TECHNICAL DATASHEET
5052 Aluminum Honeycomb

5052 aluminum honeycomb provides the aerospace and commercial markets with a high degree of flexibility in solving lightweight structural design challenges.

Prior to bonding, the foil is cleaned and treated using a proprietary chemical conversion coating. The resulting honeycomb exhibits excellent corrosion resistance in hostile environments, especially salt fog. Typical weight loss after 30 days in salt fog (using ASTM B-117) is 15mg/ft2 (161.4mg/m2). While MIL-C-7438 allows up to 125mg/ft2 (1345.0mg/m2).

We produce a broad range of cell sizes and densities, assuring that the correct product will be available for your application. When combined with our ability to custom- manufacture specific core types, plus our precision processing capabilities, we can supply core in any shape, size, density, or contour that you need.

For lightweight applications requiring excellent mechanical strength and corrosion resistance at a competitive rate 5052 is the best all-round structural core material

Applications

- Aircraft control surfaces
- Energy absorbers
- Aircraft engine nacelles
- RF and EMI shielding
- Advanced sporting equipment
- Space and satellite components
- Air and light directionalisation
- Other high performance applications

Availability

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

Features

- Unsurpassed corrosion resistance and bond durability
- Excellent strength to weight ratio
- Elevated temperature performance to 350°F/177°C
- Fire and fungus resistant
- Broad range of cell sizes
- Easily machined and formed
- Resistant to hostile environments
- Exceeds MIL-C-7438 and many other aerospace specifications

Other Products

If you need different performance to your application, CML offers many other products including;

- Commercial grade aluminum honeycomb
- Aramid fibre honeycomb
- Thermoplastic honeycomb
- Aluminum honeycomb in 5056 alloys
- Phenolic and polyisocyanurate foams

Available Dimensions						
	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
Thickness (T)			35	889		
	Up to 4 inches (102mm) T				+0.005	+0.727
	Over 4 inches (102mm) T				+0.062	+1.575
Density	see mechanical characteristics chart				+10%	

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5052 Aluminium Honeycomb (SI/Metric Version)									
Mechanical Characteristics									
lbs - 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	2.10	1.38	1.00	1.48	1.00	0.91	0.62	221	110
4.5 - 1/8 - .0010	4.00	2.62	1.86	2.38	1.65	1.55	1.03	352	172
6.1 - 1/8 - .0015	7.10	4.55	3.10	3.90	2.76	2.38	1.52	531	255
8.1 - 1/8 - .0020	10.86	7.41	5.24	5.58	3.96	3.72	2.14	772	345
10.0 - 1/8 - .0025	12.93	8.96	7.38	7.41	5.58	4.21	2.85	965	414
12.0 - 1/8 - .0030	20.13	10.69	9.65	13.49	8.96*	6.55*	3.03*	1103	517
2.6 - 5/32 - .0007	1.69	1.03	0.72	1.17	0.76	0.70	0.55	165	83
3.8 - 5/32 - .0010	2.86	1.93	1.45	1.90	1.38	1.16	0.97	283	138
5.3 - 5/32 - .0015	5.03	3.45	2.34	2.93	2.34	1.90	1.38	441	214
6.9 - 5/32 - .0020	7.86	5.38	3.93	4.10	3.45	2.62	1.90	627	290
8.4 - 5/32 - .0025	11.14	7.93	5.52	5.31	4.07	3.31	2.28	800	352
2.0 - 3/16 - .0007	1.24	0.69	0.48	0.81	0.55	0.49	0.45	117	62
3.1 - 3/16 - .0010	2.34	1.38	1.00	1.48	1.00	0.88	0.52	221	110
4.4 - 3/16 - .0015	3.83	2.59	1.86	2.31	1.62	1.52	1.00	345	165
5.7 - 3/16 - .0020	6.00	4.14	2.83	3.21	2.62	2.10	1.38	483	234
6.9 - 3/16 - .0025	8.17	5.38	3.93	4.14	3.45	2.62	1.90	627	290
8.1 - 3/16 - .0030	11.96	7.41	5.24	5.07	3.95	3.38	2.14	772	345
1.6 - 1/4 - .0007	0.70	0.48	0.34	0.61	0.41	0.35	0.24	90	41
2.3 - 1/4 - .0010	1.48	0.86	0.59	1.00	0.62	0.61	0.48	145	76
3.4 - 1/4 - .0015	2.59	1.62	1.10	1.62	1.10	1.00	0.69	241	124
4.3 - 1/4 - 0020	3.76	2.52	1.72	2.24	1.62	1.41	0.97	331	165
5.2 - 1/4 - .0025	5.31	3.45	2.28	2.86	2.28	1.86	1.10	427	214
6.0 - 1/4 - .0030	7.65	4.48	2.96	3.69	2.69	2.41	1.45	517	248
7.9 - 1/4 - .0040	10.38	7.07	4.96	4.90	3.79	3.10	2.07	745	338
1.0 - 3/8 - .0007	0.39	0.17	0.17	0.32	0.21	0.21	0.21	48	21
1.6 - 3/8 - .0010	0.68	0.48	0.34	0.61	0.41	0.35	0.24	90	41
2.3 - 3/8 - .0015	1.41	0.86	0.59	0.97	0.62	0.57	0.48	145	76
3.0 - 3/8 - .0020	2.17	1.31	0.93	1.41	0.97	0.88	0.59	207	103
3.7 - 3/8 - .0025	2.86	1.83	1.38	1.76	1.31	1.14	0.72	276	138
4.2 - 3/8 - .0030	3.90	2.34	1.65	2.17	1.59	1.41	0.90	324	159
5.4 - 3/8 - .0040	5.58	3.72	2.48	3.00	2.45	1.97	1.24	455	221
6.5 - 3/8 - .0050	7.00	5.17	3.52	3.83	3.03	2.48	1.83	572	276
2.6 - 1/2 - .0025	1.38	1.03	0.72	1.03	0.76	0.51	0.55	165	83
3.0 - 1/2 - .0030	1.72	1.31	0.93	1.24	0.97	0.73	0.59	207	103
4.0 - 1/2 - 0040	2.76	2.21	1.52	2.00	1.52	1.17	0.83	303	152
0.8 - 3/4 - .0010	0.16	0.14	0.10	0.17	0.17	0.13	0.17	34	14
1.8 - 3/4 - .0025	0.69	0.62	0.41	0.62	0.48	0.34	0.28	103	48
2.1 - 3/4 - .0030	0.90	0.72	0.52	0.72	0.59	0.41	0.52	124	62
3.0 - 3/4 - .0040	1.72	1.31	0.93	1.24	0.97	0.72	0.59	207	103
4.2 - 3/4 - .0060	3.10	2.34	1.65	2.21	1.59	1.31	0.90	324	159

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