



Gillfab™ 4109 Panel

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Description

Gillfab 4109 is a low smoke flooring panel made from unidirectional carbon reinforced phenolic facings bonded to aramid honeycomb core.

Applications

Designed for use as flooring in cabin compartments of commercial aircraft.

Features

- Facings can be modified for better impact and covered with a thin fiberglass layer to prevent galvanic corrosion.
- Low smoke evolution in a fire.
- Very light weight and low deflection.
- Passes McDonnell Douglas rolling cart fatigue test (Type I).
- Service temperature range: Up to 180°F.

Specifications

- McDonnell Douglas Dwg. No. 7954400, Ty. 1 and 2.
- British Aerospace BAER 3231, Gr M & L.
- FAR 25.853a - fire resistance.

Construction

		<u>Ty 1/Gr M</u>	<u>Ty 2/Gr L</u>
Facings:	Unidirectional carbon/phenolic.	.010"	.010"
Core:	1/8" cell aramid honeycomb.	8 pcf	4 pcf
Adhesive:	Fire retardant modified epoxy.		

Availability

Thickness:	Per customer specification.
Size:	Standard size is 48" x 144". Other sizes are available on request to up 72" x 168".



Standard Tolerances

Thickness:	± .010"
Length:	+0.5", -0"
Width:	+0.5", -0"
Warpage:	.025 in./ft., max.

Alternative Gill Products

Product Number	Difference
Gillfab 4017	S-2 glass® reinforced epoxy facings give a higher impact resistance and lower cost, but a higher smoke evolution.
Gillfab 4004	S-2 glass reinforced phenolic facings make the panel lower in cost but not as rigid.
Gillfab 4009	Epoxy resin facings in place of phenolic, giving better mechanicals but higher smoke evolution.
Gillfab 4409	Similar, but qualified to Boeing BMS 4-20.
Gillfab 4509	Phenolic resin facings and adhesive in place of modified epoxy and also qualified to Douglas Drawing 7954400.



Properties of Gillfab 4109

Gr M

Based on 0.4" thick panel with .010"/.010" facings and core at 8 pcf

Property	Test Method	Typical Values	
		English	(Metric)
Mechanical			
Ultimate bending moment, 20 in. span, 3 in. spcm. width, 1/4 pt. loading, lbs-in/in (Nm/25m) min.	MILSTD 401B	210	(23.73)
Peel strength, lbs-in/in (Nm/25mm) min.	MILSTD 401B	7.0	(.791)
After 30 days humidity exposure @ 95-100% RH, 120°F(49°C)		6.0	(.678)
Ultimate shear strength, 4 in span, 2 in. spcm. width, 1/4 pt. loading, psi (MPa) min.	MILSTD 401B	300	(2.07)
Flatwise compressive strength, psi (MPa) min.	MILSTD 401B	1,500	(10.34)
Physical			
Weight, psf (kg/m ²)		.54 (+0.03)	(2.49) (+0.3/-0.0)
Panel thickness, in (mm)		.400±.010	10.16 ± 0.25
Flammability, 60 sec. vertical	FAR 25.853a	Pass	
N.B.S. Smoke Density, Radiant and Flaming	BAER 4625		
Ds @ 90 secs. max.		100	
Ds @ 4 min. max.		200	
OSU Heat Release	FAR 25.853(a-1)		
Appendix F, Part IV			
Total, kw-mins/m ²		49	
Peak, kw/m ²		40	

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