASTM D7249	919	ASTM D7249	1176	ASTM D7249	753	ASTM D7249	734
Long Beam Comp Longitudinal (Ribbon Direction) (N)	ASTM D7249	1120	ASTM D7249	1051	ASTM D7249	803	ASTM D7249	886
Short Beam Shear Transverse (N)	ASTM C393	1120	ASTM C393	1452	ASTM C393	1907	ASTM C393	2672
Short Beam Shear Longitudinal (Ribbon Direction) (N)	ASTM C393	2101	ASTM C393	2609	ASTM C393	3701	ASTM C393	5379
Climbing Drum Peel Transverse (N/76mm)	ASTM D1781	195	ASTM D1781	175	ASTM D1781	251	ASTM D1781	252
Climbing Drum Peel Longitudinal (R Direction) (N/76mm)	ASTM D1781	228	ASTM D1781	158	ASTM D1781	No Data	ASTM D1781	No Data
Flammability 60s Vertical Burn								
Burn length (mm)	FAR25.853a	25	FAR25.853a	21	FAR25.853a	31	FAR25.853a	45.5
After Flame(s)		6		3.9		12.2		9.9
Drip Flame Time (s)		0		0		0		0
Flammability 45 Degree 30s Burn Test								
After Flame (s)	FAR25.853a	1	FAR25.853a	0	FAR25.853a	Pass	FAR25.853a	Pass
Flame Penetration		None		None		Pass		Pass
Afterglow Time (s)		0		0		Pass		Pass
Heat Release								
Heat Release Rate Peak (kW/m²)	FAR25.853 d	58	FAR25.853 d	60	FAR25.853 d	Not required	FAR25.853 d	Not required
Heat Release Rate 2min THR (kWmin/m²)		38		30.6		Not required		Not required
Emissions Testing Test								
Smoke Emission Density, Dm in 4 min	FAR25.853 d	0.7	FAR25.853 d	2.3	FAR25.853 d	101.3	FAR25.853 d	89.3

The test results above are typical average values. Longitudinal direction is along honeycomb ribbon. Transverse direction is 90° to honeycomb ribbon. The original test reports are available upon request.