

CARBONSTEP®

Panel's composition

SKINS IN BIDIRECTIONAL CARBON FABRIC

CORE

Aluminium honeycomb (Alloy series 3000*) with hexagonal cells
Diameter: Ø1/4", Ø3/8" **
Thickness Foil: from 50 to 70 microns

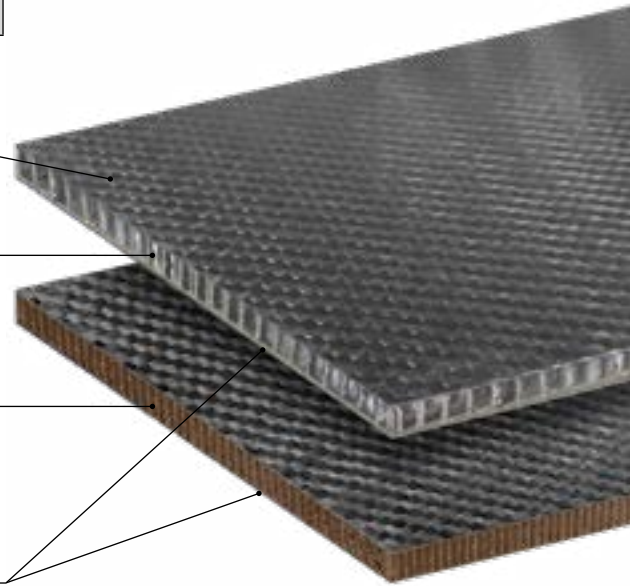
CARBONSTEP® A

CORE

Nomex® honeycomb core
Diameter: from Ø1/8" to Ø3/16", X₁

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X₁ = other diameters on request



Thickness starting from 3 mm to 80 mm

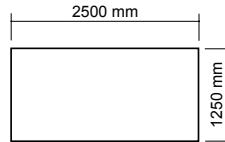
* To Aluminium alloy series 3000 belong: Aluminium alloy 3003, Aluminium alloy 3005, Aluminium alloy 3103, Aluminium alloy 3104

** Ø3/8" on request

Technical data sheet for standard panels (dimensions, materials and special finishes on request)

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TECHNICAL CHARACTERISTICS OF PANEL	thickness of the panel	mm	from 5 to 50
	panel size	mm	standard 1250x2500 (other dimensions available on request)
	thickness' tolerance	mm	± 0,4
	dimension's tolerance	mm	± 30
	skins' thickness	mm	on request
	Impregnation		epoxy resin, other resins on request
	weaving style		plain, twill, satin, unidirectional
	Carbonfaden		3k, 6k, 12k, 24k
	weight		customizable on request
	honeycomb		aluminium alloy 3000 series/alloy 5000 series, nomex® with phenolic resin, aramid paper with phenolic resin
	diameter of honeycomb	Ø = mm	from 3 to 19
	middle resistance to peeling	ASTM D1781	customizable on request
	service temperature	°C	customizable on request

Standard dimensions (other dimensions available on request) - Dimension tolerance ± 30 mm



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Honeycomb core's properties		50 Microns			
Type	ALUMINIUM ALLOY 3003/3005/3103/3104				
Ø honeycomb in mm	6	9	12	19	
Ø honeycomb in inches	1/4"	3/8"	1/2"	3/4"	
Density Kg/m ³	56 - 59	39 - 40	29 - 30	20 - 21	
Compressive stabilised strength MPa	3,0 - 3,5	1,4 - 1,95	0,8 - 0,95	0,4 - 0,6	

Aluminium honeycomb



Honeycomb core's properties		70 Microns			
Type	ALUMINIUM ALLOY 3003/3005/3103/3104				
Ø honeycomb in mm	6	9	12	19	
Ø honeycomb in inches	1/4"	3/8"	1/2"	3/4"	
Density Kg/m ³	80 - 83	54	40 - 42	27 - 29	
Compressive stabilised strength MPa	4,3 - 4,6	2,5 - 2,6	1,41 - 1,5	0,85 - 0,9	

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Honeycomb core's properties			Compression Strength	L-Shear	W-Shear
Nomenclature	Cell size mm	Density kg/m ³	N/mm ²	N/mm ²	N/mm ²
Hexagonal	3,2	48	1,90	1,16	0,62
Hexagonal	3,2	64	3,10	1,48	0,82
Hexagonal	3,2	80	4,70	1,95	1,05
Hexagonal	3,2	96	6,60	2,45	1,42
Hexagonal	3,2	128	11,30	2,95	1,78
Hexagonal	3,2	144	13,20	3,05	1,90
Hexagonal	4,0	29	0,60	0,45	0,26
Hexagonal	4,0	80	5,10	1,90	0,98
Hexagonal	4,8	32	0,90	0,58	0,36
Hexagonal	4,8	48	2,60	0,98	0,56
Hexagonal	4,8	64	3,40	1,70	0,92
Hexagonal	4,8	80	6,00	1,95	1,10
Hexagonal	4,8	96	7,30	2,26	1,32
Hexagonal	6,4	24	0,54	0,34	0,18
Hexagonal	6,4	32	0,80	0,54	0,30
Hexagonal	6,4	48	2,05	1,00	0,56
Hexagonal	6,4	64	3,40	1,54	0,79
Hexagonal	9,6	24	0,52	0,32	0,16
Hexagonal	9,6	32	0,68	0,56	0,29
Hexagonal	9,6	48	1,80	1,15	0,66
Over expanded	4,8	29	0,60	0,31	0,32
Over expanded	4,8	48	2,30	0,60	0,72
Over expanded	4,8	64	3,80	0,72	0,90
Over expanded	4,8	72	4,00	0,75	0,92
Over expanded	4,8	80	5,30	0,88	1,17
Over expanded	4,8	96	6,70	0,92	1,28
Over expanded	6,4	48	2,30	0,60	0,72
Over expanded	6,4	64	3,20	0,72	0,90

Nomex® honeycomb



Tolerance - density +/- 16%