



Gillfloor™ 4509 Panel

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Description

Gillfloor 4509 Panel 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 are 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 180F.

Specifications

- McDonnell Douglas Dwg. No. 7954400, Ty. 1 and 2.
- FAR 25.853 - fire resistant.

Construction

		Type 1	Type 2
Adhesive:	Fire retardant modified phenolic	.012"	.012"
Core:	1/8" cell aramid honeycomb.	8 pcf	4 pcf
Facings:	Unidirectional carbon/phenolic	.04 psf	.04 psf

Availability

Thickness: Per customer specification.

Length and Width: Standard size is 48" x 144". Other sizes are available on request to up 72" x 168".



Standard Tolerances

Thickness:	+/- .01"
Length:	-0, +0.5"
Width:	-0, +0.5"
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 higher weight.
Gillfab 4009	Epoxy facings/epoxy adhesive.
Gillfab 4109	Phenolic facings/epoxy adhesive.
Gillfab 4409	Phenolic facings/phenolic adhesive.



Properties of Gillfab 4509

Property	Test Method	Unit	Type I	Type II
Weight	DWG 7954400	lb/sq ft (kg/sq m)	0.521 (0.24)	0.418 (0.19)
Thickness	DWG 7954400	inch (mm)	0.393 (10.0)	0.388 (9.9)
Sandwich Peel	DPS 1.92	in-lb(N-m)/3 in width	25.5 (2.88)	23.6 (2.68)
Sandwich Peel, Humidity Aged	DPS 1.92	in-lb(N-m)/3 in width	25.8 (2.91)	22.2 (2.51)
Long Beam Flexural Note 1 Ultimate Load Deflection	DPS 1.92 Method 3	lb (N) inch (mm)	500 (2,224) 0.265 (6.7)	434 (1,931) 0.291 (7.4)
Long Beam Flexural Note 1 Ultimate Load, humidity aged	DPS 1.92 Method 3	lb (N)	482 (2144)	410 (1,824)
Sandwich Compression	DPS 1.92	lb/sq in (kPa)	1,568 (10,811)	574 (3,958)
Insert Membrane, Humidity Aged	DWG 7954400	lb (N)	1,329 (5,912)	1,132 (5,035)
Impact Resistance Load Fiber Damage	DWG 7954400	in-lb (N-m) ---	26 (35.3) None	24 (32.6) None
Lap Shear	DWG 7954400	lb/sq in (kPa)	1,257 (,8667)	1,084 (7,474)
Warpage	DWG 7954400	inch (mm)	.002 (0.05)	0.005 (0.13)
Shear Strength, 45 Degree off Axis, Humidity Aged	DWG 7954400	lb (N)	412 (1,833)	404 (1,797)
Flammability - 60 Second Self-Extinguishing Time Burn Length Drip Extinguishing Time	FAR 25.853	second inch (mm) second	5.1 2.7 (68.6) 0	4.4 2.8 (71.1) 0
Flammability - 45 Degree Self-Extinguishing Time Afterglow Penetration	FAR 25.855	second second ----	0 0 None	0 0 None
Smoke Density	DMS 1500	D _s	25	22
Food Roller Cart Note 2	DWG 7954400	lb (kg)/wheel # cycles	100 (45.4) 111,002	NR
Note 1 Tested in core ribbon direction. Note 2 Roller cart tested terminated with no failure observed. These values exceed the requirements of McDonnell Douglas DWG 7954400.				

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