

**ALUPANEL
MADE IN
THE UK**



ALUPANEL

aluminium composite panel

Display
Design
Solutions



MULTIPANELUK™

a multitude of applications.



With a multi-million pound production facility in England, Multipanel UK is the only company to manufacture Aluminium Composite Panels in the UK

A variety of products with a multitude of applications

 **ALUPANEL**[®]
aluminium composite panel

The number one choice for fabrication

 **ALUPANELXT**
perfect for cladding

Perfect for architectural cladding

 **ALUPANEL A-LITE**[®]
aluminium composite panel

Lightweight digital print panel

 **ALUPANEL LITE**
aluminium composite panel

Reduced weight panel ideal for flat application



Introduction to ALUPANEL	3
Why use ALUPANEL?	4
ALUPANEL Applications	5-7
Product Composition	8
Processing Techniques	9-11
Technical Details	12
General Information	13
Storage and Handling	14
Standard Color Chart	15

ALUPANEL - An internationally recognised product providing pioneering solutions to the Sign, Advertising and Construction markets.

In a highly crowded business environment it is vital to get noticed. From eye catching signage, innovative point of sale displays to highly effective wayfinding solutions, there is only one all round solution – ALUPANEL.

A premium quality composite panel, ALUPANEL features two 0.30mm Aluminium sheets, sandwiching a Polyethylene core.

Available in one of the widest colour ranges on the market, all standard PE colours come with a 5 year guarantee for internal and external applications*.

Please see application pages for more details.

*Brushed and Mirror finished have a 5 year guarantee for INTERNAL application only.

A selection of the many applications for ALUPANEL:

- Sign Making and Out of Home Media
- Shop Fitting and Design
- Manufacture of Point of Sale Displays
- Exhibition Stand Designs
- Wayfinding Solutions
- Partitioning, Wall Linings and Suspended Ceilings
- Industrial Applications



Make ALUPANEL your
Display Design Solution.

www.multipaneluk.co.uk



10 Reasons to Use ALUPANEL

- 1 Incredibly rigid with an impressive weight advantage
- 2 Dimensionally Stable. Minimal expansion and contraction rates*
- 3 High quality, fully certified product.
- 4 High UV Resistance**
- 5 5 Year product guarantee***
- 6 Incredibly flat, smooth surface
- 7 Simple to cut, router, fold and bend!
- 8 One of the largest colour ranges on the market, available globally
- 9 Suitable for digital printing, screen printing, vinyl application and painting
- 10 The most competitively priced, high quality ACP on the market

* Please see technical specification for contraction rates

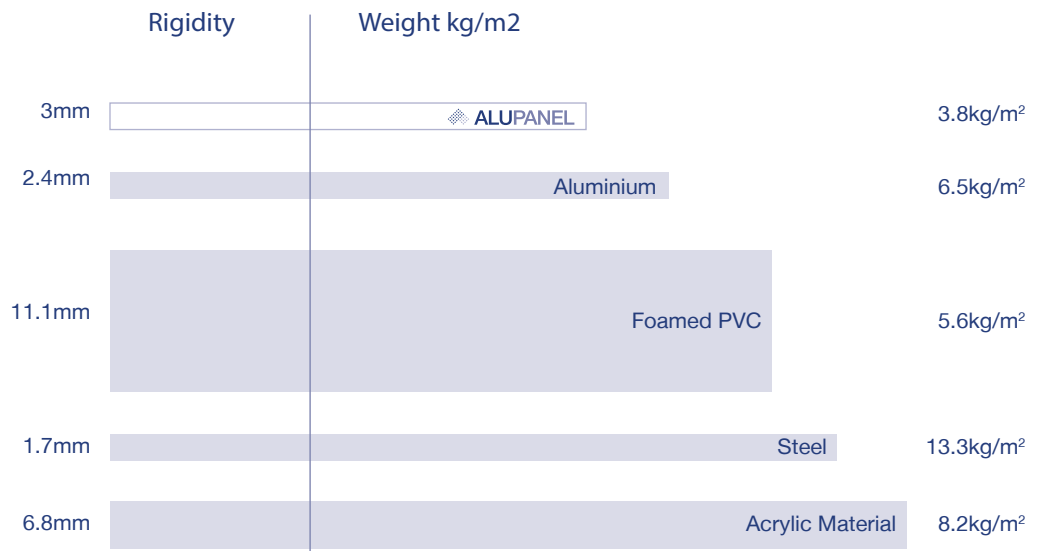
** Please refer to Installation Guidelines for UV Resistance

*** Internal guarantee only for Mirror/Brushed finishes

Weight vs Rigidity

ALUPANEL is light!

At equal rigidity of the materials shown, ALUPANEL is the lightest per M2!



Sign Making and Shop Fitting

Sign Making + Out of Home Media

Due to the outstanding flatness and formability of ALUPANEL, it lends itself extremely well to the manufacture of signs. Direct digital print and vinyl application will both adhere brilliantly to the panel due to its extreme smoothness and high quality PE paint finish. This also makes it perfect for the more traditional screen printing and hand painting methods.

*MOQ applies to colour matching

With one of the highest gloss levels in the industry, ALUPANEL exudes quality in every aspect.

The availability of a wide range of colours and special finishes, as standard, increases the possibilities of corporate colour matching, but it doesn't end there! We can match almost any RAL or Pantone Colour*, to create perfect colour matched panels, just contact your local Sales Manager or Distributor for more information.

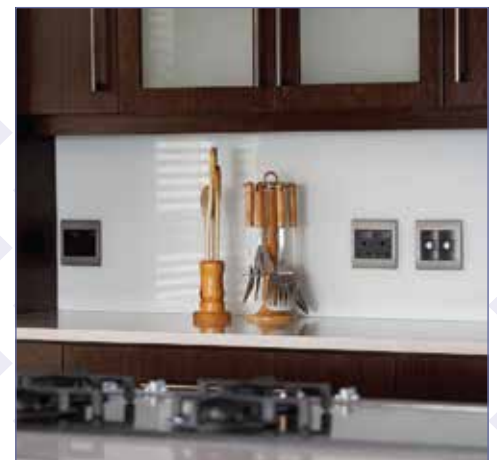


Shop Fitting

ALUPANEL is the ideal solution for creating cost effective, quality finishes for offices, shops and professional retail environments.

The ability to machine, form and cut ALUPANEL provides almost endless solutions and possibilities to the shop fitting market. ALUPANEL can even be cut on site, without the requirement of heavy machinery – saving time and cost during installation.

Perfect for reception areas and counter tops, cubicles and partitioning, wall linings, cladding, feature bulkheads and even kitchen splash backs (due to its hygiene properties).



www.multipaneluk.co.uk

ALUPANEL

Internal Partitioning and POS

Internal Partitioning

ALUPANEL can be used for office partitioning, creating high quality temporary or permanent partitions, in many colours and finishes.

Our interior aluminium cladding system allows easy on site construction of partitioning, and is available as a complete system. Please contact your local Sales Manager or Distributor for more information on our cladding systems.



Point of Sale Displays

The unique qualities and range of finishes means ALUPANEL is an ideal solution for quality POS display manufacture.

The sign manufacturing capability, described overleaf, combined with the lightweight nature of the product and the ease of machining and forming, means that this is an excellent product for this application.



Exhibition Stands and Industrial Applications

Transport and Industrial Applications

ALUPANEL is commonly used in Transport and Industrial applications, from wall linings in trains and buses, to internal and external linings of articulated and commercial vehicles. It is also widely used in flooring.



Exhibition Stand Design

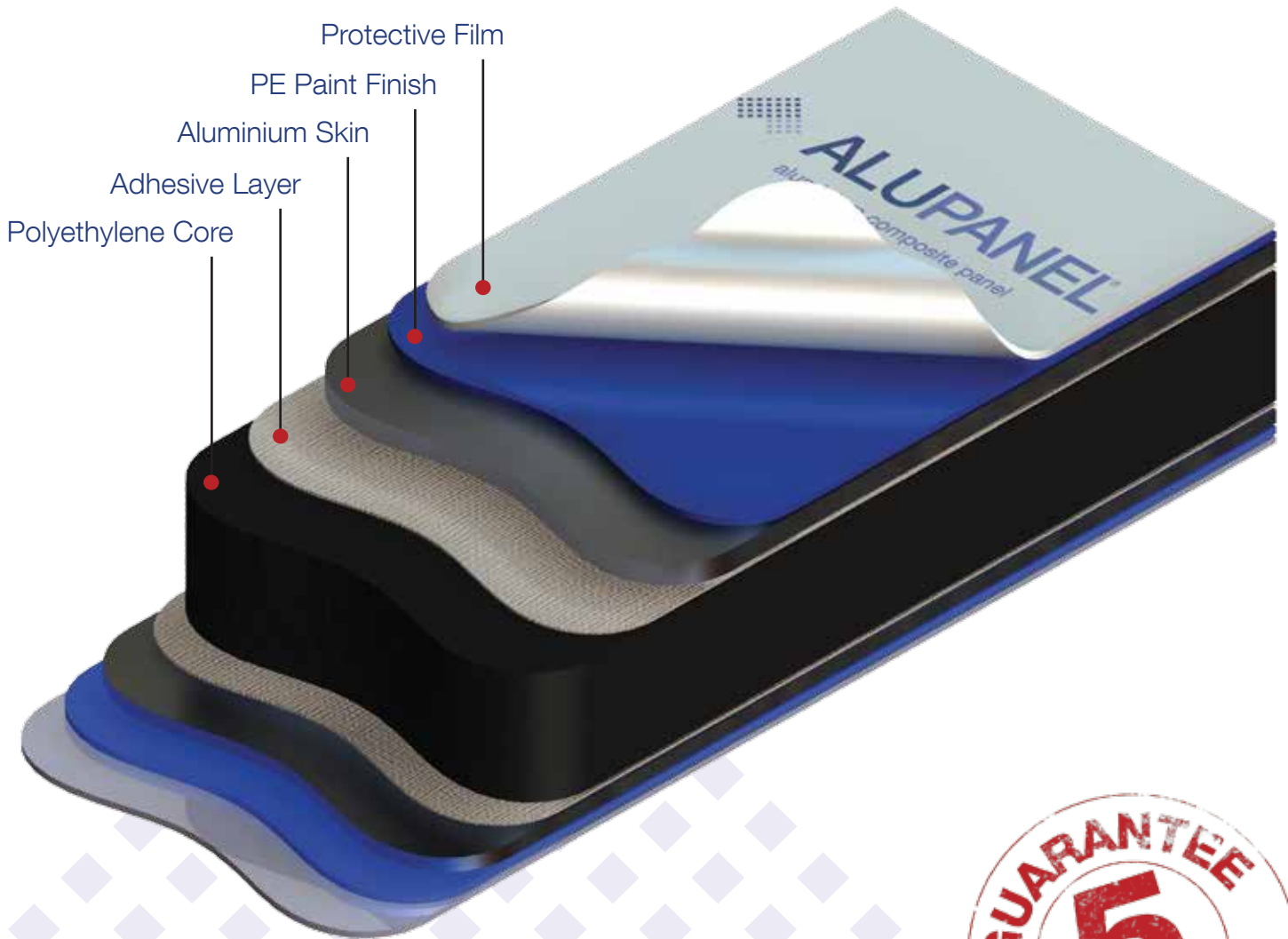
At Exhibition and Trade fairs, it is an even greater challenge to stand out from the crowd of large, innovative exhibition stands. ALUPANEL gives you the unique opportunity to do just this, with a panel that will create a solid and hard wearing structure, that can be moved from location to location.

With plenty of colours and finishes available and the potential to create outstanding 3D structures, ALUPANEL will be sure to get you noticed.



Product Composition

ALUPANEL® can revolutionise traditional signwriting!



Processing Techniques

One

Sawing and Cutting



Circular Saw:

Trapezoidal / Flat tooth blade.
Flat teeth chamfered at 45°,
Carbide tipped.

Saw blade diameter:

300mm

Number of teeth:

72 for cutting up to 5 panels
96 for single cuts avoiding burrs

Saw blade diameter:

250mm

Number of teeth:

60 for cutting up to 5 panels
80 for single cuts avoiding burrs,

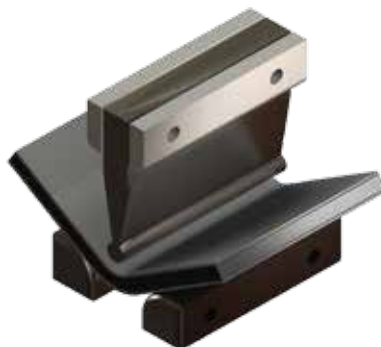
Tooth Thickness: 3.2mm
Clearance Angle: 15°
Rake Angle: 10° positive

Hot Air Welding



A polyethylene welding rod is available for use with an electric hot air welding set.

Bending with a Panel Folder



Use a folding table. Min inside radius $r=40xt$ (t =panel thickness)

Routing



ALUPANEL can easily be folded by hand if a "V" shaped groove is milled on the rear of the panel. This can be done using a conventional router (available from your local DIY store) or CNC milling machine. A minimum of 0.30mm Polyethylene should be left on the back layer when routing to avoid sharp corners or paint chipping.

Sharp tools must be used in order to avoid damaging the edge of the material.

Cutting Speed:

3000 - 5000 m/min

Feed Speed:

25 - 30 m/min



Processing Techniques

Two

Bending with a 3 roller panel bender



3-Roller panel bender is recommended for bending large internal diameters.

Clamping and Bolting



3mm & 4mm ALUPANEL can be clamped with a serrated corner joint and butt sections. When bolting, $e=2D$ is the formula to use to calculate the distance of fixing to the end of the panel. For external use please refer to our Thermal Expansion document

Shearing



Use a standard guillotine for this purpose.

Ensure the top cover sheet is inserted properly.

Spray Painting and Coating



Standard air drying painting acrylic or two part polyurethane coatings are suitable.

Drilling



ALUPANEL is easily drilled - For best results, use drill bits specifically designed for drilling aluminium and plastic. For large holes, a drill bit with a locating point is required.

Cutting angle:

100° - 140° Helix angle : 30° - 50°

Cutting Speed:

50 - 300 m/min

Feed Speed:

0.02 - 0.5mm / Revolution

Hole Size:

Screw width + 2mm

Processing Techniques

Three

Riveting



ALUPANEL can be riveted with standard equipment using rivets or blind rivets. For external use please refer to our Thermal Expansion document (available from your local Sales Manager/Distributor).

Hole Size = Rivet Width +2mm

Folding



ALUPANEL can easily be folded by slotting or routing a groove on the rear of the product, as described in the slotting and routing section.

Digital and Screen Printing

ALUPANEL is perfect for Digital and Screen Printing due to its outstanding flatness. Please pre-test a small patch to ensure ink suitability. Once protective film has been removed, the panel is ready for printing. Panels must be clean and free from grease.

Vinyl Application

Ensure panels are clean and free from grease. The smooth, flat surface combined with the dimensional stability ensures a long lasting finish. Vinyl can be applied either wet or dry.

Laminating

ALUPANEL can be laminated using a specialist machine, or by hand. The quality of the PE finish ensures a strong bond between the panel and laminating material. Panels must be clean and free from grease.

Punching

Use a steel band tool on a punching base for 2mm and 3mm thickness. Conventional punching machines are ideal for this process.

Gluing

Use standard metal/aluminium adhesives. Avoid contact with the Polyethylene Core as some adhesives will attack it. Double sided tape designed for use with metal/aluminium can also be used. Please refer to our Thermal Expansion document.

Smoothing Edges

After cutting ALUPANEL, any rough edges may be removed using a file with a rasp like effect. Always file along the length of the cut edge.

Thermal Expansion

Before use, please refer to our Thermal Expansion document which details recommendations and instructions for panels that will be subject to temperature fluctuations.

Directional Finish

ALUPANEL has a directional finish (indicated by the arrows on the protective film) and must always be installed in the same direction.

Please refer to our installation/fabrication manual before undertaking any of the above techniques.

www.multipaneluk.co.uk



Technical Details

Panel Dimensions					
Panel Thickness (mm)	2	3	4	6	8
Aluminium Skin Thickness (mm)	0.30				0.40
Weight (Kg/m ²)	2.9	3.8	4.75	6.6	8.79
Standard Sizes (mm)					
1000 x 2440	*	*			
1000 x 3050	*	*			
1220 x 2440	*	*	*	*	*
1220 x 3050		*			*
1500 x 3050	*	*	*		
1500 x 4050		*	*		
2000 x 3050		*	*		
2000 x 4050		*	*		

Dimensional Tolerances	
Thickness (mm)	-0 + 0.2
Width (mm)	± 2
Length (mm)	± 3
Diagonal (mm)	± 5
Thermal Expansion	2.4mm/m @100°C Temp Difference
Aluminium Thickness	As specified in EN485-4

Surface Properties	
Paint Thickness (micron)	20
Pencil Hardness	2H
Toughness of Coating	3T
Temperature Resistance	-50°C to +90°C
Impact Strength (Kg/cm ²)	50
Boiling Water Resistance	Boiling for 2hrs without change
Acid Resistance	Surface immersed in 2% HC1 for 24hrs without change
Alkali Resistance	Surface immersed in 2% NaHO for 24hrs without change
Oil Resistance	Surface immersed in 20# engine oil for 24hrs without change
Solvent Resistance	Cleaned 100 times with Dimethylbenzene without change
Cleaning Resistance	>1000 times without change
Peel Strength 180°	>5 Newton/mm

Product Properties					
Sound Absorption NRC	0.05				
Sound Attenuation Rw db	23	24	25	26	27
Water Absorption % by Volume	0.01				
Thermal Performance R Values	0.0047	0.0080	0.0113	0.0180	0.0246
Core Composition	LDPE				
Fire Performance	Class 1 BS476 PT7 Class 0 BS476 PT6				
Tensile Strength of Aluminium Layers	149MPa				

General Information

Certificates:

Certification		
TEST/CLASSIFICATION	CERTIFICATE NUMBER	TESTING ORGANISATION
ISO9001:2008	FS655635	BSI
ISO14001:2004	04110E20070R0M	EIC
ISO140-3:1995	AU09114039-1 (R1)	Intertek
ISO4892-2:2006	AU09114039-1 (R1)	Intertek
EN438:2005	TC07/090020	UKTC
EN10002-1:2001	AU09114039-1 (R1)	Intertek
EN310:1993	AU09114039-1 (R1)	Intertek
EN13446:2002	AU09114039-1 (R1)	Intertek
EN1604:1997	AU09114039-1 (R1)	Intertek
EN13501-1:2002	AU09114039-1 (R1)	Intertek
EN319:1993	AU09114039-1 (R1)	Intertek
EN1602:1997	AU09114039-1 (R1)	Intertek
EN12664:2001	AU09114039-1 (R1)	Intertek
EN1186-3/1/14:2002	GZATR071200944CM	SGS
REACH	AU09114039-1 (R1)	Intertek
BS476 PART 6 & 7 (CLASS 1 & 0)	GZML05110606	SGS
M1	J379549	Exova
RoHS	SZJH174957	Intertek
RoHS	101189-601135	Bureau Veritas (LCIE)
RoHS	SHAH00148327	Intertek
EN45545-2: 2013 (AlupanelFR)	347204/5/6	Exova

Recycling

Multipanel UK operate a recycling policy where full pallets of clean, de-nailed ACM returned to our factory will be recycled back into our products or into products for other world markets.

Multipanel UK will operate in compliance with all applicable environmental legislation and hold all relevant certification for our products.

We are dedicated to the reduction of toxic emissions and strive to work to best environmental practices in everything that we do.

For further information on our Environmental & Recycling Policy please refer to our Environmental Brochure.

Warranty

All ALUPANEL PE finishes come with a 5 year warranty for internal and external use. All ALUPANEL Brushed and Mirror finishes come with a 5 year warranty for internal use only.



Storage, Handling and Colours

Storage Instructions:

ALUPANEL should be stored in a clean, dry area. Before use, ensure panels are at a minimum temperature of 15°C. It is important that when sheets are not in use they are stored correctly. A protective layer between sheets is advised to prevent damage occurring and stacking on a level, horizontal surface is recommended.

Protective Equipment:

In all cases you should follow the safety practices of your workplace. However, we advise you to handle any sheet with gloves, and strictly follow the instructions of your machining equipment manufacturer.



Protective Films:

The clear film on both sides of the panel is a protective measure whilst the panel is being processed, transported and installed. This protective film should remain on the panel for the duration of the installation only. You must remove this film once the panel has been fixed and set in place. The gloss/matt finish is clearly marked on each side of the film. Due to the nature of the finishing process the paint has a directional quality. Care must be taken when using multiple sheets to ensure that the panel is installed in the same direction. This can be done by following the direction of the printed arrows on the protective film.

Handling ALUPANEL Sheets:

ALUPANEL should be handled with care. If large sheet sizes must be handled it is recommended that a suitable number of staff should assist in the process. When removing panels from a pallet/stack never drag the panel, always lift clear above the remaining panels on the stack. This will require two or more operatives.

Cleaning:

Regular cleaning may be required depending on where the panel has been used.

- A moderate amount of pressure is all that's needed in order to clean the surface.
- It is important that you avoid any alkaline, acidic and abrasive cleaning products as this can have an adverse effect on the panels Polyester coating.
- When the panel has been cleaned you should rinse off with clean water and rub down with an absorbent cloth/leather to remove any residue left behind.

Colours

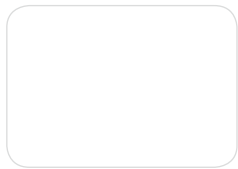
As ALUPANEL is coated in the factory, we have the flexibility to provide a full range of non-standard colours to match almost any RAL and Pantone colour.

Special orders will be subject to a minimum order quantity, and a marginally longer lead time than standard product.

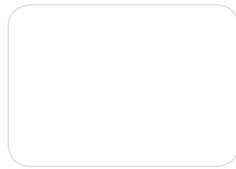
If you have a requirement for a specific colour match, please contact your local Sales Manager or Distributor to discuss your needs.

Standard Colour Range

PE Finishes



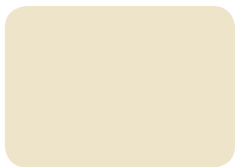
Ultrawhite



Platinum White 9016



Jet Black 9005



Light Ivory 1015



Ultra Marine Blue 5002



Blue 5022



Green 6005



Traffic Green 6024



Traffic Yellow 1023



Orange 2004



Traffic Red 3020



Burgundy Red 3004



Traffic Grey 7042



Anthracite Grey 7016

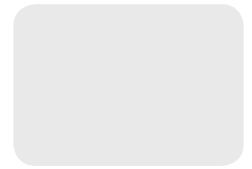


Chocolate 8011

Metal Finishes



Silver 9006



Silver Mirror



Brushed Aluminium



Brushed Copper



Brushed Gold



Brushed Copper Gold



Gold Mirror



Brushed Black

Multipanel UK reserves the right to amend the range of colours and finishes based on regional demand without prior notice. Please check with your local distributor regarding current availability.

www.multipaneluk.co.uk



ALUPANEL

aluminium composite panel

UK Head Office

Unit 6, Site 2, Oak Business Units,
Thorverton Road, Matford, Exeter,
Devon, EX2 8FS
Tel: +44 (0)1392 823015

UK Manufacturing Site

Unit 2, Millyard Way,
Pike Road Industrial Estate, Eythorne,
Dover, Kent, CT15 4NL
Tel +44 (0)1304 831319

Northern Europe Office

Tel: +31 (0)55 301 0255

USA Office

Tel: +1 718 841 9940

www.multipaneluk.co.uk



MULTIPANELUK^{LTD}

a multitude of applications