



## Gillcore™ HD Honeycomb

January 2012

### Description

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Gillcore HD is an aramid fiber (Nomex®) reinforced honeycomb which is coated with phenolic resin.

### Applications

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- Interior aircraft panels including flooring, sidewalls, ceilings, galleys and lavatories.
- Exterior aircraft panels including trailing and leading edges, flaps, ailerons, access panels, and doors.
- Ship and boat panels such as those dividing berthing areas and staterooms.
- Pleasure and racing boat hulls.
- Ceilings, walls, and floors of portable structures.

### Features

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- High strength-to-weight and rigidity-to-weight ratios.
- Thermal tolerance to 325F.
- Densities range from 1.5 to 12 pcf.
- High wet strength and corrosion resistance.
- Conforms to rigid smoke toxicity and flammability standards.
- Good fatigue and impact resistance.

### Availability

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Thickness:	2.00", up to 36"
Length:	Any, up to 144"
Width:	Up to 60"

### Construction

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Resin: Phenolic

Reinforcement: Aramid paper (Nomex).



## Standard

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Thickness:	Up to 2.0"	+/- 0.006"
	2.01" to 4.00"	+0.010"/-0"
	>4.00"	+0.060"/-0"
	Full block (34")	+1.00"/-0

## Tolerances

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Length: +4"/-0" or as specified by customer

Width: +2"/-0" or as specified by customer

## Specifications

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- Qualified to FMS 1030.
- Qualified to Boeing BMS 8-124 CI IV.
- Qualified to McDonnell Douglas DMS 1974 Gr A.
- Qualified to Lockheed STM 28-105
- Qualified to Lockheed LCM 28-1041
- Qualified to Lockheed C28-105
- Qualified to Lockheed-Georgia STM 28-105. [1/8 - 1.8 (1.5) and 1/8 - 3.0 (2)]
- Qualified to Northrop Grumman GC101
- Qualified to Vought 10425.1957.
- Qualified to Cessna CMNP083, Ty II, CI 4, Gr 1.8, 3.0, 6.0.
- Qualified to AMS 3711, Aerospace Material Standards.
- Qualified to Bell Helicopter (Textron) 299-947-103.
- Qualified to Raytheon/Beech - BS 23732
- Qualified to AIM Aviation AIM-M-1013, AIM 11-01-001.
- Meets the requirements of AMS-C-91986.
- Meets the requirements of Rockwell LB0130-022.
- Qualified to Airbus AIMS 11-01-001/ABS5035.



**Properties of Gillfab HD - Non-Metallic Honeycomb  
Based on .500" thick slice unless stated otherwise  
Typical average property values**

PROPERTY	TEST METHOD	UNIT (Eng./Metric)	1/8 CELL (±10%)		
			1.8 PCF	3.0 PCF	4.0 PCF
Nominal Density			1.8 PCF	3.0 PCF	4.0 PCF
Bare Compression	ASTM D1621	PSI (N/mm <sup>2</sup> )	95 (0.655)	317 (2.19)	609 (4.20)
Stabilized Compression	ASTM C365	PSI (N/mm <sup>2</sup> )	132 (0.91)	327 (2.25)	624 (4.30)
Shear - L Direction Ultimate Load Modulus	ASTM C273	PSI (N/mm <sup>2</sup> ) PSI (N/mm <sup>2</sup> )	102 (0.703) 4,371 (30.1)	178 (1.23) 8,408 (57.9)	367 (2.23) 10,200 (70.3)
Shear - W Direction Ultimate Load Modulus	ASTM C273	PSI (N/mm <sup>2</sup> ) PSI (N/mm <sup>2</sup> )	48 (0.331) 2,010 (13.9)	100 (0.689) 3,823 (26.4)	226 (1.558) 7,100 (49.0)
Water Migration	BMS 8-124	Number of contiguous cells	3.23	1.43	1.26
Flammability - 60 Second Vertical SelfExtinguishing Time Burn Length Drip Extinguishing Time	BSS 7230	second inch (mm) second	0.1 1 (25) 0	1.6 1.9 (48) 0	1.1 2.7 (69) 0



PROPERTY	TEST METHOD	UNIT (Eng./Metric)	1/8 CELL (±10%)		3/16 CELL (±10%)
Nominal Density			8.0 PCF	9.0 PCF	6.0 PCF
Cell Size	BMS 8-124	in (mm)	0.134 (3.4)	0.135 (3.4)	0.196 (5)
Bare Compression	ASTM D1621	PSI (N/mm <sup>2</sup> )	1,665(11.48)	2,031 (14.00)	94 (6.85)
Stabilized Compression	ASTM C365	PSI (N/mm <sup>2</sup> )	1,750(12.07)	2,133 (14.71)	1,120 (7.72)
Shear - L Direction Ultimate Load Modulus	ASTM C273	PSI (N/mm <sup>2</sup> )	548 (3.778)	564 (3.889)	590 (4.068)
		PSI (N/mm <sup>2</sup> )	18,610(128.3)	20,510(14.4)	17,000(117.2)
Shear - W Direction Ultimate Load Modulus	ASTM C273	PSI (N/mm <sup>2</sup> )	397 (2.737)	423(2.917)	388 (2.675)
		PSI (N/mm <sup>2</sup> )	10,370(71.5)	12,110 (83.5)	9,900 (68.3)
Water Migration	BMS 8-124	Number of contiguous cells	1.00	1.47	1.08
Flammability -60 Second Vertical Self-Extinguishing Time Burn Length Drip Extinguishing Time	BSS 7230	second	1.3	0.1	1.9
		inch (mm)	2.9 (74)	0.5 (13)	1.6 (41)
		second	0	0	0

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