



PRODUCT DATA SHEET

Gillfloor® 4809

DESCRIPTION

Gillfloor® 4809 is an ultra-light weight floor panel made from unidirectional carbon fiber reinforced epoxy facings bonded to para-aramid honeycomb core. Outer panel surfaces feature fiberglass overlay to help protect against galvanic corrosion.

APPLICATIONS

Extremely light-weight, high-strength panels designed for use as flooring in passenger compartments of commercial aircraft in which light weight is a major consideration.

FEATURES

- Good impact strength
- Offers 13-20% weight savings (depending on type) vs. carbon meta-aramid panel having comparable properties
- Excellent machinability and bonding surfaces
- Resistant to galvanic corrosion
- Excellent strength-to-weight and stiffness-to-weight ratios
- Very light-weight and negligible panel deflection under load



AVAILABILITY

	4809 Ty VI	4809 Ty VII	4809 Ty VIII	4809 Ty IX
Thickness	0.400	0.400	0.400	0.400
Facing, face/back, inch (mm)	0.015/0.015	0.015/0.015	0.020/0.020	0.030/0.030
Length, inch (mm)	Typical 144 (3,658); Maximum 168 (4,267)			
Width, inch (mm)	Typical 48 (1,219); Maximum 72 (1,829)			
Honeycomb	Gillcore® para-aramid low-density	Gillcore® para-aramid medium-density	Gillcore® para-aramid high-density	Gillcore® para-aramid high-density

CONSTRUCTION

- Adhesive:** Epoxy film
- Core:** Gillcore® para-aramid honeycomb
- Reinforcement:** Unidirectional carbon fiber with glass overlay
- Resin System:** Epoxy

SPECIFICATIONS

- Qualified to Boeing BMS 4-20, Types VI, VII, VIII, and IX
- FAR 25.853 - fire resistant



HEALTH PRECAUTIONS

This product is safe to use and apply when recommended precautions are followed. Before using this product, read and understand the Safety Data Sheet (SDS), which provides information on health, physical and environmental hazards, handling precautions and first aid recommendations. A SDS is available at <https://www.thegillcorp.com/msds.php>.

For industrial use only. Keep away from children. Additional information can be found at: www.thegillcorp.com. For sales and ordering information call 1-626-443-6094.

PERFORMANCE PROPERTIES, TYPICAL

The following tests are run in accordance with BMS 4-20 (Boeing) specification test methods.

TGC Part Number	4809 Type VI	4809 Type VII	4809 Type VIII	4809 Type IX
Areal weight, psf (kg/m ²)	0.395 (1.93)	0.447 (2.18)	0.567 (2.77)	0.752 (3.67)
Thickness, in (mm)	0.40 (10.2)	0.40 (10.2)	0.40 (10.2)	0.40 (10.2)
Long beam flexure, load, lbs (N)	320 (1423)	340 (1512)	420 (1868)	740 (3292)
Deflection at 100 lbs (445N) load, in (mm)	0.38 (9.7)	0.37 (9.4)	0.29 (7.4)	0.21 (5.3)
Long beam load, humidity exposed, lbs (N)	285 (1268)	297 (1321)	381 (1695)	678 (3016)
Panel shear, lbs (N)	887 (3946)	1197 (5324)	1510 (6717)	2190 (9742)
Drum peel, in-lbs/3" width (N/76-mm width)	30 (267)	36 (321)	41 (367)	44 (398)
Insert shear, lbs (N)	1345 (5983)	1350 (6005)	1400 (6228)	1580 (7028)
Impact strength, in-lbs (N-m)	13 (1.47)	13 (1.47)	19 (2.15)	33 (3.73)
Stabilized core compression, lbs/sq in (kg/cm ²)	1005 (70.7)	1910 (134.3)	2856 (200.8)	4280 (300.9)
Warpage, in/ft (mm/m)	0.001 (0.083)	0.002 (0.167)	0.002 (0.167)	0.002 (0.167)
Food cart roller test, cycles without failure	>80,000	>160,000	>160,000	>160,000
Flammability - 60 seconds vertical				
Self-extinguishing time, seconds	2.3	1.0	1.3	1.3
Burn length, in (mm)	1.7 (43.18)	1.6 (40.64)	1.5 (38.1)	1.4 (35.56)
Drip extinguish time, seconds	0	0	0	0
Flammability – 45 degree angle				
Self-extinguishing time, seconds	0	0	0	0
Penetration	No Penetration	No Penetration	No Penetration	No Penetration
Glow time, seconds	0	0	0	0
Specific optical density, Ds after 4 mins, max	114	118	117	138

Figures shown reflect typical values and should not be used as design specifications.

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