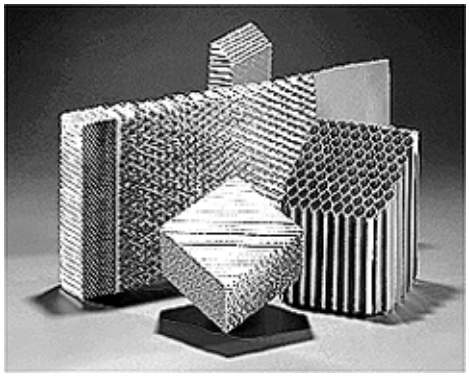
PAA-CORE™ 5056
Aluminum Honeycomb

June 2003
Metric

Description



PAA-CORE 5056 aluminum honeycomb is the industry's highest-performing core material. Phosphoric acid anodized and coated with a proprietary primer, it outperforms all other core materials.

Decades of operational experience have shown that bond durability between core and face sheets is critical to long part life, and for this, PAA-CORE has no equal. Independent analysis confirms the environmental performance durability of PAA-CORE, assuring a lower total life cost than with other core materials. PAA-CORE also has unsurpassed corrosion resistance, experiencing only minimal weight loss after 31 days in an acidified salt spray chamber, which simulates the harshest environmental conditions. PAA-CORE retained virtually all of its physical properties during this test.

More importantly, PAA-CORE outperforms non-metallic core materials. With significantly higher strength-to-weight ratios and hot/wet strength, it offers designers higher performance with lower weight. In addition, it saves money, since PAA-CORE costs less than non-metallic cores.

There is simply no equivalent to Alcore's PAA-CORE.

Applications

- Aircraft control surfaces
- Longer service aircraft flooring
- Aircraft landing gear doors
- Extended service aircraft engine nacelles
- Marine and naval panels
- Advanced energy absorbers
- High performance composite structures
- Replacement for non-metallic core materials

Features

- Unsurpassed corrosion resistance and bond durability
- Excellent strength-to-weight ratio
- Elevated temperature performance to 350° F/177° C
- Fire and fungus resistant
- Eliminates need for priming or pour-coat
- Easily machined and formed
- Resistant to hostile environments
- Exceeds MIL-C-7438 and many other aerospace specifications

Availability

- Unexpanded blocks
- Unexpanded slices
- Expanded sheets
- Pieces cut to size

PAA-CORE 5056 aluminum honeycomb is available with cell perforations to facilitate venting. Custom dimensions, cell sizes, tolerances and mechanical properties are also available.

How to Order

When ordering, please specify PAA-CORE 5056 using the following format:

Example: PAA - 5056 - 3.1 - 3/16 - N - E, where

Product	Alloy	Density	Cell Size	Perforated or Non-Perforated	Expanded or Unexpanded
PAA	5056	3.1	3/16	P or N	E or U

Available Dimensions

	Standard		Maximum		Tolerance	
	inches	mm	inches	mm	inches	mm
Ribbon (L)	48	1219	100	2540	+2.0 / -0.0	+50.8 / -0.0
Transverse (W)	96	2438	144	3658	+4.0 / -0.0	+101.6 / -0.0
			35	889		
Thickness (T)	up to 4 inches (102mm) T				±0.005	±0.127
	over 4 inches (102mm) T				±0.062	±1.575
Density	see mechanical characteristics chart					±10%
Cell Size	see mechanical characteristics chart					±10%

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Fax: +33 (0)5 59 41 25 00
Email: sales@alcorebrigantine.fr
www.mcgillcorp.com/alcore_brigantine

Mechanical Characteristics (Typical Values - SI/metric units)									
	Stabilized Compressive Strength		Crush Strength	Shear Strength				Shear Modulus	
lbs/ft^3 - inches - inches	MPa		MPa	MPa				MPa	
				L		W		L	W
	23°C	177°C	23°C	23°C	177°C	23°C	177°C	23°C	
3.1 - 1/8 - .0007	2.45	1.59	1.24	1.76	1.17	1.10	0.76	221	110
4.5 - 1/8 - .0010	4.83	3.31	2.21	3.10	1.89	1.79	1.24	352	172
6.1 - 1/8 - .0015	8.34	5.38	3.79	4.83	2.93	2.83	1.69	531	255
8.1 - 1/8 - .0020	13.24	9.31	5.86	6.62	4.07	3.96	2.34	772	345
10.0 - 1/8 - .0025	15.17	11.20	8.27	8.21	5.72	4.65	3.14	965	414
12.0 - 1/8 - .0030	22.41	13.45	10.69	11.89*	9.86*	7.07*	3.21*	1103	517
2.6 - 5/32 - .0007	1.86	1.10	0.90	1.41	0.90	0.83	0.62	165	83
3.8 - 5/32 - .0010	3.52	2.41	1.59	2.34	1.59	1.38	1.21	283	138
5.3 - 5/32 - .0015	6.03	4.31	3.00	3.86	2.55	2.31	1.59	441	214
6.9 - 5/32 - .0020	9.31	7.17	4.55	5.34	3.62	3.03	2.07	627	290
2.0 - 3/16 - .0007	1.41	0.79	0.55	1.00	0.69	0.60	0.48	117	62
3.1 - 3/16 - .0010	2.90	1.59	1.24	1.86	1.17	1.07	0.76	221	110
4.4 - 3/16 - .0015	4.65	3.28	2.14	3.00	1.79	1.72	1.17	345	165
5.7 - 3/16 - .0020	6.96	5.03	3.31	3.93	2.83	2.31	1.55	483	234
6.9 - 3/16 - .0025	8.62	7.07	4.55	5.27	3.62	3.10	2.07	627	290
8.1 - 3/16 - .0030	11.20	9.31	5.86	6.38	4.07	3.79	2.34	772	345
1.6 - 1/4 - .0007	0.79	0.55	0.41	0.63	0.48	0.43	0.28	90	41
2.3 - 1/4 - .0010	1.86	1.03	0.83	1.28	0.76	0.72	0.52	145	76
3.4 - 1/4 - .0015	3.38	2.07	1.31	2.07	1.31	1.24	0.86	241	124
4.3 - 1/4 - .0020	4.34	3.17	2.07	2.83	1.76	1.62	1.10	331	165
5.2 - 1/4 - .0025	5.72	4.31	2.62	3.45	2.48	2.14	1.34	427	207
6.0 - 1/4 - .0030	6.90	5.34	3.62	4.41	2.86	2.59	1.65	517	248
7.9 - 1/4 - .0040	10.89	8.96	5.65	6.21	3.90	3.72	2.28	745	338
1.0 - 3/8 - .0007	0.43	0.28	0.24	0.39	0.28	0.26	0.24	48	21
1.6 - 3/8 - .0010	0.79	0.59	0.41	0.64	0.48	0.43	0.28	90	41
2.3 - 3/8 - .0015	1.59	1.03	0.83	1.21	0.76	0.69	0.52	145	76
3.0 - 3/8 - .0020	2.41	1.52	1.10	1.72	1.14	1.03	0.69	207	103
3.7 - 3/8 - .0025	3.10	2.24	1.52	2.24	1.55	1.31	0.90	276	138
4.2 - 3/8 - .0030	3.79	2.83	2.00	2.72	1.79	1.55	1.07	324	159
5.4 - 3/8 - .0040	5.86	4.48	3.10	3.90	2.69	2.24	1.38	455	221
6.5 - 3/8 - .0050	7.83	6.55	4.14	4.90	3.17	2.90	2.07	572	276
2.6 - 1/2 - .0025	1.59	1.10	0.90	1.31	0.90	0.69	0.62	165	83
3.0 - 1/2 - .0030	2.17	1.52	1.10	1.65	1.14	0.86	0.69	207	103
6.0 - 1/2 - .0040	6.90	5.31	3.62	4.41	2.86	2.59	1.65	517	248
3.1 - 1/8 - .0007	2.45	1.59	1.24	1.76	1.17	1.10	0.76	221	110
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12.0 - 1/8 - .0030	22.41	13.45	10.69	11.89*	9.86*	7.07*	3.21*	1103	517

For minimum values, please see MIL-C-7438.

* Beam Shear