



HONEYCOMB ALUMINUM 5052

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 to 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 (5052 and 5056)

Density: the weight of material expressed in pounds per cubif feet or kg/m³

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%



HONEYCOMB ALUMINUM 5052

Product details

Mechanical properties

5052 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	Compressiv					Crush Strength h psi	Plate					
		Bare		Stabilized				L Direction			W Direction		
		Strengt h psi	Modulu s ksi	Strengt h psi	Modulu s ksi	Modulu s ksi		Strengt h psi	Modulu s ksi	Strengt h psi	Modulu s ksi	Strengt h psi	Modulu s ksi
1/16 – 5052 – .0007	6.5	typ	min	typ	min	typ	typ	typ	min	typ	typ	min	typ
1/16 – 5052 – .001	9.2	950	740	1000	780	275	505x	560	440	90.0	350	270	40.0
1/16 – 5052 – .0015	12.4	1500	1170	1550	1200	420	750x	850	660	150.0	520	400	53.0
1/16 – 5052 – .0015	12.4	2430	1900	2650	2000	650	1200x	1150	900	210.0	715	560	65.0
1/8 – 5052 – .0007	3.1	285	200	300	215	75	130	210	155	45.0	130	90	22.0
1/8 – 5052 – .001	4.5	550	375	570	405	150	260	340	285	70.0	220	168	31.0
1/8 – 5052 – .0015	6.1	980	650	1020	680	240	450	560	455	98.0	340	272	41.0
1/8 – 5052 – .002	8.1	1500	1000	1560	1100	350	750	800	670	135.0	470	400	54.0
1/8 – 5052 – .0025	10.0	2100p	1575p	2250p	1685p	500x	1050x	980p	735p	175.0p	550p	415p	65.0p
1/8 – 5052 – .003	12.0	2700	2100	2900	2200	900	1350x	1940l	1250l	210.0x	1430l	1000l	78.0
5/32 – 5052 – .0007	2.6	220	150	240	160	55	90	165	120	37.0	100	70	19.0
5/32 – 5052 – .001	3.8	395	285	410	300	110	185	270	215	56.0	165	125	26.4
5/32 – 5052 – .0015	5.3	690	490	720	535	195	340	420	370	84.0	270	215	36.0
5/32 – 5052 – .002	6.9	1080	770	1130	800	285	575	590	540	114.0	375	328	46.4
5/32 – 5052 – .0025	8.4	1530	1070	1600	1180	370	800	760	690	140.0	475	420	56.0
3/16 – 5052 – .0007	2.0	160	90	175	100	34	60	120	80	27.0	70	46	14.3
3/16 – 5052 – .001	3.1	290	200	335	215	75	130	210	155	45.0	125	90	22.0
3/16 – 5052 – .0015	4.4	520	360	550	385	145	250	330	280	68.0	215	160	30.0
3/16 – 5052 – .002	5.7	820	560	860	600	220	390	460	410	90.0	300	244	38.5
3/16 – 5052 – .0025	6.9	1120	770	1175	800	285	575	590	540	114.0	375	328	46.4
3/16 – 5052 – .003	8.1	1600	1000	1720	1100	350	750	725	670	135.0	480	400	54.0
1/4 – 5052 – .0007	1.6	90	60	100	70	20	40	85	60	21.0	50	32	11.0
1/4 – 5052 – .001	2.3	190	120	210	130	45	75	140	100	32.0	85	57	16.2
1/4 – 5052 – .0015	3.4	340	240	370	250	90	150	230	180	50.0	140	105	24.0
1/4 – 5052 – .002	4.3	500	350	540	370	140	230	320	265	66.0	200	155	29.8
1/4 – 5052 – .0025	5.2	690	500	760	510	190	335	410	360	82.0	265	200	35.4
1/4 – 5052 – .003	6.0	990	630	1100	660	235	430	530	445	96.0	340	265	40.5
1/4 – 5052 – .004	7.9	1420	970	1490	1050	340	725	700	650	130.0	440	390	52.8
3/8 – 5052 – .0007	1.0	50	20	55	20	10	25	45	32	12.0	30	20	7.0
3/8 – 5052 – .001	1.6	90	60	95	70	20	40	85	60	21.0	50	32	11.0
3/8 – 5052 – .0015	2.3	190	120	200	130	45	75	135	100	32.0	80	57	16.2
3/8 – 5052 – .002	3.0	285	190	310	200	70	120	200	145	43.0	125	85	21.2
3/8 – 5052 – .0025	3.7	370	270	410	285	105	180	250	200	55.0	160	115	26.0
3/8 – 5052 – .003	4.2	520	335	560	355	135	220	310	255	65.0	200	150	29.0
3/8 – 5052 – .004	5.4	740	500	800	535	200	360	430	380	86.0	280	228	36.8
3/8 – 5052 – .005	6.5	950	700	1000	750	265	505	545	500	105.0	350	300	43.5

P indicates preliminary data

The values shown are approximate and not binding.

Latest version 05/2016