

aalco[®]

For use in:

Shop Design

Exhibition stands

POS/POP Display

Hoardings



For Signage and Display

*aalco*panel

Aluminium Composite Panels (ACP) are a strong, rigid, lightweight, flat solution for many applications, especially the **Sign Industry** as well as **Display, POS Displays (Point of Sale), Shop-Fitting** and **Exhibition** use. Other uses include **partitioning** and **wall lining**. Hoarding Board is specifically for use in enclosing building sites.

aalcopanel ACP is designed for use in interior applications where high load-bearing capacity is not required. All *aalcopanel* panels have a PE Thermoplastic core and two Skins of Aluminium Alloy 1100.

aalcopanel

Benefits

- ✓ Highly cost effective
- ✓ Extremely rigid and very lightweight
- ✓ Tough and hard wearing
- ✓ Very flat, smooth surface
- ✓ Easily cut, folded and formed

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WEIGHTS

All weights shown in this publication are for guidance only. They are calculated using nominal dimensions and scientifically recognised densities. Please note that in practice, the actual weight can vary significantly from the theoretical weight due to variations in manufacturing tolerances and compositions.

Shop & POS Design

Particularly suited to Tops and Fronts, Cubicles, Partition Walls, Shaped Profiles and Kitchen Splash Back and Back Boards.



POS/POP Displays

Ease of machining and forming means decorative and shaped panels are readily available to enhance your display.



Applications of *aalco*panel

Exhibition Stands

Hardwearing but lightweight panels mean an effective marketing tool that is reusable and easy to transport, further reducing costs.



Hoardings

Lightweight, but hardwearing and with a flat smooth surface that can take many different applications makes *aalco*panel Hoarding Board ideal for this purpose.

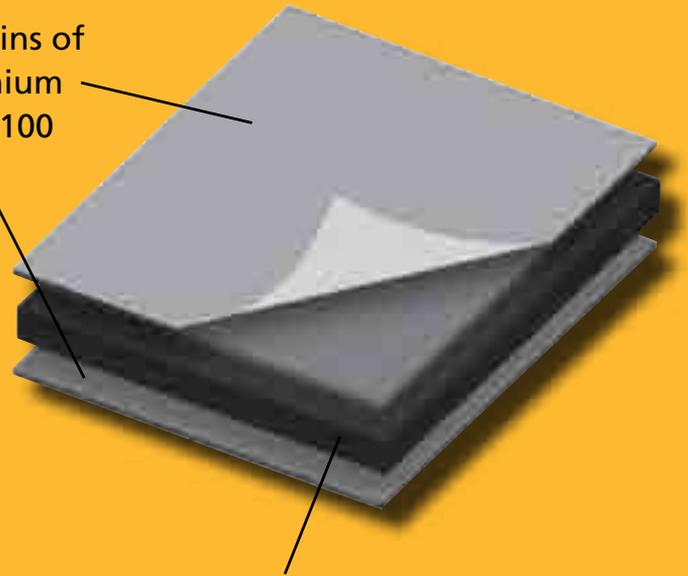


Other uses of *aalco*panel include partitioning, suspended ceilings and interior wall lining (not fire rated).

Technical Data for *aalcopanel*

- The overall thickness is 3.0 mm
- The Aluminium Skins are finished with Polyester (PE) Paint
- Paint Film Thickness: 20 microns
- Both painted Skins are PVC Coated with Hi-Tack 50 micron film
- Unit Weight is 3.8 kg per sq m (Except Hoarding Board)
- During storage the panels must be protected against rain and moisture penetration

Two Skins of Aluminium Alloy 1100



PE Thermoplastic core

Dimensional Tolerances

Thickness (mm)	-0 + 0.1
Width (mm)	±1
Length (mm)	±1
Diagonal (mm)	±3
Thermal Expansion	2.4 mm/m @ 100°C Temp Difference
Aluminium Thickness (mm)	±0.02

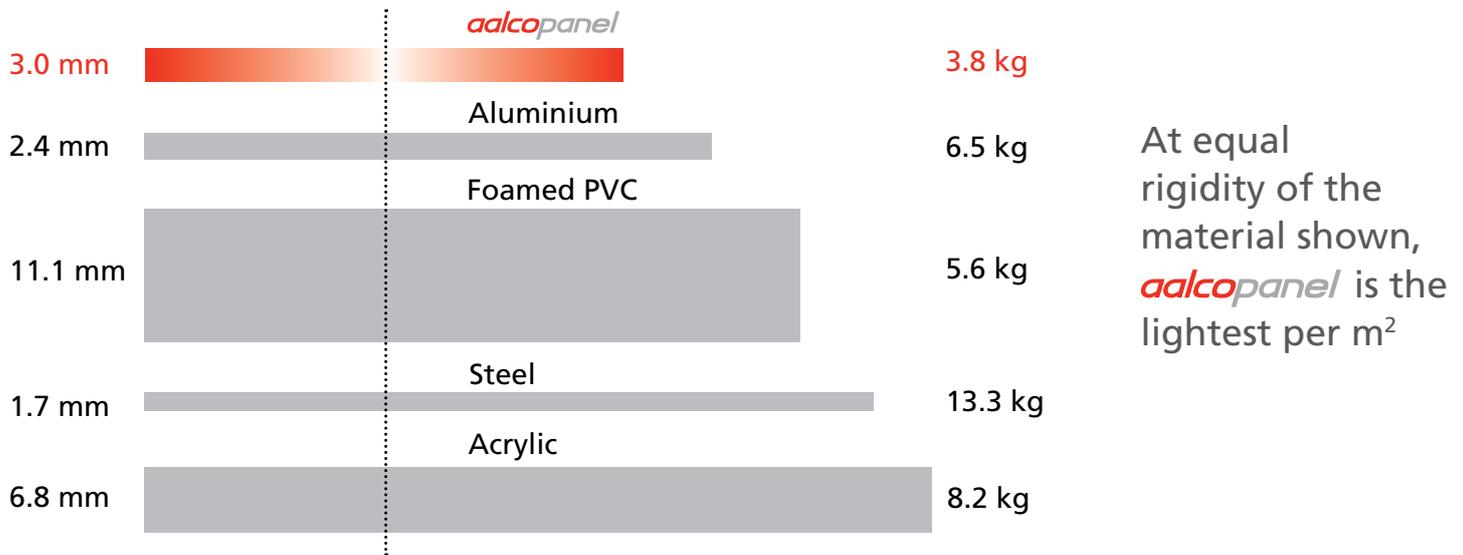
Product Properties

Weight (kg m ²)	3.8
Sound Absorption NRC	0.05
Sound Attenuation RW DB	24
Water Absorbtion % by volume	0.01
Thermal Performance R _w Values	0.0057
Core Composition	LDPE Polyethylene
Colour Difference	ΔE=1.6 ASTM G155-05A, 4000H Test
Gloss Retention	85.7% ASTM G155-05A, 4000H Test

Surface Properties

Paint Thickness (microns)	20
Pencil Hardness	>HB
Toughness of Coating	3T
Impact Strength (kg cm ²)	-50° to +90°C
Boiling Water Resistance	Boiling for 2hrs without change
Acid Resistance	Immersed Surface in 2% HCl for 24hrs without a change
Alkali Resistance	Immersed Surface in 2% NaOH for 24hrs without a change
Oil Resistance	Immersed Surface in engine oil for 24hrs without a change
Solvent Resistance	Cleaned 100 times with Dimethylbenzene without change
Cleaning Resistance	>1000 times without change
Peel Strength 180°	>5 Newton / mm
Lead (Pb) Content	White Panels - 0 parts per million Coloured Panels - 20 parts per million

Rigidity vs Weight kg/m²



Recycling

aalco panel is fully recyclable. Both the core material and the aluminium cover sheets can be remelted and used for the production of new material.

Cleaning, Maintenance

Clean with a soft cloth and mild detergent or water. Strong acid or alkali is not advised. High pressure sprayers can also be used when cleaning curtain walls.

HOARDING BOARD

aalco panel Hoarding Board has only one side painted, in Matt White; with the reverse being mill finish aluminium. This product is often used for enclosing building sites. It also has a PE Thermoplastic core and two skins of Aluminium Alloy 1100. The overall thickness is 3.0 mm. The painted skin (only) is PVC Coated with Hi-Tack 50 micron film.

Matt White with Aluminium Reverse



Size Range - *aalco panel* Hoarding Board

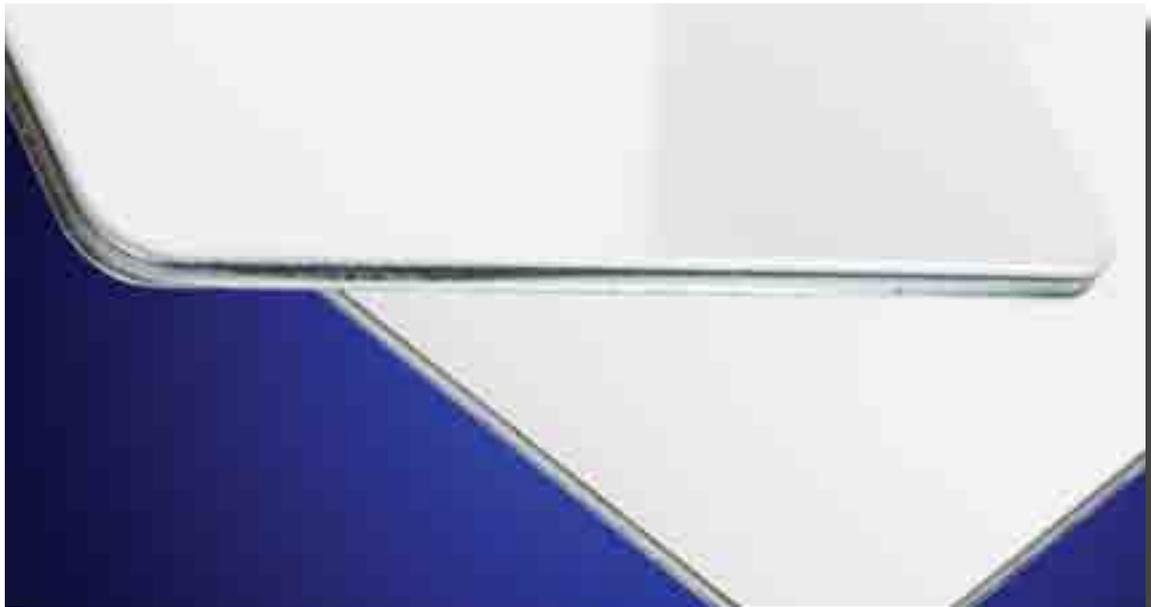
Size	Aluminium Skin Thickness	Colour (RAL)	Gloss - Front	Reverse	Weight per Sheet
2440 x 1220 x 3 mm	0.21 mm	White - 9016	Matt	Mill finish Aluminium	10.0 kg

Colours and finishes available

Size Range - Standard *aalcopanel*

Size	Aluminium Skin Thickness	Colour (RAL)	Gloss - Front	Gloss - Back	Weight per Sheet
2440 x 1220 x 3 mm	0.3 mm	White - 9016	85%	45%	11.4 kg
3050 x 1500 x 3 mm	0.3 mm	White - 9016	85%	45%	17.4 kg

**Gloss White with
Matt White Reverse**



Size Range - Standard *aalcopanel*

Size	Aluminium Skin Thickness	Colour (RAL)	Gloss - Front	Gloss - Back	Weight per Sheet
2440 x 1220 x 3 mm	0.3 mm	White - 9016 / Silver - 9006	45%	45%	11.4 kg
3050 x 1500 x 3 mm	0.3 mm	White - 9016 / Silver - 9006	45%	45%	17.4 kg

**Matt White with
Silver Reverse**



Colours and finishes available

Size Range - Standard *aalco*panel

Size	Aluminium Skin Thickness	Colour (RAL)	Gloss - Front	Gloss - Back	Weight per Sheet
2440 x 1220 x 3 mm	0.3 mm	Black - 9005	85%	45%	11.4 kg
3050 x 1500 x 3 mm	0.3 mm	Black - 9005	85%	45%	17.4 kg

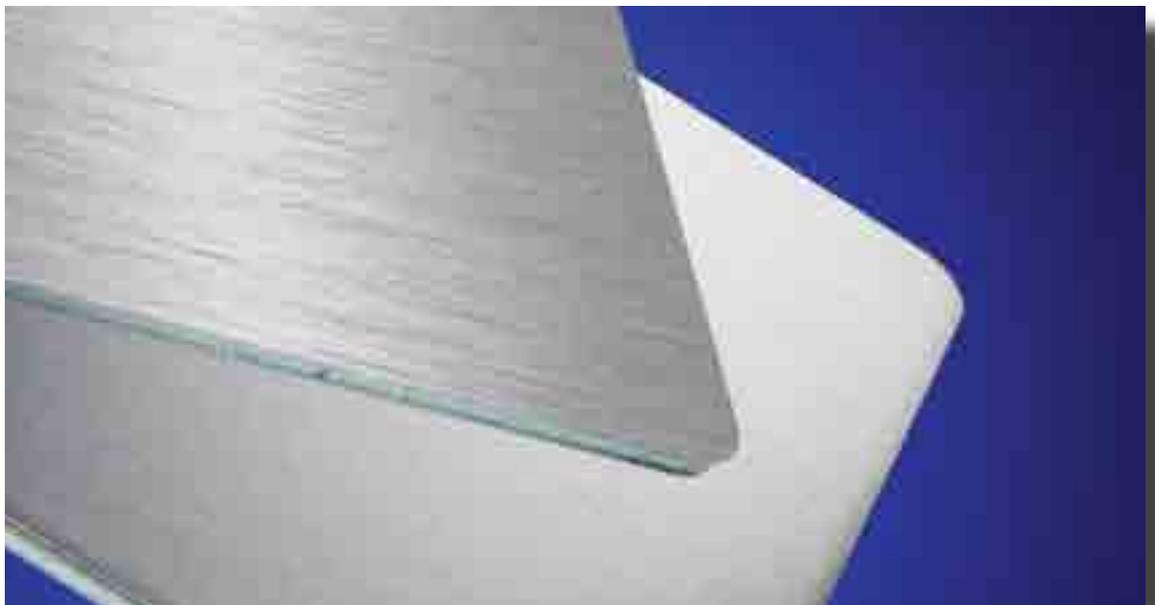
**Gloss Black with
Matt Black Reverse**



Size Range - Standard *aalco*panel

Size	Aluminium Skin Thickness	Colour (RAL)	Gloss - Front	Gloss - Back	Weight per Sheet
2440 x 1220 x 3 mm	0.3 mm	Silver - 9006	N/A	45%	11.4 kg
3050 x 1500 x 3 mm	0.3 mm	Silver - 9006	N/A	45%	17.4 kg

**Brushed Silver
with Matt
Silver Reverse**

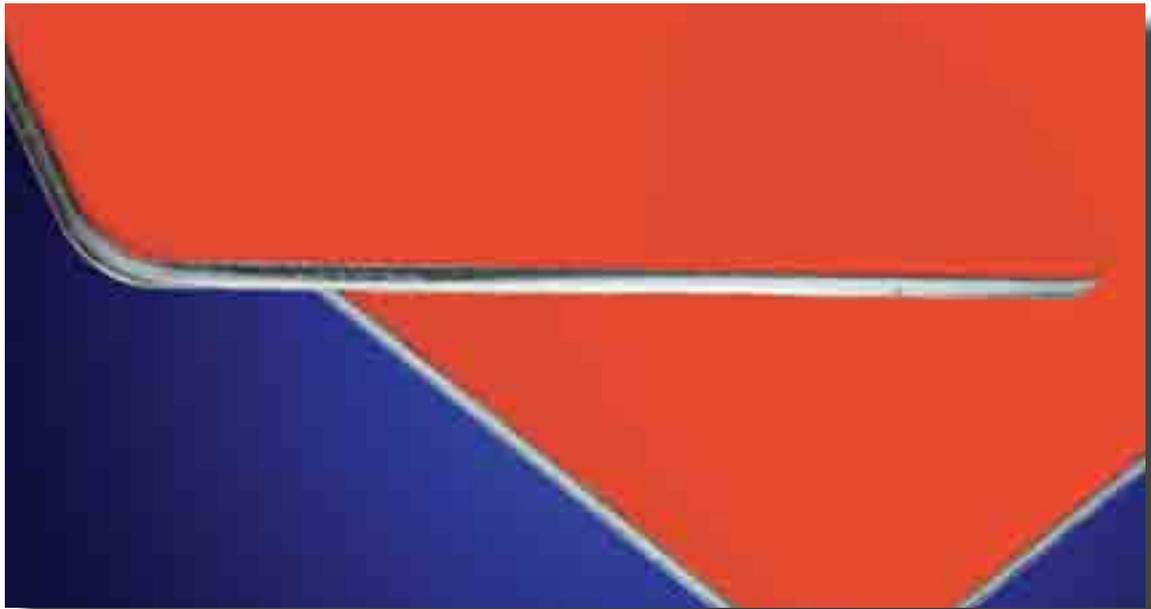


Colours and finishes available

Size Range - Standard *aalco*panel

Size	Aluminium Skin Thickness	Colour (RAL)	Gloss - Front	Gloss - Back	Weight per Sheet
2440 x 1220 x 3 mm	0.3 mm	Red - 3020	85%	45%	11.4 kg
3050 x 1500 x 3 mm	0.3 mm	Red - 3020	85%	45%	17.4 kg

**Gloss Red with
Matt Red Reverse**



Size Range - Standard *aalco*panel

Size	Aluminium Skin Thickness	Colour (RAL)	Gloss - Front	Gloss - Back	Weight per Sheet
2440 x 1220 x 3 mm	0.3 mm	Blue - 5002	85%	45%	11.4 kg
3050 x 1500 x 3 mm	0.3 mm	Blue - 5002	85%	45%	17.4 kg

**Gloss Blue with
Matt Blue Reverse**

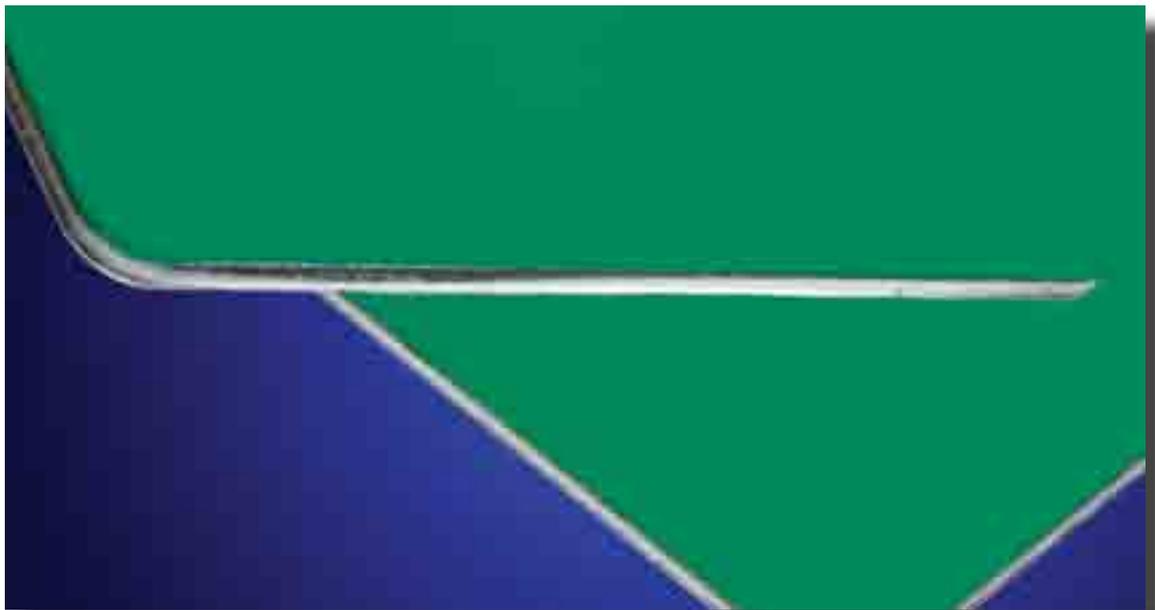


Colours and finishes available

Size Range - Standard *aalco*panel

Size	Aluminium Skin Thickness	Colour (RAL)	Gloss - Front	Gloss - Back	Weight per Sheet
2440 x 1220 x 3 mm	0.3 mm	Green - 6024	85%	45%	11.4 kg
3050 x 1500 x 3 mm	0.3 mm	Green - 6024	85%	45%	17.4 kg

**Gloss Green with
Matt Green Reverse**



Size Range - Standard *aalco*panel

Size	Aluminium Skin Thickness	Colour (RAL)	Gloss - Front	Gloss - Back	Weight per Sheet
2440 x 1220 x 3 mm	0.3 mm	Yellow - 1023	85%	45%	11.4 kg
3050 x 1500 x 3 mm	0.3 mm	Yellow - 1023	85%	45%	17.4 kg

**Gloss Yellow with
Matt Yellow Reverse**



Fabrication of *aalcopanel*

Cutting to shape



Sawing

- with vertical panel saw
- circular saw or fret saw



Cutting

- with guillotine shears using cushion clamp
- note:*
concave PE core edge effect

Joining



Drilling holes for joining

- with drill bits for aluminium sheet and plastic panels
- for larger holes use a drill bit with location point



Riveting

- with pop or blind rivets



Screwing

- with common stainless steel screws or bolts for wood, sheet or metal



Welding

- of the PE-core by means of a hot welding device and polyethylene welding rod



Gluing

- with standard metal adhesive for aluminium (no adhesion to core edges)
- with commercial double-sided adhesive tape

Shaping



Bending

- with folding machine or bending press

note:
min inner radius $r = 15 \times t$
($t =$ panel thickness), spring-back greater than with solid sheet



Roll Bending

- with roll bending machines, using ground rolls



Folding (routing technique)

- manually after routing v-groove using a panel saw with routing device
- CNC machining centre
- panel routing machine

Punching and Decorative work



Punching

- for 2.0 and 3.0 mm panels with steel punch and die

note:
concave PE core edge effect

- for all thicknesses with steel metal punching machines



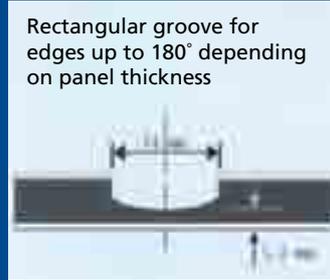
Decorative work

- with fret saw
- with water jet
- with CNC machining centre

Benefits

- ✓ *Simple operating technique*
- ✓ *Folding can be done directly on site - this could mean lower transport and storage costs*
- ✓ *Low manufacturing cost of pre-shaped decorative elements, advertising boards and large signage*
- ✓ *Versatile formability*
- ✓ *Shapes are not restricted by machine dimensions*

*aalco*panel can be shaped by means of a simple processing technique. This procedure, the routing and folding technique, enables the variety of shapes and sizes to be manufactured. V-shaped or rectangular grooves are routed on the rear of the panels with disk end or milling cutters, whereby the aluminium cover sheet at the front and part of the polyethylene core are retained. The grooves can be produced with either a panel saw or a routing tool.



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