

## **HONEYCOMB ALUMINUM 5056**

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*Product details*

### **Description**

The honeycomb aluminum aeronautical grade is produced by thin aluminum strip of 5000. The protection is applied on the tape against corrosion of atmospheric agents. There are several sections of cells and density. The honeycomb is produced by bonding aluminum sheets that damage all'esagno expanded form.

The honeycomb can be provided in blocks, unexpanded strips and expanded sheets. The thickness is chosen by the customer. The material can be perforated for communicating all the cells between them (for vacuum application and space). Some cells can be expanded in OX shape (rectangular) to allow the curvature in one direction.

### **Features**

- High resistance to compression and shear /Weight reduction
- Corrosion resistant and fire / recyclable material

### **Applications**

It is used in various aero fields (airplanes, helicopters, radar), automotive (racing cars), RF shielding ensuring a long life and resistance to moisture and temperature.

### **Dimensions**

The standard size is mm1220x2440. General tolerances - 50 / + 100 mm  
On request special sizes. The thickness is chosen by the customer: minimum 1.5 mm up to 500 mm depending on the type of cell. Tolerance standard +/- 0.12 mm or +/- 0.05mm with extracost.

### **Designation**

The full description of the honeycomb provides:

Alloy: description of the type of aluminum alloy used (5056)

Density: the weight of material expressed in pounds per cubic feet or kg/m<sup>3</sup>

Cell: distance between two sides of the hexagon (mm or fraction of an inch)

Foil Nom: thickness of the wall that makes up the hexagon (mm or inches)

P or N : material can be supplied perforated or non perforated

Tolerances + / - 10%

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### Mechanical properties

#### 5056 Alloy Hexagonal Aluminum Honeycomb – Specification Grade

Both CR-PAA and CR III corrosion-resistant coating

Honeycomb Designation Cell Size – Alloy – Foil Gauge	Nominal Density pcf	Compressive				Crush Strength psi	Plate Shear						
		Bare		Stabilized			L Direction			W Direction			
		Strength psi		Strength psi			Modulus ksi	Strength psi		Modulus ksi	Strength psi		Modulus ksi
1/16 – 5056 – .001	9.2	typ	min	typ	min	typ	typ	typ	min	typ	typ	min	typ
		1700p	1300p	1800p	1400p	500p	850x	980p	760p	155.0	600p	460p	50.0p
1/8 – 5056 – .0007	3.1	320	250	350	260	97	170	250	200	45.0	155	110	20.0
1/8 – 5056 – .001	4.5	630	475	690	500	185	320	440	350	70.0	255	205	28.0
1/8 – 5056 – .0015	6.1	1120	760	1200	825	295	535	690	525	102.0	400	305	38.0
1/8 – 5056 – .002	8.1	1750	1200	1900	1300	435	810	945	740	143.0	560	440	51.0
5/32 – 5056 – .0007	2.6	250	180	265	185	70	120	200	152	37.0	115	80	17.0
5/32 – 5056 – .001	3.8	450	360	500	375	140	235	335	272	57.0	195	155	24.0
5/32 – 5056 – .0015	5.3	820	615	865	650	240	420	550	435	85.0	325	250	33.0
5/32 – 5056 – .002	6.9	1220	920	1340	1000	350	650	760	610	118.0	430	360	43.0
3/16 – 5056 – .0007	2.0	190	110	200	120	45	75	140	105	27.0	85	50	13.0
3/16 – 5056 – .001	3.1	380	250	410	260	97	170	265	200	45.0	150	110	20.0
3/16 – 5056 – .0015	4.4	620	460	670	490	180	310	425	340	68.0	245	198	27.0
3/16 – 5056 – .002	5.7	920	685	1000	735	270	480	565	480	94.0	330	280	36.0
1/4 – 5056 – .0007	1.6	100	75	110	80	30	50	90	78	20.0	60	38	10.5
1/4 – 5056 – .001	2.3	240	145	265	155	58	100	180	130	32.0	100	62	15.0
1/4 – 5056 – .0015	3.4	400	300	480	315	115	200	290	230	50.0	175	130	22.0
1/4 – 5056 – .002	4.3	580	440	620	465	172	300	400	325	67.0	230	190	27.0
1/4 – 5056 – .0025	5.2	790	600	820	645	230	410	490	425	84.0	300	245	32.0
3/8 – 5056 – .0007	1.0	55	25	60	35	15	35	55	45	15.0	35	25	6.8
3/8 – 5056 – .001	1.6	100	75	110	80	30	50	90	78	20.0	60	38	10.5
3/8 – 5056 – .0015	2.3	215	155	225	155	58	100	170	130	32.0	95	62	15.0
3/8 – 5056 – .002	3.0	320	240	340	260	92	160	245	190	43.0	145	100	19.0

P indicates preliminary data

The values shown are approximate and not binding.

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