

**PRODUCT DATA SHEET**

Gillcore® HD Honeycomb

DESCRIPTION

Gillcore® HD is a meta-aramid fiber reinforced honeycomb which is coated with heat resistant phenolic resin. Gillcore® HD provides a wide range of honeycomb types, including different cell sizes, cell geometries, paper thicknesses and densities, for commercial and aerospace defense applications.

APPLICATIONS

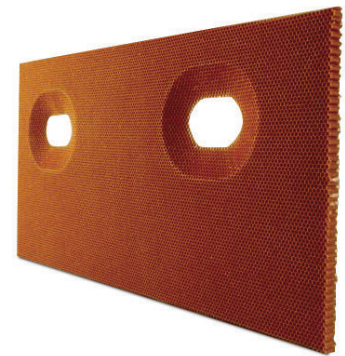
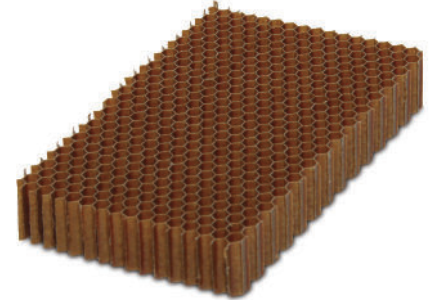
Interior aircraft panels including flooring, sidewalls, ceilings, galleys and lavatories.

Exterior aircraft panels including trailing and leading edges, flaps, ailerons, radomes, fairings, helicopter blades, access panels and doors.

Sports and leisure industry such as surfboards, pleasure boats, skis and auto racing bodies.

Ceilings, walls and floors of portable structures.

Dividing berthing areas, staterooms and hulls for marine applications.

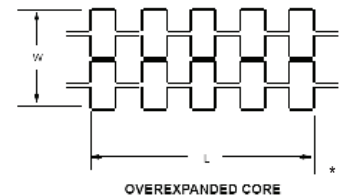
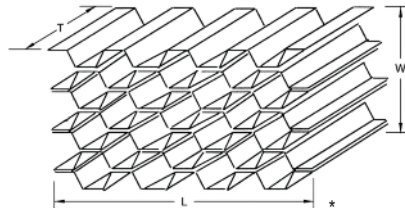
**FEATURES**

- High strength to weight ratio
- Corrosion resistant
- Fire resistant (self-extinguishing)
- Good thermal stability
- Good thermal and electrical insulating properties
- High toughness
- Good fatigue and impact resistance
- Excellent dielectric properties
- Good formability for curve forming

AVAILABILITY

Hexagonal Shaped Core
L = Ribbon Dimension
W = Dimension normal to ribbon
T = Thickness dimension

* Per BMS 8-124



Available in sheet form or block form

Direction/Configuration	Hexagonal Core	Hexagonal Core	Overexpanded Core
	Ribbon dimension as block width	Ribbon dimension as block length	
L (Ribbon dimension)	Typical 48 inch (1,219 mm) Maximum 65 inch (1,651 mm)	Maximum 96 inch (2,438 mm)	Maximum 50 inch (1,270 mm)
W (Dimension normal to ribbon)	Typical 96 inch (2,438 mm) Maximum 144 inch (3,658 mm)	Maximum 48 inch (1,219 mm)	Maximum 144 inch (3,658 mm)
Thickness	0.080 inch (2.03 mm) - 34 inch (864 mm)		

CONSTRUCTION

Reinforcement: Meta-aramid paper

Resin: Phenolic



SPECIFICATIONS

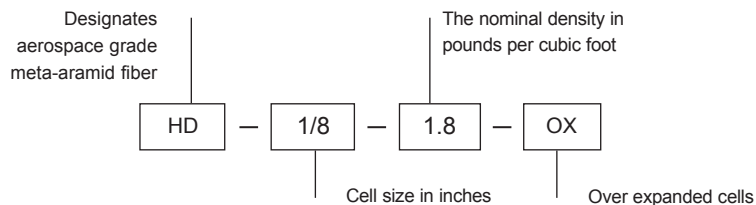
- Qualified to FMS 1030
- Qualified to McDonnell Douglas DMS 1974 Gr A
- Qualified to Lockheed LCM 28-1041
- Qualified to Vought 10425.1957
- Qualified to AMS 3711, Aerospace Material Standards
- Qualified to Raytheon/Beech - BS 23732
- Meets the requirements of AMS-C-81986
- Qualified to Airbus AIMS 11-01-001/ABS5035
- Qualified to Lockheed-Georgia STM 28-105. [1/8 - 1.8 (1.5) and 1/8 - 3.0 (2)]
- DHMS P1.26 DeHavilland
- Qualified to Boeing BMS 8-124 CI IV
- Qualified to Lockheed STM 28-105
- Qualified to Northrop Grumman GC101
- Qualified to Cessna CMNP083, Ty II, CI 4, Gr 1.8, 3.0, 6.0
- Qualified to Bell Helicopter (Textron) 299-947-103
- Qualified to AIM Aviation AIM-M-1013, AIMS 11-01-001
- Meets the requirements of Rockwell LB0130-022
- Qualified to Lockheed C28-105

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 8-124 requirements.

Gillcore® HD Honeycomb Description	Gillcore® HD Honeycomb Configuration	Compressive				Plate Shear					
		Bare		Stabilized		L Direction			W Direction		
		Strength		Strength		Strength		Modulus	Strength		Modulus
		Typical Average	Typical Individual	Typical Average	Typical Individual	Typical Average	Typical Individual	Typical Average	Typical Average	Typical Individual	Typical Average
		psi	psi	psi	psi	psi	psi	ksi	psi	psi	ksi
HD-1/8-1.8	HD111	107	93	114	96	99	82	5.28	51	44	2.37
HD-1/8-3.0	HD132	309	263	329	288	224	192	7.26	109	93	3.97
HD-1/8-4.0	HD142	554	460	595	514	277	238	9.04	153	129	5.15
HD-1/8-5.0	HD153	715	606	773	681	415	364	11.79	231	202	6.48
HD-1/8-6.0	HD163	1,074	963	1,187	1,016	466	438	14.35	287	257	7.76
HD-1/8-8.0	HD183	1,722	1,435	1,835	1,644	548	488	18.61	398	347	10.37
HD-1/8-9.0	HD193	1,934	1,737	2,133	1,901	564	529	20.51	422	380	12.08
HD-3/16-2.0	HD322	127	104	138	108	126	102	5.29	62	50	2.74
HD-3/16-3.0	HD332	303	237	365	304	209	185	7.22	111	93	4.45
HD-3/16-4.0	HD343	521	449	573	523	331	303	10.18	178	154	5.16
HD-1/4-1.5	HD412	81	73	87	78	96	81	4.37	52	44	2.81
HD-1/4-3.0	HD433	302	261	323	279	236	206	7.47	128	103	4.24
HD-3/8-3.0	HD533	277	240	328	305	223	200	7.37	134	114	4.77
HD-3/16-1.8-OX	HD312O	107	86	160	142	59	54	2.11	61	53	3.74
HD-3/16-3.0-OX	HD332O	323	253	365	289	128	112	3.30	146	130	6.84
HD-3/16-4.0-OX	HD342O	552	424	607	484	190	180	4.60	271	256	9.40



Gillcore® HD Honeycomb Description	Gillcore® HD Honeycomb Configuration	Cell Size	Density	Compressive				Plate Shear					
				Bare		Stabilized		L Direction			W Direction		
				Strength		Strength		Strength		Modulus	Strength		Modulus
				Typical Average	Typical Individual	Typical Average	Typical Individual	Typical Average	Typical Individual	Typical Average	Typical Average	Typical Individual	Typical Average
		mm	kg/m³	Mpa	Mpa	Mpa	Mpa	Mpa	Mpa	Gpa	Mpa	Mpa	Gpa
HD-1/8-1.8	HD111	3.2	29	0.74	0.64	0.79	0.66	0.68	0.56	0.036	0.35	0.30	0.016
HD-1/8-3.0	HD132	3.2	48	2.13	1.81	2.27	1.98	1.54	1.32	0.050	0.75	0.64	0.027
HD-1/8-4.0	HD142	3.2	64	3.82	3.17	4.10	3.54	1.91	1.64	0.062	1.05	0.89	0.035
HD-1/8-5.0	HD153	3.2	80	4.93	4.18	5.33	4.69	2.86	2.51	0.081	1.59	1.39	0.045
HD-1/8-6.0	HD163	3.2	96	7.40	6.64	8.18	7.00	3.21	3.02	0.099	1.98	1.77	0.053
HD-1/8-8.0	HD183	3.2	128	11.86	9.89	12.64	11.33	3.78	3.36	0.128	2.74	2.39	0.071
HD-1/8-9.0	HD193	3.2	144	13.33	11.97	14.70	13.10	3.89	3.64	0.141	2.91	2.62	0.083
HD-3/16-2.0	HD322	4.8	32	0.88	0.72	0.95	0.74	0.87	0.70	0.036	0.43	0.34	0.019
HD-3/16-3.0	HD332	4.8	48	2.09	1.63	2.51	2.09	1.44	1.27	0.050	0.76	0.64	0.031
HD-3/16-4.0	HD343	4.8	64	3.59	3.09	3.95	3.60	2.28	2.09	0.070	1.23	1.06	0.036
HD-1/4-1.5	HD412	6.4	24	0.56	0.5	0.60	0.54	0.66	0.56	0.030	0.36	0.30	0.019
HD-1/4-3.0	HD433	6.4	48	2.08	1.08	2.23	1.92	1.63	1.42	0.051	0.88	0.71	0.029
HD-3/8-3.0	HD533	9.5	48	1.91	1.65	2.26	2.10	1.54	1.38	0.051	0.92	0.79	0.033
HD-3/16-1.8-OX	HD312O	4.8	29	0.74	0.59	1.10	0.98	0.41	0.37	0.015	0.42	0.37	0.026
HD-3/16-3.0-OX	HD332O	4.8	48	2.23	1.74	2.51	1.99	0.88	0.77	0.023	1.01	0.90	0.047
HD-3/16-4.0-OX	HD342O	4.8	64	3.80	2.92	4.18	3.33	1.31	1.24	0.032	1.87	1.76	0.065

Flammability: Gillcore® HD honeycomb meets the flammability requirements of BMS 8-124.

Water migration: Gillcore® HD honeycomb does not exceed 1 cell migration in 24 hours when tested per BMS 8-124.

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

Updated: 09/28/23

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.

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