



Gillfab™ 4088 Panel

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Description

Gillfab 4088 is a high strength sandwich panel made from unidirectional glass reinforced epoxy facings bonded to aluminum honeycomb.

Applications

An aircraft grade panel used in some military aircraft as either flooring or pressure bulkheads.

Features

- High impact facings.
- High strength-to-weight ratio.
- High corrosion resistant skins.
- Service temperature range: -65°F to 180°F.

Specifications

- Lockheed LAC-C-28-1147.

Construction

Adhesive:	Modified epoxy film.
Core:	Aluminum honeycomb 1/8" cell, 6.1 pcf density.
Facings:	Unidirectional glass reinforced epoxy laminate (Gillfab 1088).

Availability

Thickness:	Per customer specification, usually .375".
Size:	Standard size is 48" x 144". Sizes up to 72" x 168" are available on special order.
Facing:	.035"; back .014".
Core:	Specification stipulates 6.1 pcf density.



Standard Tolerances

Thickness:	± 0.01 "
Length:	+ .25", - 0"
Width:	+ .25", - 0"
Warpage:	$<.004 L^2/t$ where L = length (ft.) and t = thickness (in.)

Alternative Gill Products

Product Number	Difference
Gillfab 4017	Nomex® honeycomb in place of aluminum honeycomb.
Gillfab 4011	Aluminum facings in place of frp.
Gillfab 5024	Higher impact facings and core variations available.



Properties of Gillfab 4088

Based on 0.5" thick panel with .035"/.014" facings
and .451" thick core at 6.1 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)		.66	(16.8)
Sandwich peel, in-lbs (N-m)/3" width	MILSTD 401B		
At room temperature		30	(3.39)
After 30 day water soak		27	(3.05)
Panel core shear, psi (kPa)	MILSTD 401B		
Ribbon (L) direction		445	(3,069)
Transverse (W) direction		270	(1,863)
Flatwise compressive strength, psi (kPa)	MILSTD 401B	660	(4,551)
Flatwise tensile strength, psi (kPa)	MILSTD 401B	450	(3,103)
Physical			
Weight, psf (kg/m ²)		.75	(3.67)
Impact strength, Gardner 11K3	ASTM D3029		
2 lb. dart, in-lbs (N-m)		30	(3.39)
Max. Service Temperature, °F(°C)		180	(82)
Thermal Conductivity,	ASTM C177		
BTU-Ft/Ft ² .hr. °F(W/cm. °C)		0.5	(.009)
Flammability			
60 second vertical exposure	FAR 25.853a		
self-extinguishing time sec		Pass	
burn length inches (mm)		Pass	
45 degree test	FAR 25.855		
self-extinguishing time sec		Pass	
penetration		None	

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