



Gillfab™ 4018 Panel

August 1994

Description

Gillfab 4018 is a low smoke sandwich panel made from unidirectional S-2 glass® reinforced phenolic facings bonded to a Nomex® honeycomb core.

Applications

Designed for use as flooring in the passenger compartment in Fokker 100 aircraft.

Features

- Low smoke evolution in a fire.
- Very high impact facings.
- High strength-to-weight ratio.
- Service temperature range: to 180°F.

Specifications

- Fokker FoN 1-4350
- FAR 25.853a and 25.855. Fire resistance.

Construction

Adhesive:	Modified epoxy film.
Core:	Nomex honeycomb.
Facings:	Unidirectional S-2 glass reinforced phenolic.

Availability

Thickness:	.407".
Length:	Standard size is 144". Up to 168", available on request.
Width:	Standard size is 48". Up to 72", available on request



Standard Tolerances

Thickness:	+0.015"
Length:	+0.5", - 0
Width:	+0.5", - 0"
Warpage:	.025" per foot maximum

Alternative Gill Products

Product Number	Difference
Gillfab 4018T	Tedlar® overlay on top facing only.
Gillfab 4018S	Tedlar overlay on both top and back surfaces.
Gillfab 4019	Made with phenolic reinforced woven cloth-carbon unidirectional glass facings. Qualified to Fokker FoN 1-4354.

Properties of Gillfab 4018

Based on .407" thick panel ($\pm .015"$) with .028"/.028" facings and 9 pcf density core

Property	Typical Values			
	English ¹	(Metric) ¹	English ²	(Metric) ²
Mechanical				
Long beam flexural strength,				
3-point loading:				
Load, lbs (N) miniv.	312	(1,390)	220	(980)
Deflection @ 100 lbs (445N), in (mm) maxiv.	.315	(8)	.472	(12)
4-point loading with .252" (6.4 mm)				
hole, lbs, (N) miniv.	209	(930)	146	(650)
4-point loading, Impact Test, lbs (N) miniv.	209	(930)	----	----
Panel shear				
Load, lbs (N) miniv.	542	(2,410)	832	(3,700)
Load on splice, lbs (N) miniv.	542	(2,410)	----	----
Peel strength, in-lbs/3" (N-mm/76mm) miniv.	13.4	(1,500)	----	----
Humidity resistance				
3-point loading				
Load, lbs (N) miniv.	312	(1,390)	.220	(980)
Deflection @ 100 lbs (455N), in (mm) maxiv.	.315	(8)	.472	(12)
4-point loading with .252" (6.4mm)	209	(930)	----	----
hole, lbs (N) miniv. N-mm/76 mm	13.4	(1,500)	----	----
Peel strength, in-lbs/3" miniv.				
Insert Shear-out strength, lbs (N) miniv.	----	----	673	(3,000)
Stabilized core compression, psi (Mpa) miniv.	1595	(11)		
Food cart test (cycles to pass)	120K cycles @ 110 lbs. (50KG) Wheel/Plus			
	35K cycles @ 165 lbs (75KG)/Wheel			
Insert shear-out, lbs (N) miniv.	----	----	673	(3000)



Property	Typical Values	
	English ¹ .	(Metric) ¹ .
Weight, psf (kg/m ²)	.799± .051	(3.90 ± .25)
Flammability		
60 sec vertical		
Extinguishing time, secs maxiv.		15
Burn length, in (mm) maxiv.	6	(152)
Drip extinguishing time, secs maxiv.		3
45 degree test		
Extinguishing time, secs maxiv.		15
Penetration, none		None
Glow time, secs maxiv.		10
Smoke emission		
Toxic gas emission, parts/million		Pass SKA/185
Optical density, flaming, D _s		Not Required At This Time
Optical density, non-flaming, D _s		Not Required At This Time
Heat release		
Peak, kw/m ² maxiv.		65
2 minute, kw/min./m ² maxiv.		65
1. Specimen length perpendicular to core ribbon direction.		
2. Specimen length parallel to core ribbon direction.		
maxiv: maximum individual value		
miniv: minimum individual value		

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