

## Compocel® AL

### Panel's composition

#### ALUMINIUM SKINS

Thickness mm: 0,5 - 0,8 - 1 (standard)

#### CORE

Aluminium honeycomb (Alloy series 3000\*) with hexagonal cells

Diameter: Ø1/4", Ø3/8", Ø1/2", Ø3/4"

Thickness Foil: from 50 to 70 microns



\* Serie 5000 on demand

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

TECHNICAL CHARACTERISTICS OF PANEL		Panel size		Standard 1250 x 2500 / 1250 x 3000 / 1500 x 3000; On request up to 2000 x 4000						
		Thickness tolerance	mm	± 0,3						
Dimension tolerance	mm	± 30								
Planarity ***	mm/m	+/-1								
Skins thickness	mm	From 0,5 to 5,0								
Skin		1000 series, 3000 series, 5000 series								
Honeycomb aluminium 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 <sup>3</sup>	from 20 to 163								
Adhesive		Two-components polyurethane adhesive/thermoplastic film/ epoxy film/ two-components epoxy adhesive								
Skin characteristics		Raw/primer/polyester/PVDF/anodised								
PANEL PHYSIC AND MECHANIC PERFORMANCES	Type panel (some examples)	Panel Thickness mm	6	10	15	10	15	20	25	
		Skin Thickness mm	0,5 + 0,5			1,0 + 1,0				
	Panel weight ‡	Kg/m <sup>2</sup>	3,8	4,0	4,3	6,7	7,0	7,3	7,6	
	Compressive stabilised strength MPa ** ‡	ASTM C 365-365 M	Mpa	2,9						
	Maximum load ** ‡	ASTM C 393 †	N	190	340	520	600	1.000	1.350	1.700
	Deflection at maximum load ‡	ASTM C 393 †	mm	14	8	6	8	6	4	3
	Skins E Elastic Modulus		Mpa	68.000 - 70.000						
	Moment of inertia I **		mm <sup>4</sup> /m	7.600	22.000	52.000	40.000	98.000	181.000	288.000
	Average resistance to peeling ** ‡	ASTM D1781-98 (2012)		> 280 N/76 mm or 40 Nmm/mm						
	Maximum service temperature **		°C	- 40 / + 60; on request + 80 / + 100 / + 150						
Thermal expansion coefficient **		°C <sup>-1</sup>	2,3 x 10 <sup>-5</sup>							

\*\* Tested by Internal Laboratory

\*\*\* Approximate value

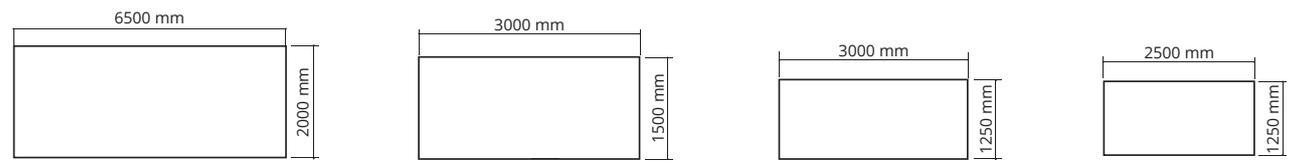
† Sample dimension with 4 support points (L, W) 540x50mm; distance among the lower points 500mm, distance among the upper points 250mm

‡ Values for a panel with a honeycomb core of Ø6 56kg/m<sup>3</sup> (Ø 1/4")



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**ALUMINIUM AND THERMOPLASTIC HONEYCOMBS, LAMINATES, SANDWICH PANELS**

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



(other size on request)

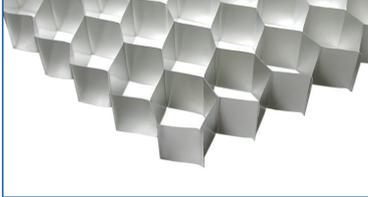
**PROCESSING METHODS**

**Cutting to size**   **Milling**   **Drilling**   **Joining**   **Cut to shape**   **Panel folding**   **Panel edgings**   **Inserts**   **Painting**   **Veneering**

LIABILITY DISCLAIMER: The above data are to the best of our knowledge correct and are intended to give information about our products and their potential applications. No warranty is given or implied in respect of certain properties of the products or their suitability for a particular application. We reserve the right for technical changes without further notice. We guarantee impeccable product quality under our terms of sale.

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 <sup>3</sup>	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

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 <sup>3</sup>	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



Aluminium honeycomb