

FLEX-CORE® HONEYCOMB ALUMINIUM 5052-5056

Product details

Description

Honeycomb aluminium Flex-core utilizes either 5052 or 5056 alloy foil. It has unique cell configurations that eliminate anticlastic behaviour and permit small radii of curvature without deformation of cell walls or loss of mechanical properties. Thickness on customer's request.

Features

- Unchanged resistance to compression in curved shapes
- Corrosion resistant / recyclable material
- Formable material to 360 °

Applications

It is used in various sectors that require the curvature

Dimensions

The standard dimensions are 915x1220mm. We can also make different sizes on request.

General tolerances -50 / + 100mm

Thickness chosen by the customer: minimum 1.5 mm up to 350 mm depending on the type of cell.

Tolerance on the standard +/- 0.12 mm thick (+/- 0.05mm with extracost).

Designation

The complete description of the honeycomb provides:

Alloy: designation of used aluminum alloy type (5052 or 5056)

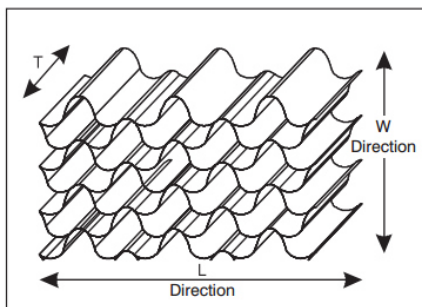
Density: weight of the material expressed in pounds / cubic foot or kg / m³

On request micro-drilling of the sheets

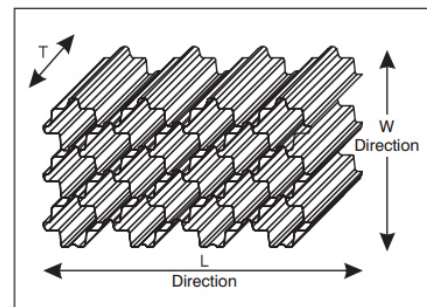
Cell: the number of cells in 305mm (or 12 ") as F40 or F80

Tolerances +/- 10%

Configuration: F FlexCore DF Double FlexCore



F



DF

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Mechanical properties

Aluminum Flex-Core

Both CR-PAA and CR III corrosion-resistant coating

5052 - 5056 Alloy Aluminum Flex-Core – Specification Grade

Hexcel Honeycomb Designation Alloy/Cell Count – 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
5052/F40 – .0013	2.1	typ	min	typ	min	typ	typ	min	typ	min	typ	min	typ
5052/F40 – .0016	2.5	200	126	225	157	65	80	90	63	18.0	50	37	10.0
5052/F40 – .0019	3.1	260	200	285	215	90x	120x	120x	95x	24.0x	70x	55x	11.0x
5052/F40 – .0025	4.1	350	238	380	280	125	165	165	126	32.0	95	75	13.0
5052/F40 – .0037	5.7	525	378	560	420	185	250	260	182	45.0	165	115	17.0
5052/F40 – .0037	5.7	935	630	1050	700	290	380	430	280	68.0	260	170	23.0
5052/F80 – .0013	4.3	615	402	650	455	195	275x	300	196	45.0	190	120	20.0
5052/F80 – .0019	6.5	1140	700	1250	735	310	510x	500	308	72.0	310	180	24.0
5052/F80 – .0025	8.0	1600	1100	1750	1120	400	720x	645	434	98.0	440	260	31.0
5052 Alloy Aluminum Double-Flex – Specification Grade													
5052/DF25 – .0025	2.7	360	270	390	290	120p	145p	185	140	29.0p	100	80	13.0p
5052/DF25 – .0047	4.8	850	680	960	720	220x	430p	370	290	50.0p	240	180	22.0p
5052/DF40 – .0025	4.2	760p	600p	850p	680p	190x	350p	280p	220p	30.0p	190p	150p	17.0p
5056 Alloy Aluminum Flex-Core – Specification Grade													
5056/F40 – .0014	2.1	240	150	260	182	65	105x	105	74	18.0	55	42	10.0
5056/F40 – .0020	3.1	460	284	510	329	125	205x	200	150	32.0	120	90	13.0
5056/F40 – .0026	4.1	680	440	740	483	185	305x	310	217	45.0	200	132	17.0
5056/F80 – .0014	4.3	780	475	860	518	195	350x	375	235	47.0	240	138	20.0
5056/F80 – .0020	6.5	1400	805	1500	910	310	630x	650	364	73.0	420	213	24.0
5056/F80 – .0026	8.0	1800	1210	1950	1260	410	810x	770	518	100.0	475	307	32.0

P indicates preliminary data X expected values

The values shown are approximate and not binding - last update 05/2016