

**Gillfab™ 4004 Panel**

March 1997

Description

Gillfab 4004 is a low smoke sandwich panel made from unidirectional S-2 Glass® reinforced phenolic facings bonded to aramid honeycomb core.

Applications

4004 is designed for use as flooring in the cargo areas of large commercial aircraft. It could be used as a low smoke, aircraft grade panel for galleys, flooring, and bulkheads.

Features

- High impact, corrosion resistant facing.
- Low smoke emission in a fire.
- Light weight.
- Service temperature range: to 180°F.

Specifications

- McDonnell Douglas Part No. 7954401, Ty 1.
- FAR 25.853 and 25.855. Fire resistance.

Availability

Thickness:	Per customer specification, from .375" and up.
Size:	Standard size is 48" x 144". Sizes up to 72" x 168" are available on special order.
Facings:	Thickness from .015" in multiples of .007".

Construction

Resin: Modified, fire resistant polyester.
Reinforcement: Aramid cloth (Kevlar).
Surface: .001" Tedlar, satin gloss.

Standard Tolerances

Thickness:	± .01"
Length:	+ 0.5", - 0"
Width:	+ 0.5", - 0"
Warpage:	.025 in/ft., max.



Alternative Gill Products

Product Number	Difference
Gillfab 4004A	Has .030"/.015" facings and .360" core. Qualified British Aerospace BAER 3232.
Gillfab 4004B, Ty 1, 2, and 3	Qualified to MAT 006. All types have .015"/.015" facings and each type is available in .280" or .405" overall thicknesses. Type 1 has 9 pcf Nomex® core Type 2 has 5 pcf Nomex core Type 3 has 3 pcf Nomex core
Gillfab 4017	Epoxy resin in facings makes 4017 higher in strength, but higher in smoke evolution.
Gillfab 4022	Non-flooring grade using woven E-glass facings.
Gillfab 4109	Has unidirectional graphite facings - for passenger flooring.



Properties of Gillfab 4004
Based on .41" thick panel with .015"/.015"
facings and .38" thick core at 9 pcf

Property	Test Method	Typical Values	
		English	(Metric)
Mechanical Properties			
Long beam flexural strength, 20" span	MIL-STD 401B		
Ultimate load, lbs(kg)		325	(147)
Facing stress, ksi(MPa)		45	(310)
Deflection at 100 lb, in(mm)		.85	(21.6)
Sandwich peel, in-lbs(N-m)/3" width	MIL-STD 401B		
At room temperature		18	(2.03)
After 30 day water soak		18	(2.03)
Panel core shear, psi (kPa)	MIL-STD 401B		
Ribbon(L) direction		340	(2340)
Transverse(W) direction		250	(1720)
Flatwise compressive strength, psi(kPa)	MIL-STD 401B	1600	(11030)
Lap Shear Strength, psi(kPa)	DAC 7954401	1700	(11720)
Physical			
Weight, psf(kg/m ²), max.		.70	(3.42)
Impact strength, Gardner	MODEL 11K3		
2 lb. dart, in-lbs(N-m)		100	(11.3)
Max. Service Temperature, °F(°C)		180	(82)
Thermal Conductivity,	ASTM C177		
BTU-Ft/Ft ² hr °F(W/cm °C)		.12	(.002)
Flammability			
60 sec. vertical exposure	FAR 25.853a		
self-extinguishing time(sec)		6	(6)
burn length (inches) (mm)		2	(50.8)
Smoke Density, (Ds) (max.)			
Flaming, 4 min.		70	

M.C. Gill Corporation gives no warranties, expressed, implied or statutory, or otherwise, as to the description, quality, fitness, capacity, or any other matter, of the properties described. The data given represents minimum values to be expected. Through additional testing of each lot it is possible to verify that the product exceeds the tabulated values. It is recommended, however, that prospective users evaluate the materials to determine their suitability for the users' specific requirements. Values are given on the condition that the user assumes all risk and that responsibility for any loss or damage caused by or resulting from the use of such information is disclaimed by M.C. Gill Corporation.

M.C. Gill Corporation
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@insoleq.co.uk

www.mcgillcorp.com

© M.C. Gill Corporation. All rights reserved.

