

HONEYCOMB ALUMINIUM COMMERCIAL GRADE 3003

Product details

Description

Honeycomb aluminum alloy of commercial grade is produced from a thin ribbon by the family of aluminum alloys 3000. There is a special protection on the ribbon against corrosion of atmospheric agents. Many cell sizes and density are available. Honeycomb can be supplied in blocks, unexpanded strips and expanded sheets. Thickness is chosen by the customer.

The material can be perforated for communicating all the cells between them (for vacuum application).

cells may be expanded in OX shape (rectangular) to allow the curvature in one direction.

Features

- Low cost
- High strength to compression / weight reduction
- Corrosion resistant / recyclable material

Applications

It is used in different industrial sectors (construction, robotics, panels, mechanical, etc.) ensuring a long life and resistance to moisture and temperature

Dimensions

The Standard sizes are mm1250x2500 and 1500x3000. You can also make different sizes on request. General tolerances -0 / + 100mm

Thickness chosen by the customer: minimum 1.5 mm up to 500 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: description of the type of aluminum alloy used (3003, 3104)

Density: the weight of material expressed in pounds per cubic 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 + / - 17%

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Mechanical properties

Aluminum Commercial Grade (ACG) for 3003 Alloy

Honeycomb Designation Material - Cell Size	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
		typ	typ	typ	typ	typ	typ	typ	typ
1/4 - .003	5.2	683	715	160	265	395	76	233	41
1/4 - .002	4.2	551	578	130	214	319	61	188	33
3/8 - .003	3.6	371	404	100	131	251	49	142	24
3/8 - .002	2.6	268	292	72	95	181	35	102	17
3/4 - .003	1.8	120	130	24	45	100	20	65	11
3/4 - .002	1.5	110	108	20	38	83	17	54	9
1/2 - .003	2.3	190	205	40	60	140	28	80	14

The values are indicative and do not represent constraint

Last updated 05-2016