



Gillfab™ 4009 Panel

July 1994

Description

Gillfab 4009 is a lightweight, highly rigid sandwich panel made from unidirectional graphite reinforced epoxy facings bonded to aramid honeycomb core.

Applications

Used as medium duty structural panels in aircraft, where light weight and rigidity are primary considerations, such as bulkheads, shelving, and galley panels

Features

- Light weight and high rigidity.
- Graphite facings can cause galvanic corrosion. Can be sold with 3 mil glass overlay. Service temperature: to 160°F.

Specifications

- Qualified to Embraer specification MEP 15-030.
- FAR 25.853 and 25.855: Fire resistance.

Construction

Adhesive:	Fire resistant modified epoxy.
Core:	1/8" cell, aramid honeycomb.
Facings:	Unidirectional carbon reinforced epoxy.

Availability

Thickness:	Per customer specification.
Size:	Standard size is 48" x 144". Other sizes available on request.
Facings:	.01" and up in .005" increments
Core:	Densities of 1.8 to 9 pcf.



Standard Tolerances

Thickness:	$\pm .01"$
Length:	+ 0.5", - 0"
Width:	+ 0.5", - 0"
Warpage:	.004 L ² /t where L = length (ft.) and t = thickness (in.)

Alternative Gill Products

Product Number	Difference
Gillfab 4009A	Higher tensile and compressive strength.
Gillfab 4017	S-2 Glass® reinforced facings - lower cost and better corrosion resistance, at the sacrifice of weight and rigidity.
Gillfab 4109	Phenolic resin used in facing results in lower smoke emission and slightly lower strength.



Properties of Gillfab 4009
Based on 0.4" thick panel with .010".010"
facings and .380" thick core at 4 pcf

Property	Test Method	Typical Values	
		English	(Metric)
Mechanical			
Long beam flexural strength, 20" span			
Ultimate load,lbs(kg)		270	(122)
Facing stress,ksi(MPa)		55	(379)
Deflection at 100 lb,in(mm)		.42	(10.7)
Sandwich peel,in-lbs(N-m)/3" width	MILSTD 401B		
At room temperature		25	(2.82)
After 30 day water soak		22	(2.49)
Panel core shear,psi(kPa)	MILSTD 401B		
Ribbon (L) direction		225	(1551)
Transverse(W) direction		110	(758)
Flatwise compressive strength,psi(kPa)	MILSTD 401B	500	(3448)
Flatwise tensile strength,psi(kPa)	MILSTD 401B	400	(2758)
Physical			
Weight, psf(kg/m ²)		.42	(2.05)
Impact strength,Gardner	MODEL 11K3		
2 lb. dart, in-lbs(N-m)		4	(.45)
Thermal Conductivity	ASTM C177		
BTU-Ft/Ft ² hr °F(W/cm °C)		.40	(.007)
Max. Service Temperature, °F(°C)		180	(82)
Flammability			
60 sec. vertical exposure	FAR 25.853a	Pass	
45 degree test	FAR 25.855	Pass	

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