

**Gillfab™ 4022 Panel**

May 1994

Description

Gillfab 4022 is a sandwich panel made from fiberglass cloth reinforced phenolic facings bonded to aramid honeycomb core.

Applications

Normally used where light weight and low smoke emission are major concerns, such as aircraft galley and bulk head panels and ceiling panels in public transit vehicles.

Features

- Low smoke emission. Good impact and corrosion resistance.
- Good burn through protection.
- Service temperature range: to 180°F.

Specifications

- Lockheed LAC - 22-1349 Ty 2 - facing.
- McDonnell Douglas Dwg. No. 9D0059.
- McDonnell Douglas Dwg. No. S3933942.
- McDonnell Douglas Dwg. No. S3933941.
- TWA 6111.
- FAR 25.853a - fire resistance.

Construction

Adhesive:	Nitrile modified epoxy film, fire resistant.
Core:	Aramid paper (Nomex®) honeycomb.
Facings:	Fiberglass cloth phenolic laminate, Gillfab 1340 and 1342.

Availability

Thickness:	Per customer specification, from .20" and up.
Size:	Standard size is 48" x 144". Sizes up to 60" x 168" are available on special order.
Facing:	Starting at .01" in multiples of .005".
Core:	Cell sizes are 1/8", 3/16", or 1/4"; 1.8 to 9 pcf density.



Standard Tolerances

Thickness:	±0.010"
Length:	+0.5", - 0
Width:	+0.5", - 0"
Warpage:	<.004 L ² /t where L = length (ft.) and t = thickness (in.)

Similar Gill Products

Product Number	Difference
Gillfab 4122	The use of phenolic adhesive results in lower strength and less smoke emission.
Gillfab 5017	The use of epoxy-fiberglass facings results in higher strength but with much higher smoke emission.
Gillfab 5055	Kevlar® reinforced skins in place of glass cloth, results in higher cost with lower weight.

Properties of Gillfab 4022

Based on 0.5" thick panel with .020"/.020" facings and .46" thick core at 3.0 pcf

Property	Minimum Specification Values	
	English	Metric
Mechanical		
Long beam flexural strength,		
3-point loading <u>1/</u> :		
Load, lbs (N) miniv.	641	(2,850)
Deflection @ 225 lbs (1000 N), in (mm) maxiv.	.295	(7.5)
4-point loading with .252" (6.4 mm) hole, lbs, (N) miniv.	447	(1,990)
4-point loading, impact test, lbs (N) miniv.	360	(1,600)
Panel shear <u>1/</u> :		
Load, lbs (N) miniv.	959	(4,200)
Load on splice, lbs (N) miniv.	959	(4,200)
Flatwise tension		
Failure stress, psi (N-mm ²) miniv.	508	(3.5)
Failure stress on splice, psi (N-mm ²) miniv.	508	(3.5)
Humidity resistance		
3-point loading		
Load, lbs (N) miniv.		
Deflection @ 225 lbs (1000 N), in (mm) maxiv.	579	(2,575)
4-point loading with .252" (6.4mm) hole,		
lbs (N) miniv. N-mm/76 mm	.295	(7.5)
Flatwise tension, lbs (N) miniv.	360	(1,600)
psi (N-mm ²) miniv.	508	(3.5)
Stabilized core compression, psi (Mpa) miniv.	826	(5.7)
Food cart test (cycles to pass)	120K cycles @ 100 lbs (50KG)/Wheel plus	
	35 K cycles @ 165 lbs (75KG)/Wheel	



Physical	English	Metric
Weight, psf (kg/m ²)	.656	(3.20)
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	
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 maxiv.	65	
2 minute, kw/min./m ² maxiv.	65	
1. Specimen length perpendicular to core ribbon direction. maxiv: maximum individual value miniv: minimum individual value		

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