

**Gillcore™ HK Honeycomb**

January 2003

**Description**

Gillcore HK is a Kevlar® N636 reinforced honeycomb. N636 is the commercial designation for DuPont's Kevlar paper for use in honeycomb core. It offers a significant 25% weight savings over Nomex® honeycomb

**Applications**

Can be used in place of fiberglass honeycomb to achieve significant weight reduction without sacrificing performance in most applications, such as:

- Interior Aircraft Panels including flooring, sidewalls, ceilings, galleys and lavatories.
- Exterior Aircraft Panels such as trailing and leading edges, flaps, ailerons, access panels and doors.

**Features**

- High strength-to-weight and rigidity-to-weight ratios.
- Thermal tolerance to 325°F.
- Densities range from 2 to 12 pcf.
- High wet strength and corrosion resistance.
- Conforms to rigid smoke toxicity and flammability standards.
- Good fatigue and impact resistance.

**Availability**

Thickness:	.08", up to 35"
Length:	Any, up to 144"
Width:	Up to 60"

**Construction**

N636 para-aramid fiber paper with phenolic resin.

**Applicable Specifications**

- Gillcore Kevlar® honeycomb core is qualified to the following specifications:
  1. Boeing BMS 8-124, Class 6, Type V, Grades 2.5, 3.0,4.0, 6.0; and Type VI, Grade 2.5.
  2. Airbus Industrie: AIMS 11-01-004 Grades D,F,P,T,W (ABS5341-A3,A5,C1,C5,C8).
  3. Bell Helicopter: 299-947-386: Type 1, Grade A, Classes 2.0, 3.0, 4.5, and 6.0.
  4. Northrop-Grumman: ACS-MRS-5301, Class 1, 1/8" cell, 6 pcf density.
  5. Lockheed-Martin: 5PTMDL17-D
- Meets flammability requirements of FAR 25.853 for cabin interiors and FAR 25.855 for cargo interiors.



## Standard

Thickness: Slices up to 2" thick  $\pm$  .006"  
Slices > 2 - 4" thick  $\pm$  .010"  
Slices > 4" thick  $\pm$  .060"

## Tolerances

Length:  $\pm$  3" or as specified

Width:  $\pm$  1" or as specified

## Kevlar N636 Core Typical Properties

Test and Unit of Measure	Test Method	HK 2061	HK132	HK 3033	HK 363
Cell Geometry		Hexagonal	Hexagonal	Hexagonal	Hexagonal
Paper Thickness, mil, (mm)		1.4 (36)	1.8 (46)	2.8 (71)	2.8 (71)
Cell Size, inch (mm)		0.156 (4.0)	0.125(3.2)	0.188(4.8)	0.188 (4.8)
Density, lb/ft <sup>3</sup> (kg/m <sup>3</sup> )		2.5 (40)	3.0 (48)	4.5 (72)	6.0 (96)
Bare Compression, psi (MPa)	ASTM D1 621	227 (1.57)	326 (2.25)	860 (5.93)	1,308 (9.02)
Stabilized Compression psi (MPa)	ASTM C365	250 (1.72)	407 (2.81)	934 (6.44)	1,347 (9.29)
"L" Plate Shear Strength psi (MPa)	ASTM C273	200 (1.38)	319 (2.20)	492 (3.39)	576 (3.97)
"L" Plate Shear Modulus psi (MPa)	ASTM C273	14,207 (98)	20,795 (143)	20,522 (142)	21,451(148)
"W" Plate Shear Strength psi (MPa)	ASTM C273	126 (0.87)	171 (1.18)	368 (2.54)	488 (3.37)
"W" Plate Shear Modulus psi (MPa)	ASTM C273	7,250 (50)	10,162 (70)	16,623 (115)	18,651 (128)

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