



luxpanel
International

LUXBOARD A

DATA SHEET:

Aluminium Honeycomb Sandwich Panel, coated with aluminium cover sheets

DESCRIPTION

Luxboard A is a lightweight aluminium panel consisting of an aluminium honeycomb core coated with aluminium sheets on both sides. The panel combines extraordinary stability characteristics with an extreme light weight property and is certified as non-combustible material. Luxboard A has a proven outstanding longevity for interior constructions in shipbuilding & railway, as well as for the truck trailer industry and general industry. It can also be found in offshore construction, design components and machinery casing.

Composition:

The cover sheets and the core are bonded together with a thermoplastic adhesive which guarantees stability of the composite material up to 120°C.

Availability:

Standard panel thickness has a minimum of 6 mm and is available in steps of 5 mm from 10 mm up to 30 mm. Bespoke thicknesses are available on request from 6 mm to 30 mm.

Panel width:

minimum production width: 1100 mm
maximum production width: 1500 mm

Panel length:

continuous production length up to 15,000 mm
(Maximum transportation limit)
Cut-to-size parts are available from the standard sizes.

Recyclability:

Luxboard A is almost completely recyclable due to its consistency of more than 90 % aluminium

MATERIALS

Core:

Aluminium honeycomb core made of 3003 alloy, nominal cell diameter is 3/8" (9,6 mm). The density of the core is 55 kg/m³.

Cover sheets:

Aluminium alloy made of 5754 H48 (standard material) guarantees high surface stability and impact strength. Standard skin thicknesses are 0,5 mm and 1,0 mm. Bespoke thicknesses are available on request.

Cover sheets can be layered symmetrically on top and bottom (1 mm/1 mm or 0,5 mm/0,5 mm) or asymmetrically (0,5 mm / 1,0 mm).

Finished/painted cover sheets are available at a minimum panel order quantity of 200 m² for 1,0 mm and 400 m² for 0,5 mm.

Tolerances:

length:	+ 1,0 / - 0 mm
width:	+ 1,0 / - 0 mm
thickness:	+ 0,1 / - 0 mm
surface flatness:	+ 0,1 / - 0,1 mm
dishing:	< 1 mm per 1m

Safety:

It is recommended that protective equipment such as safety glasses and breathing protection is worn during any cutting operations to avoid inhalation and eye contact with dust. Gloves should be worn to avoid cuts. Hands should be washed before eating, drinking or smoking and after finishing work.

IMPORTANT: All information is given without acceptance of liability and in best knowledge and good faith. Luxpanel International GmbH has the right to change specifications without prior notice. All business is carried out according to the standard terms and conditions of sale of Luxpanel International GmbH.

CERTIFICATIONS / CLASSIFICATIONS



0098

In conformity with the EU-MED directive ,
European Union Marine Equipment Directory,
to allow use in vessels constructed, built, registered
or operated in Europe

U.S. Coast Guard

Module B no. 164.112 /EC 0098

IMO, SOLAS

non combustible according to IMO FTP Code, Annex 2
C-class division according to SOLAS II-2, Reg. 3.10

DIN 4102-B1

Construction material class B1 DIN 4102-1 for thicknesses
between 10 mm and 30 mm have been certified
according to the fire shaft test after a two year period of storage
- certified as building cladding construction material class B1
- certified as double floor construction material class B1

DIN 5510-2

Testing for usage in railway constructions
- flammability classification S 4
- toxicity classification SR 2
- drop-forming classification ST 2

TABLE SIZES:

Type	Thickness				cell size		weight	production- width*	max. lenghts
	total	skin sheet		honey comb core					
		top	bottom						
		[mm]			[mm]	[inch]	[kg/m²]	[mm]	
A0603 A0605	6	0,25 0,5	0,25 0,5	5,5 5,0	9,6 9,6	3/8" 3/8"	2,0 3,3	1250 / 1500	15.000
A1003 A1005 A1010 A1015	10	0,25 0,5 1,0 1,5	0,25 0,5 1,0 1,5	9,5 9,0 8,0 7,0	9,6 9,6 9,6 9,6	3/8" 3/8" 3/8" 3/8"	2,2 3,5 6,2 8,8	1250 / 1500	15.000
A1503 A1505 A1510 A1515	15	0,25 0,5 1,0 1,5	0,25 0,5 1,0 1,5	14,5 14,0 13,0 12,0	9,6 9,6 9,6 9,6	3/8" 3/8" 3/8" 3/8"	2,5 3,8 6,5 9,1	1250 / 1500	15.000
A2003 A2005 A2010 A2015	20	0,25 0,5 1,0 1,5	0,25 0,5 1,0 1,5	19,5 19,0 18,0 17,0	9,6 9,6 9,6 9,6	3/8" 3/8" 3/8" 3/8"	2,8 4,1 6,8 9,4	1250 / 1500	15.000
A2503 A2505 A2510 A2515	25	0,25 0,5 1,0 1,5	0,25 0,5 1,0 1,5	24,5 24,0 23,0 22,0	9,6 9,6 9,6 9,6	3/8" 3/8" 3/8" 3/8"	3,1 4,4 7,1 9,7	1250 / 1500	15.000
A3003 A3005 A3010 A3015	30	0,25 0,5 1,0 1,5	0,25 0,5 1,0 1,5	29,5 29,0 28,0 27,0	9,6 9,6 9,6 9,6	3/8" 3/8" 3/8" 3/8"	3,4 4,7 7,4 10,0	1250 / 1500	15.000

* extra width on request

TABLE MECHANICAL PERFORMANCE AND PHYSICAL DATA:

Typw	Thick- ness	E-Modulus of skin sheet	Traverse strength at deformation*	max. bending at traverse strength*	max. bending in the middle *	drum peeling strength **		drum peeling torque**	compression strength*** σ_{db}	
	total					with skin	F _M		slenderness ratio	
	[mm]					[N/75 mm]	[N/75 mm]	[Nm]	2,5	7,5
A1010	10	70.000	1.130	6,74	6,89	525	335			
A1510	15	70.000				530	340			
A2010	20	70.000	3.602	4,91	4,94	558	368	59	2,48	2,15
A2510	25	70.000				910	720			
A3010	30	70.000	6.018	4,31	4,32	940	750			

*) 4-point bending test in dependance on DIN 53293

**) Drum-peeling-test according to DIN 53295

***) Compression-strength-test according to DIN 53291

further technological data is following