FOAMALITE®

FOAMALITE® premium | FOAMALITE® x-press | FOAMALITE® color | FOAMALITE® plus

THE DEPENDABLE SELECTION

FOR EXCELLENT PERFORMANCE.

3A COMPOSITES

FOAMALITE® premium

THE VERSATILE SHEET FOR ALL DISPLAY APPLICATIONS.

PRODUCT

FOAMALITE® premium is a superior quality, extremely versatile PVC foam sheet. The combination of light-weight and extremely good dimensional stability makes it the perfect display board for all structural applications. Thanks to the fine cell structure and smooth surface finish FOAMALITE® premium is the preferred choice of sign makers, exhibition contractors and professional printers throughout Europe. The improved surface hardness ensures reliable performance and excellent results. The robust surfaces and high durability make it also suitable for interior and exterior applications.

FOAMALITE® premium can be fabricated mechanically as well as thermoformed for three-dimensional applications. It is supplied as standard with polyethylene masking film on one side. The masking film removes cleanly revealing a smooth surface finish ideally suited for screen and digital printing applications.

PROTECTIVE FILM

- PE film on one side as standard
- Protective PE film on both sides on request

APPLICATIONS

- Signage and display panels
- POS/POP displays
- Screen printed panels
- Digitally printed displays
- Exhibition stands
- Shop fitting
- Wall cladding & partitioning
- Interior design

FOAMALITE® premium – AT A GLANCE

- Universal sheet for all display applications
- Ideal for structural applications
- High dimensional stability
- Smooth surface finish with high surface hardness
- Robust sheet suitable for interior and exterior applications
- Easy processing
- Three-dimensional formability
- Difficult-to-ignite according to EN 13501-1
- Wide range of sheet sizes and thicknesses, special formats available on request

PRODUCT RANGE

Colour: White

Thickness mm	1	2	3	4	5	6	8	10	13	15	19
Standard formats (WxL)											
1220 x 2440 mm	■	■	■		■			■			■
1220 x 3050 mm	■	■	■	■	■	■	■	■	■	■	■
1560 x 3050 mm		■	■		■			■	■	■	■
2050 x 3050 mm		■	■	■	■	■	■	■			

Tolerances: -0 to +5 mm on width and -0 to +10 mm on length.

FOAMALITE® x-press

THE PREFERRED CHOICE OF PRINTERS.

PRODUCT

FOAMALITE® x-press is a light-weight and easy to use PVC foam sheet. Its white, smooth and uniform surfaces make it the material of choice for outstanding printing results. Thanks to its degree of whiteness, FOAMALITE® x-press ensures a very high fidelity of colours. FOAMALITE® x-press sheets feature blemish-free surfaces with a consistently regular roughness that have been specifically designed for impeccable adhesion of UV curing inks.

Thanks to the good dimensional stability, FOAMALITE® x-press is suited for flat applications.

It is supplied as standard with polyethylene masking film on one side. The masking film removes cleanly revealing a smooth surface finish with no glue residues.

PROTECTIVE FILM
- PE film on one side as standard
- Protective PE film on both sides on request

APPLICATIONS

- Digitally and screen printed panels
- Short- and mid-term advertising campaigns
- Signage
- Ideal lamination substrate
- Flat applications

FOAMALITE® x-press – AT A GLANCE

- Smooth white surface for excellent printing results
- "Ready to use"
- Optimal ink adhesion and colour fastness
- Good dimensional accuracy of the sheets
- Suitable for flat applications
- Difficult-to-ignite according to EN 13501-1
- Wide range of sheet sizes and thicknesses, special formats available on request

PRODUCT RANGE

Colour: White

Thickness mm	2	3	4	5	6	8	10
Standard formats (WxL)							
1220 x 2440 mm	■	■		■			■
1220 x 3050 mm	■	■		■			
1560 x 3050 mm	■	■		■			■
2050 x 3050 mm	■	■	■	■	■	■	■

Tolerances: -0 to +5 mm on width and -0 to +10 mm on length.

FOAMALITE® color

CREATIVE SHEET IN VIVID COLOURS.

PRODUCT

FOAMALITE® color rounds off the FOAMALITE® product family with a selection of nine different vibrant colours. As the colouring is uniform throughout the rigid foam sheet, it offers optimum colour consistency and guarantees the same colour is seen from different angles. FOAMALITE® color provides designers the best possible colour options for a wide variety of solutions in the field of visual communications. FOAMALITE® color is ideal for enhancing the impact of all adverstising with vivid colours.

PROTECTIVE FILM
- PE film on one side as standard
- Protective PE film on both sides on request

COLOURS

Light yellow	Red	Green
Dark yellow	Light blue	Grey
Orange	Dark blue	Black

APPLICATIONS

- Signage and display panels
- Merchandising display
- POS/POP applications
- Shop fitting
- Exhibition stands
- Decorative wall cladding

FOAMALITE® color – AT A GLANCE

- Nine vivid colour shades
- Uniform solid coloured material
- Maximum colour consistency throughout the entire sheet
- Recommended for interior applications or seasonal exterior use (6-month duration)
- Impervious to moisture
- Simple, mechanical processing using standard tools for processing wood and plastics

PRODUCT RANGE

Colours: please refer to chart

Thickness mm	3	5	8	10
Standard formats (WxL)				
1220 x 2440 mm	■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■		
1560 x 3050 mm	■ ■ ■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■ ■ ■ ■		
2050 x 3050 mm	■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■ ■ ■ ■	■ ■ ■ ■	■

Tolerances: -0 to +5 mm on width and -0 to +10 mm on length.

FOAMALITE® plus

THE STRONG PVC SHEET WITH
THE BLACK CORE.

PRODUCT

FOAMALITE® plus is a co-extruded rigid PVC foam sheet, consisting of high quality white outer skins and a black recycled core. FOAMALITE® plus features a hard, flat, bright white surface making it more robust and offering greater scratch resistance than standard PVC foam sheet.

The core consists of recycled PVC, meaning the whole sheet comprises 80% recycled material and makes an active contribution to the 3A Composites GmbH waste minimisation programme.

FOAMALITE® plus is ideal for numerous interior and exterior signage and printing applications due to the higher density of the sheet and the flat outer surfaces. Co-extrusion of core and surface layers ensure FOAMALITE® plus is stronger and more rigid than standard PVC sheets.

PROTECTIVE FILM
- PE film on one side as standard
- Protective PE film on both sides on request

APPLICATIONS

- Signage and display panels
- Screen printed panels
- Digitally printed panels
- Photo mounting and lamination
- POP (Point of Purchase) applications
- Wall cladding und partitioning
- Hygienic cladding
- Decorative cladding
- Suspended ceilings

FOAMALITE® plus – AT A GLANCE

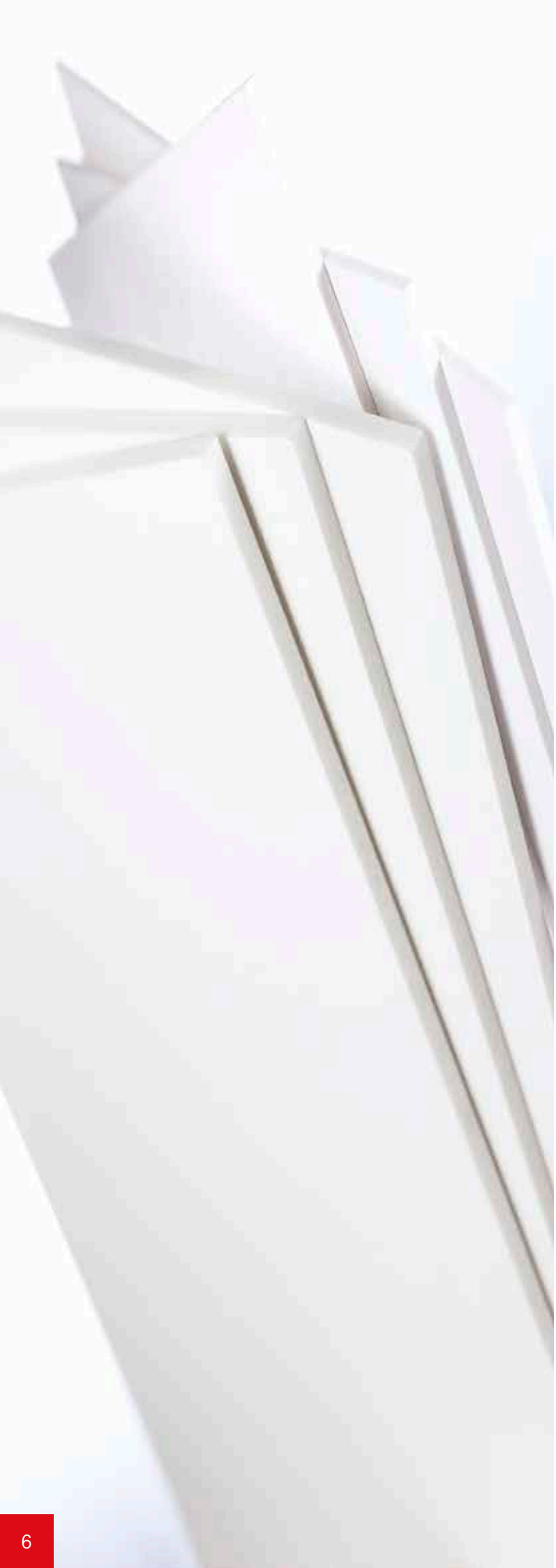
- Flat, bright white surface
- More robust and better scratch resistance than standard PVC sheet
- Stronger and better rigidity than standard PVC-sheet
- Recycled core constitutes 80% of sheet's weight
- Suitable for exterior applications
- Wide range of sheet sizes and thicknesses. Special formats available on request.

PRODUCT RANGE

Colour: White cover skins, black recycled core

Thickness mm	5	10
Standard formats (WxL)		
1560 x 3050 mm	■	■

Tolerances: -0 to +5 mm on width and -0 to +10 mm on length.



FOAMALITE®

FOAMALITE® PROCESSING TECHNIQUES

MACHINING

- Thin FOAMALITE® sheet can be cut with a strong-bladed utility knife.
- Vertical cutting machines are a very good method of carrying out cutting work on FOAMALITE® sheet without causing scratching.
- Shearing with guillotine cutters will lead to compression and some one-sided rounding at cut edges.
- FOAMALITE® sheet up to 5 cm thick can be die-cut with steel rule dies on a cutting plate. Ambient temperature should not be below 20 °C.
- FOAMALITE® sheet must not be laser cut.
- Circular saw blades made of alternatively arranged flat/trapezoidal tungsten carbide tipped teeth are best for FOAMALITE® sheet.
- FOAMALITE® sheet may be drilled with standard twist drill bits and on CNC machines best machined with single-edged tools.

SHAPING AND FORMING OPTIONS

- FOAMALITE® sheet performance and characteristics may vary depending on the direction of extrusion. Sharp corners and deep notches should always run at right angles to the direction of extrusion to minimise risks of breakage.
- FOAMALITE® sheet up to approximately 6 mm thick can be subjected to cold bending at room temperature. Care must be taken to observe the minimum bending radius (cold bending radius) of approximately 100 times the sheet thickness (e.g. 300 mm for a 3 mm thick sheet).
- Thick FOAMALITE® sheet can undergo thermoforming by heating the sheet to approximately 130 °C. Cooled to a rigid state, the component retains the formed shape. When FOAMALITE® color is subjected to hot folding, the folded areas may appear lighter in colour.
- FOAMALITE® sheet can be fully formed and even embossed by vacuum forming. The temperature of the sheet should be approximately 130 °C: the minimum temperature is 120 °C and maximum 160 °C. Stretched areas in FOAMALITE® color may appear lighter in colour.

FIXING AND BONDING

- A UV-stabilised, transparent, diffusion adhesive, often called 'PVC adhesive' is the most suitable material for cold welding FOAMALITE® sheets with similar material (rigid PVC).
- If FOAMALITE® sheets are to be joined to other materials, due to the variety of surfaces to be bonded and different applications, specialist adhesive suppliers should be consulted.
- Chipboard screws with a 3 to 4 mm shank diameter are the best means of fixing components to the surface of FOAMALITE® sheets.
- Use only stainless steel fastening elements made for outdoor mounting of FOAMALITE® sheets (danger of iron stains)
- Ensure exterior mounting is tension-free.
- Approximately 20 mm margin should remain between the holes for the screws and the edge of the sheet, and the distance between the individual holes should not exceed 500 mm.
- White FOAMALITE® sheets are resistant to exposure from sunlight without protection for approximately three to four years. Coloured FOAMALITE® color sheets are not suitable for long term exterior applications as the UV rays in sunshine can lead to changes in colour. Seasonal outdoor use may be considered.

SURFACE FINISHING

PAINTING – PRINTING – APPLICATION OF ADHESIVE FILMS

- FOAMALITE® sheets can be painted with a water soluble one component paint systems (for the interior) and two component polyurethane paint systems (for exterior applications). The surface should be lightly sanded and treated with a primer coat before painting. The drying temperature should not exceed 50 °C.
- FOAMALITE® sheets can be screen printed using printing inks suitable for rigid PVC. N.B.: crack propagation can be caused by hard, full cover screen printing inks and lead to substrate brittleness if the sheet is not carefully handled. When light FOAMALITE® x-press sheets are backlit or there is printing on both sides, it must be accepted that this may result in the printing on the rear showing through very slightly.
- FOAMALITE® sheets are often printed with UV curable printing inks in direct digital printing processes. N.B: humidity in the printing room plays a vital role in the printing (45 % minimum) ensuring consistent dissipation of static charges.
- FOAMALITE® sheet surfaces are ideal substrates for the application of suitably chosen lettering films and graphics.

GENERAL INFORMATION

- FOAMALITE® sheets are resistant to aqueous acids, alkalis and saline solutions as well as oils and aliphatic compounds. However, FOAMALITE® sheets will swell or dissolve in aromatic compounds, chlorinated solutions, ethers and ketones. N.B. the damaging effect of a substance may not become apparent immediately but impact only after many hours or even months.
- FOAMALITE® sheets must not come into contact with acetone, petrol, methyl ethyl ketone (MEK), tetrahydrofuran (THF) or Toluene (e.g. for cleaning purposes), because these solvents cause PVC to swell or dissolve and prolonged contact may completely destroy the material.
- FOAMALITE® x-press is considerably lighter, and therefore softer and less rigid, than FOAMALITE® premium due to the difference in density. It is less suitable for exterior applications. In addition, the especially light FOAMALITE® x-press sheets are not suitable for thermoforming.
- FOAMALITE® sheets must be stored flat, in dry surroundings at temperatures of around 20 °C and stress-free (remove pallet strapping). Packaged sheets must not be stored in the open (danger of deformation due to solar heat build-up). When using a forklift ensure the forks are set at a suitable width to avoid deforming the pallets in transport. (Danger of removal of nails).

FOAMALITE®

PHYSICAL PROPERTIES

			FOAMALITE® premium	FOAMALITE® X-press	FOAMALITE® color	FOAMALITE® plus
CHARACTERISTIC	TEST METHOD	UNIT	AVERAGE RESULT			
Apparent density	DIN EN ISO 1183-1	kg/m³	550 - 700	450 - 550	500 - 580	530 - 590
Surface hardness	ISO 868	Shore D	40	35	37	45
Max. service temperature	–	°C	55	55	55	55
Coefficient of linear expansion	DIN EN ISO 75 - 2	mm/(m·K)	0.05	0.05	0.05	0.05
Water absorption	EN ISO 62	%	<1	<1	<1	<1
Behaviour in fire	EN 13501-1	Euro-class	C – s3 – d0 (difficult-to-ignite)	C – s3 – d0 (difficult-to-ignite)	C – s3 – d0 (difficult-to-ignite)	
	NF P 92-501	France	M1 1 - 10 mm (difficult-to-ignite)	M1 2 - 10 mm (difficult-to-ignite)	M1 3-10 mm (difficult-to-ignite)	

FOAMALITE® is produced under stringent environmental and quality control procedures. Thus, the consistent quality of the product is achieved.

ROHS DIRECTIVE

FOAMALITE® meets the requirements of the RoHS/ WEEE directives of the European Union on the restriction of hazardous substances. FOAMALITE® foam sheets do not contain lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBBs), polybrominated diphenyl ethers (PBDEs), formaldehyde, CFCs, asbestos, plasticizer nor silicone.

REACH REGULATION

FOAMALITE® meets the requirements of the current version of the European Union chemicals regulation (REACH). In particular, FOAMALITE® foam sheets do not contain any of the substances which are listed in the current version of the ECHA Candidate List of "Substances of Very High Concern" (SVHC).

3A COMPOSITES

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