

**Gillfab™ 4522 Panel****March 1998****Description**

Gillfab 4522 is a low smoke sandwich panel with facings of phenolic resin reinforced with woven glass cloth bonded to a Nomex® honeycomb core.

Applications

Flooring panel for containerized cargo compartments and freighter aircraft for Airbus Industrie A300/A310/A300-600, A319/A320/A321, and A330/A340 aircraft

Features

- All phenolic resin - low smoke and toxic emissions in a fire.
- High impact, corrosion resistant facings.
- Light weight.
- Good burn through resistance.
- Service temperature: to 180°F.

Specifications

- AI Technical Specification No. 5360 M1M 000500, Issue 5 (CCC1).
- FAR 25.853 - fire resistant.
- ABD 0031 - Smoke density, toxicity, flammability, and burn through.

Construction

Adhesive:	Modified epoxy.
Core:	Aramid honeycomb (Nomex).
Facings:	Phenolic resin, glass fiber reinforced plastic.

Availability

Thickness:	0.374"
Length and Width:	Per customer specification, up to 60"x144"
Facing thickness:	Top: 0.020", Bottom: 0.015"
Core:	8.0 pcf density, 3/16" cell size



Standard Tolerances

Thickness:	+ 0.02", -0.01"
Length:	-0, +0.5"
Width:	-0, +0.5"
Warpage:	0.03937"

Alternative Gill Products

Product Number	Difference
Gillfab 4322	Panel designation originally qualified for use in containerized cargo flooring for A320, A321 aircraft. Thicker facings, lower density core.



Properties of Gillfab 4522

Based on a panel 0.374" thick with 0.020"/0.015" phenolic facings and a 8 pcf 0.339" thick core
Typical Average and Specification Property Values English (Metric)
Specification: AI 5360 M1M 000500, Issue 5 (CCC1)

Property	Test Method	Typical
Weight, psf (kg/m ²)	ASTM C 29	0.592
(2.9) maximum		
Long Beam Flexural Strength, lbs(N)	ASTM C 393	
Ultimate Load		
Ribbon (L) Direction		
RT		315 (1,403)
HA + 40°C		282 (1,255)
Transverse (W) Direction		
RT		274 (1,217)
HA + 40°C		281 (1,249)
Long Beam Deflection @		
445N (100 lbs), in (mm)		
Ribbon (L) Direction		
RT		0.874 (22.2)
HA + 40°C		0.833 (21.16)
Transverse (W) Direction		
RT		0.909 (23.09)
HA + 40°C		0.835 (21.21)
Panel Shear		
Ultimate Load, lbs (N)	ASTM C 393	
RT		775 (3,449)
HA + 40°C		741 (3,295)
Impact Strength, ft-lbs (N-m)	Chapter 9.8*	
	ASTM D 3029	4.875 (6.61)
C.D. Peel, lbs (N)	ASTM D 1781	
RT		65 (289)
HA + 40°C		58 (259)
Flammability	ABD 0031	
60 Second Vertical	AITM 2.0002A	
Extinguishing Time, sec		1.1
Burn Length, in (mm)		0.4 (10.2)
Drip Extinguishing Time, sec		.0
12 Second Vertical	AITM 2.0002B	
Extinguishing Time, sec		0.0
Burn Length, in (mm)		0.3 (7.6)
Drip Extinguishing Time, sec		0.0
30 Second 45 Degree	AITM 2.0004	
Extinguishing Time, sec		0.0
Afterglow, sec		0.4
Flame Penetration		None
Flame Penetration Resistance	FAR 25.855, App. F,	
Flame Penetration	Part III, Amend. 25-60	None
Temperature Rise, °F		180

Meets smoke and toxicity requirements of ABD 0031.

*Chapter numbers in "Test Method" column refer to section in Airbus specification.

NOTE:"Reported" means no Specification requirement for that property.

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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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