

larcove[®]

by Alucoil[®]

Aluminium Honeycomb Panels for Transport & Industry
Lightweight solutions for ships, trains, elevators, buses and aircrafts

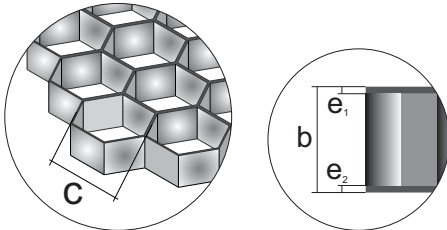
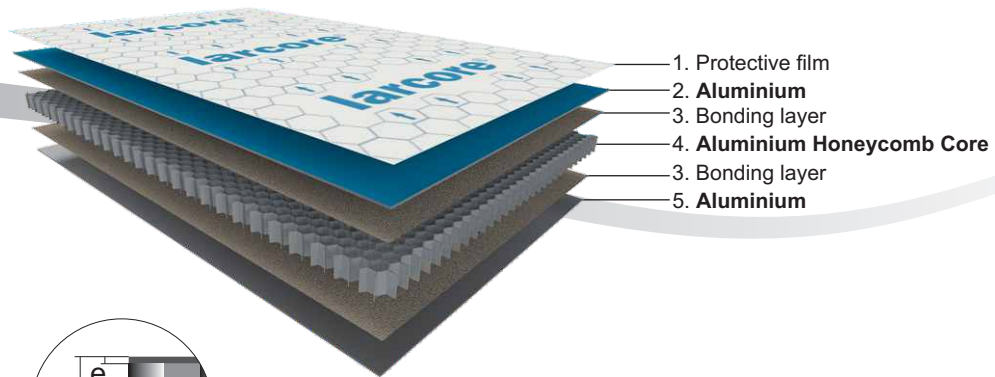


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Alucoil[®]
Grupo Alibérico



For industrial use of **larcore**[®] aluminium honeycomb panel in external or internal areas with high humidity concentration, the installation must ensure the water tightness of the **larcore**[®] entirely, as a whole.

Composition

Through a proprietary continuous manufacturing process, **Alucoil**[®] produces its structural aluminum honeycomb panel **larcore**[®] to fit perfectly in numerous sectors such as marine, railway and industrial applications. It is an extremely lightweight and rigid panel which is fire proof, non-toxic, recyclable, insulating, and energy efficient.

After an intensive R&D effort, **Alucoil**[®] has managed to combine the natural qualities of the honeycomb structure with its industrial experience in the manufacturing of structural metal panels, obtaining a final product capable of offering complete solutions for different project requirements.

Panel features

Total thickness "b" [mm]	5,5±0,2	6,0±0,2	10,0±0,2	15,0±0,2	20,0±0,2	25,0±0,2	30,0±0,2	40,0±0,2
Metal thickness "e ₁ " [mm]	0,5	1,0	1,0	1,0	1,0	1,0	1,0	1,0
Metal thickness "e ₂ " [mm]	0,5	0,5	0,5	1,0	1,0	1,0	1,0	1,0
Alloy	5754	5754	5754	5754	5754	5754	5754	5754
Panel weight [kg/m ²]	3,62	4,97	5,19	6,78	7,05	7,32	7,59	7,60
Moment of inertia ⁽¹⁾ "I" [cm ⁴ /m]	0,53 ⁽²⁾	0,79	3,16	9,99	20,55	35,61	49,60	76,07 ⁽²⁾
Rigidity ⁽¹⁾ "EI" [kNcm ² /m]	3727 ⁽²⁾	5519	22169	69964	143868	249289	347169	532467 ⁽²⁾
Section modulus ⁽¹⁾ "W" [cm ³ /m]	2,39 ⁽²⁾	2,63	4,92	13,32	20,55	28,49	33,06	38,03 ⁽²⁾
Sound reduction "R _w " [dB]	18,75 ⁽²⁾	19,0 ⁽²⁾	20,0 ⁽²⁾	21,25 ⁽²⁾	22,5 ⁽²⁾	23,75 ⁽²⁾	25 ⁽²⁾	27,5 ⁽²⁾
Acoustic isolation "R _A " [dBA]	19,5 ⁽²⁾	19,6 ⁽²⁾	20,3 ⁽²⁾	21,18 ⁽²⁾	22,16 ⁽²⁾	23,21 ⁽²⁾	24,3 ⁽²⁾	26,15 ⁽²⁾
Thermal resistance "R" [m ² K/W]	0,0065 ⁽²⁾	0,0063 ⁽²⁾	0,0074 ⁽²⁾	0,0084 ⁽²⁾	0,0089 ⁽²⁾	0,0093 ⁽²⁾	0,0099 ⁽²⁾	0,011 ⁽²⁾
Standard width [mm]	1000 ⁺² ₋₀ / 1250 ⁺² ₋₀ / 1500 ⁺² ₋₀ / 2000 ⁺² ₋₀							
Min / max length [mm]	2000 ⁺⁶ ₋₀ - 14000 ⁺⁶ ₋₀							
Cell size "c"	3/8" / 9,52 mm							
Foil thickness	70μ							50μ

⁽¹⁾ Value measured in the transversal axis

⁽²⁾ Panels 5,5 and 40mm thickness not tested / Sound reduction, Acoustic isolation and thermal resistance not tested in any panel thickness

Core characteristics

Aluminium alloy	3005 [EN 573-3]	
Compression resistance	2,00 MPa	1,20 MPa
Core density	54 kg/m ³	40 kg/m ³
Protective primer	OK	
Finishes	Polyester 25 ⁺¹⁰ ₋₄ μ	
Coated surface	Primer 5 ⁺² ₋₂ μ Film PVC 100-200μ	

- Extended technical data sheet under request -



CERTIFICATES MARINE

- 1.- MED approval – IMO Modules B+D for surface materials and floor coverings with low flame-spread characteristics (veneers and floorings)
- 2.- IMO FTPC Part 1 – Class C non-combustible
- 3.- RS type approval – Russian Maritime Register of Shipping

FIRE TEST MARINE

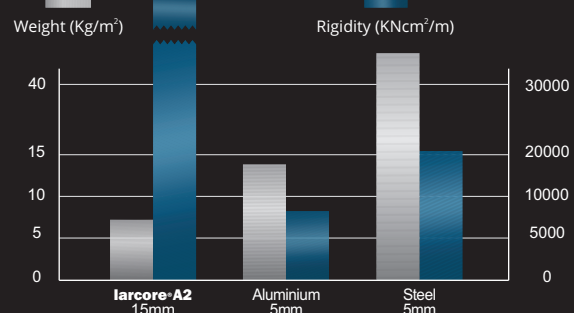
1.- IMO FTPC Part 1-2-5 (Non-combustibility aluminium honeycomb core, smoke density and toxicity and surface flammability)

FIRE TEST RAILWAYS

- 1.- EUROPE [EN 45545-2:2013] R1-2-3-6-7-8-9-10-11-12-17-19-21 for HL1, HL2 and HL3
- 2.- SPAIN [UNE EN 23721-27] M1
- 3.- FRANCE [NF P 92501] M0 - [NF F 16-101] F1

Transport and Industry

New projects in marine, railways, trucks, elevators, buses, aircrafts and other applications will get lighter, stronger, more rigid and energy efficient constructions. **larcore**® achieves a perfect balance between weight, rigidity and fireproofing classification being an ideal material for the manufacturing of transport and industrial components.



Lightweight solutions for ships, trains, elevators, buses and aircrafts
Applications: wall claddings, false ceilings, floating floors and assemblies
lighter, stronger and more energy efficient thanks to **larcore**® aluminium honeycomb panels



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