



Gillfab™ 4105 A/B

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Description

Gillfab 4105A (Ty 1) is a sandwich panel made with facings of fiberglass cloth reinforced epoxy laminate bonded to an aramid honeycomb core. 4105B (Ty 2) is identical except a sheet of aluminum foil is bonded to the bottom facing.

Applications

Designed for use as flooring in passenger, cockpit, and cargo compartments in Airbus Industrie's A300 and A310 aircraft.

Features

- High impact, corrosion resistant facing.
- Light weight.
- Service temperature: to 158°F.

Specifications

- Airbus Industrie: TL 53/5000/79.
- FAR 25.853 - fire resistant.

Construction

Adhesive:	Epoxy, fire resistant.
Core:	Aramid honeycomb.
Facings:	Woven E-glass cloth/epoxy.

Availability

Thickness:	.375".
Length:	144" is standard. Other sizes available on request.
Width:	36" or 48" is standard. Other sizes available on request.
Core:	6.0 pcf density, 3/16" cell size.



Standard Tolerances

Thickness:	± 0.01 "
Length:	+ 0.5", -0.062"
Width:	+ 0.5", -0.062"
Warpage:	$< .004 L^2/t$ where L = length (ft.) and t = thickness (in.)

Alternative Gill Products

Product Number	Difference
Gillfab 4004	Unidirectional S-2 glass®; phenolic resin facing; lower smoke generation.
Gillfab 4005	1/8" cell size, 3 mil aramid honeycomb, otherwise very similar.
Gillfab 4017	Unidirectional S-2 glass facings; higher impact, lighter weight but less rigid.



Properties of Gillfab 4105A/B Ty 1 And Ty 2

Based on .375" thick panel with .025"/.025" facings and .325" thick core at 6 pcf

Property	Test Method	Typical Values	
		English	(Metric)
Mechanical			
Static Load	Airbus Industrie		
Surface Load, lbs/sq.ft. (kg/m ²)	TL53/5000/79		
No permanent set		300	(1,465)
No failure		1,200	(5,861)
Concentrated load, lbs/sq. in (kPA)		200	(1,379)
Stilletto heel load, lbs/cm ² (kPA)		200	(8,898)
Bending			
Upper face turned towards the load applied, in-lbs. (N-m)		300	(33.9)
Upper face turned away from the load applied, in-lb. (N-m)		225	(25.4)
Full scale panel shear strength, max. lbs. (k)		21,900	(9934)
Flatness @ 2.95 lb/ft load, in/ft (mm/m)		.35	(29.2)
Insert pull out, lbs. (k)		1,440	(653)
Long Beam Flexural Strength, Ribbon Direction (L) 20" span, 1/4 pt loading	MIL-STD-401B		
Ultimate Load, lbs. (kg)		367	(166.8)
Facing Stress, ksi (MPA)		37.5	(259)
Deflection @ 100 lbs., in (mm)		.683	(17.3)
**B" Allowable Values			
Ultimate Load, lbs. (kg)		347	158)
Facing Stress, ksi (MPA)		35.3	(243)
Deflection @ 100 lbs., in (mm)		0.714	(18.1)
Sandwich Peel, in-lbs (N-m)/3" width	MIL-STD-401B		
At room temperature		27.0	(3.05)
Panel Core Shear, psi (kPA), Ribbon	BMS 4-17		
Direction (L) 4" span, 3 pt. Loading **B" Allowable, psi (KPA)		468	(3,227)
Flatwise compressive strength, psi (kPA)	MIL-STD-401B	916.0	(6,317)
Flatwise tensile strength, psi (kPA)	MIL-STD-401B	501.0	(3,455)
Flatwise tensile modulus, ksi (MPA)	MIL-STD-401B	17.33	(119.4)
Physical			
Weight, psf (kg/m ²)		.670	(3.27)
Maximum Service Temperature, °F (°C)		158	(70)
Flammability	FAR 25.583	Pass	
**B" Allowable: a calculated allowable value where at least 90 percent of the population of values will equal or exceed the calculated allowable with a confidence level of 95 percent.			

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