



## PRODUCT DATA SHEET

# Gillfloor® 4809

### DESCRIPTION

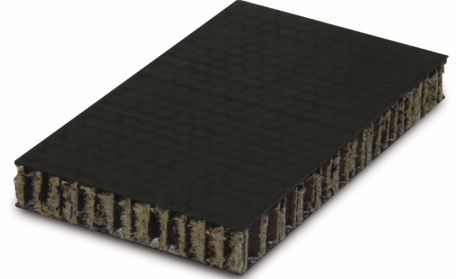
Gillfloor® 4809 is an ultra-light weight floor panel made from unidirectional carbon fiber reinforced epoxy facings bonded to Kevlar® honeycomb core. Outer panel surfaces feature fiberglass overlay to help protect against galvanic corrosion.

### 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 Nomex® 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 and 0.660	0.400	0.400	0.369
Facing, face/back, inch (mm)	015/015	015/015	020/020	030/030
Length, inch (mm)	Typical 144 (3,658); Maximum 168 (4,267)			
Width, inch (mm)	Typical 48 (1,219); Maximum 72 (1,829)			
Honeycomb	Gillcore® Kevlar low-density	Gillcore® Kevlar medium-density	Gillcore® Kevlar high-density	Gillcore® Kevlar high-density

### CONSTRUCTION

- Adhesive:** Epoxy film
- Core:** Gillcore® HK Kevlar® 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](http://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 <sup>2</sup> )	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, lbs/3" width (N/76-mm width)	30 (133)	36 (160)	41 (182)	44 (196)
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 <sup>2</sup> )	1005 (70.7)	1910 (134.3)	2856 (200.8)	4280 (300.9)
Warpage, in/ft (mm/m)	0.001 (1.2x10 <sup>-5</sup> )	0.002 (2.4x10 <sup>-5</sup> )	0.002 (2.4x10 <sup>-5</sup> )	0.002 (2.4x10 <sup>-5</sup> )
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.

All recommendations, statements, values and technical data herein are based on tests The Gill Corporation believes to be reliable and correct, but accuracy and completeness of said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied. Users shall rely on their own information and tests to determine suitability of the product for the intended use and assume all risks and liability resulting from their use of the product. The Gill Corporation's sole responsibility shall be to replace that portion of the product that proves to be defective. The Gill Corporation will not be liable to the buyer or any third person for any injury, loss or damage directly or indirectly resulting from use of, or inability to use, the product. Recommendations or statements not contained in a written agreement signed by an officer of The Gill Corporation shall not be binding upon The Gill Corporation. Gillfloor® and Gillcore® are registered trademarks of The Gill Corporation.