

**Gillfab™ 4106A/B**

April 2001

Description

Gillfab 4106 is a sandwich panel made from aluminum facings bonded to aramid honeycomb core.

Applications

A rigid, lightweight sandwich panel normally used in aircraft interior applications, such as bulkheads, galley panels, shelving, and cabin flooring in low traffic areas.

Features

- High strength-to-weight ratio.
- High bond strength.
- Good flatness.
- Service temperature range: -65°F to 180°F.

Specifications

- FAR 25.853. Fire resistance.
- McDonnell Douglas Dwg. S3932194.

Construction

Adhesive:	Modified epoxy film, fire retardant, per customer requirement. Gillfab 4106A designates ribbon direction parallel to panel length. Gillfab 4106B designates ribbon direction parallel to panel width.
Core:	Aramid honeycomb, per customer requirement.
Facings:	Aluminum, per customer requirement..

Availability

Thickness:	Per customer specification, from 0.1" and up.
Size:	Standard size is 48" x 144".
Facing:	Aluminum alloy: 2024-T3 or 7075-T6, in standard thicknesses of .01", .016", .02", .025", .03" and up.
Core:	Density and cell size per customer specification. Density range from 1.8 to 9.0 pcf; cell sizes of 1/8", 3/16" or 1/4". Gillfab 4106A designates ribbon direction parallel to panel length. Gillfab 4106B designates ribbon direction parallel to panel width.



Standard Tolerances

Thickness:	$\pm .010$ "
Length:	+ 0.5", - .125"
Width:	+ 0.5", - .125"
Warpage:	$<.004 L^2/t$ where L = length (ft.) and t = thickness (in.)

Alternative Gill Products

Product Number	Difference
Gillfab 5017	Fiberglass cloth-epoxy facings - better impact and corrosion resistance.
Gillfab 4030	Aluminum honeycomb in place of aramid honeycomb.



Properties of Gillfab 4106

Based on 0.5" thick panel with .020"/.020" facings and .46" thick core at 3 pcf

Property	Test Method	Typical Values	
		English	(Metric)
Mechanical			
Long beam flexural strength, 20" span	MILSTD 401B		
Ultimate load,lbs(kg)		346	(157)
Facing stress,ksi(MPa)		30	(207)
Deflection at 100 lb,in(mm)		.48	(12.2)
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		160	(1,102)
Transverse(W) direction		85	(586)
Flatwise compressive strength,psi(kPa)	MILSTD 401B	270	(1,860)
Flatwise tensile strength,psi(kPa)	MILSTD 401B	450	(3,100)
Physical			
Weight, psf(kg/m ²)		.82	(4.00)
Impact strength,Gardner	MODEL 11K3	40	(4.52)
2 lb. dart, in-lbs(N-m)			
Max. Service Temperature, °F(°C)		180	(82)
Thermal Conductivity BTU-Ft/Ft ² hr °F(W/cm °C)	ASTM C177	.50	(.009)
Flammability			
60 sec. vertical exposure	FAR 25.853a		
self-extinguishing time(sec)		0	
burn length(inches) (mm)		0	
45 degree test	FAR 25.855		
self-extinguishing time(sec)		0	
penetration		None	
glow time(sec)		0	

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M.C. Gill Corp.
4056 Easy Street
El Monte, CA 91731-1087 USA
626-443-4022 info@mcgillcorp.com

M.C. Gill Europe Ltd. - Insoleq
23 Enterprise Road, Balloo Industrial Estate South
Bangor Co-Down BT19 7TA, Northern Ireland
+44 (0) 2891 470073 sales@mcgillcorp.com

www.mcgillcorp.com

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