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ALUMINIUM AND THERMOPLASTIC HONEYCOMBS, LAMINATES, SANDWICH PANELS



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ALUSTEP® 500

Panel's composition

SKIN IN GLASSFIBRE

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

* Serie 5000 on demand

** Ø3/8" on request

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

TECHNICAL CHARACTERISTICS OF PANEL	Panel thickness	mm	from 5 to 50						
	Panel size	mm	Standard 1250 x 2500 / 1550 x 3050 On request up to 2000 x 3200						
	Thickness tolerance	mm	± 0,4						
	Dimension tolerance	mm	± 30						
	Skins thickness	mm	0,4						
	Skin		Glassfibre 500 gr / m ² 600 tex						
	Honeycomb alluminium alloy		3000 series / 5000 series						
	Thickness of honeycomb foil	µm	50 and 70						
	Honeycomb diameter	Ø = mm	from 3 to 19						
	Honeycomb density	Kg/m ³	from 20 to 163						
	Adhesive		Epoxy Resin						
PANEL PHYSIC AND MECHANIC PERFORMANCES	Panel Thickness (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	Mpa						
	Maximum load ** ‡	ASTM C 393 †	N	180±20	400±40	600±60	800±80	1000±100	1200±100
	Deflection at maximum load ‡	ASTM C 393 †	mm	55±6	28±3	18±2	13±2	11±1	9±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
	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

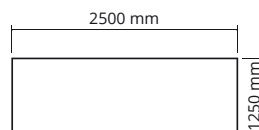
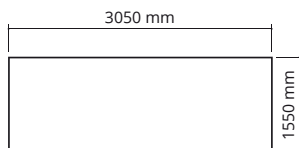
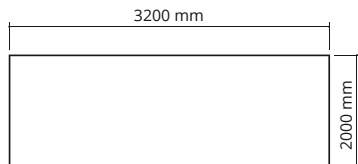


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ENG

Standard dimensions (other dimensions available on request) - Dimension tolerance ± 30 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/m³	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/m³	80 - 83	54	
Compressive stabilised strength MPa	4,3 - 4,6	2,5 - 2,6	



Aluminium honeycomb