

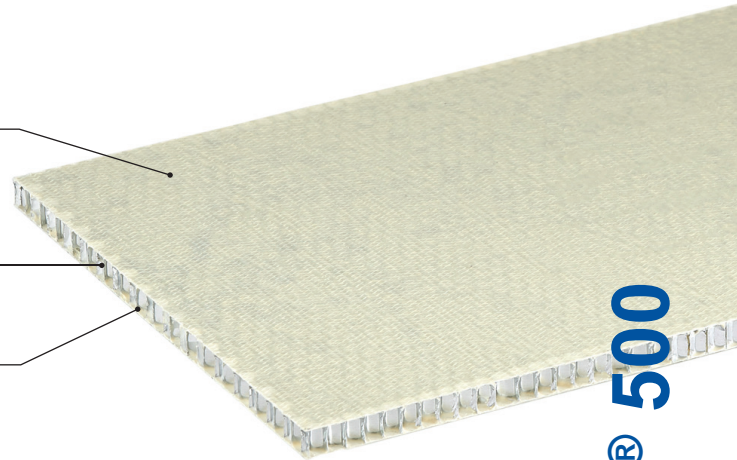
ALUSTEP® 500

Panel's composition

SKINS IN BIDIRECTIONAL GLASSFIBER FABRIC
500 g/m² impregnated with epoxy resin

CORE

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



Thickness starting from 4 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)

TECHNICAL CHARACTERISTICS OF PANEL		thickness of the panel		mm		from 5 to 50			
		panel size	mm	standard 1250 x 2500 / 1550 x 3050 On request up to 1600 x 4000					
thickness' tolerance	mm	±0,4							
dimension's tolerance	mm	± 30							
skins' thickness	mm	0,4							
glass fiber skin		Glass fiber Plain 500 gr / m ² 600 tex							
Impregnation		Epoxy resin							
honeycomb alluminium alloy		3000 series / 5000 series							
thickness of honeycomb foil	µm	50 and 70							
diameter of honeycomb	Ø = mm	from 3 to 19							
honeycomb density	Kg/m ³	from 20 to 163							
adhesive for aluminum honeycomb		Epoxy Resin							
type panel (some examples)	mm	5	10	15	20	25	30	35	
panel weight ‡	Kg/m ²	2,5±0,2	2,7±0,2	3,0±0,2	3,3±0,2	3,6±0,2	3,8±0,2	4,1±0,2	
compressive stabilised strength MPa ** ‡	ASTM C 365-365 M	2,9 ± 0,3							
maximum load ** ‡	ASTM C 393 †	N	180±20	400±40	600±60	800±80	1000±100	1200±100	1400±100
deflection at maximum load ‡	ASTM C 393 †	mm	55±6	28±3	18±2	13±2	11±1	9±1	8±1
skins E Elastic Modulus **		Mpa	28'000±1'000						
moment of inertia I **		mm ⁴ /m	4.000	18.400	40.000	76.000	120.000	174.000	240.000
middle resistance to peeling ** ‡	ASTM D1781-98 (2012)		> 500 N/76 mm or >60 Nmm/mm						
load distributed on a 1000 x 1000 x 20mm supported on 2 sides		kg	300						
Marble/Panel Bonding Test according to ASTM D 4501			suitable bonding, the substrate (stone) breaks down						
deflection recorded on 1000 x 1000 x 20mm panels supported on 2 sides under 300 kg weight distributed on the whole panel surface		mm	18						
maximum service temperature **		°C	- 40 / + 70 ; on request + 85						
thermal expansion coefficient **		°C ⁻¹	1,5 * 10 ⁻⁵ / 1,5 mm for ΔT 100 °C for 1 meter length						

* Tested by Certifying Institute

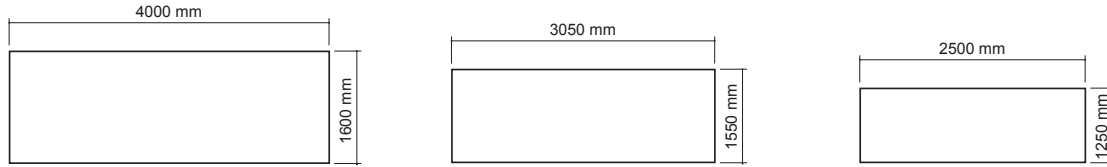
** Tested by Internal Laboratory

*** Approximate value

† Sample dimension with 4 support points (L, W) 540x540

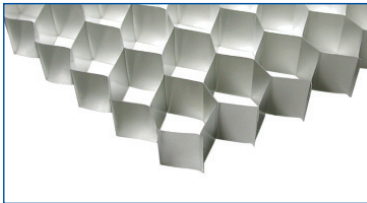
‡ All values refer to a panel made of aluminum honeycomb with a cell diameter 6 mm 56 kg/m³ and epoxy adhesive

Standard dimensions (other dimensions available on request) - Dimension tolerance $\pm 30\text{mm}$



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

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



Aluminium honeycomb