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Display Europe
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Display Asia Pacific

Schweiter Technologies

DIBOND®, HYLITE®
KAPA®, DISPA®, FOAM-X®, GATORFOAM®, LUMEX®, FOAMALITE®
FOREX®, SMART-X®

exhibition stands and displays, shop fitting, signage, POS/POP advertising, photomounting, digital printing

THE BROADEST RANGE AND THE WIDEST DIMENSIONS
3A COMPOSITES
A WORLDWIDE ORGANIZATION

3A Composites GmbH operates from headquarters in Germany, Switzerland and Ireland and has a long tradition of manufacturing famous brands and offering customers a very varied product range. This range comprises leading brands including DIBOND®, SMART-X®, KAPA®, GATORFOAM®, FOAM-X®, lightweight foam boards, DISPA®, paper boards, FOREX® and FOAMALITE® rigid foam plastic sheets as well as LUMEX® highly transparent PET polyester sheets.

This broad range, including a huge choice of variants and options for applications in signage, exhibition, shop and interior design, POS / POP and advertising, means we are able to serve our customers as a single-source supplier of sheet material for virtually any application.

Thanks to a worldwide production and distribution network, designed with our customers in mind, our products are available on short lead times in over 80 countries. This service is based on cooperative partnerships with leading distributors in the paper, plastics and metal sectors who provide application support and other valuable customer services tailored to suit individual needs.

As market leader, we attach the highest importance to sustainability in our production processes and the development of environmentally compliant materials to ensure prompt delivery of requirement-oriented, innovative and high quality products to our customers.

The selection of materials depends on key factors such as required lifespan, processing, fixing and attaching options as well as surface finishes.

This matrix gives you an overview of our whole range with the specification criteria helping you to find the appropriate product for your application.

Of course, this can only act as an initial guide. More detailed information can be found in this brochure or in our individual product brochures.

Please contact our sales team for detailed advice and support.

3A Composites, a division of Schweiter Technologies, has more than 4’000 employees at various locations in Europe, the Americas and Asia. It is active in manufacturing and commercializing lightweight products for architecture, visual communication, transportation, industrial and wind energy markets. The 3A COMPOSITES range includes leading brands such as ALUCOBOND®, DIBOND®, ALUCORE®, HYLITE®, FOREX®, SMART-X®, GATOR®, KAPA®, DISPA®, FOAMALITE®, LUMEX®, FOME-COR®, AIREX® and BALTEK®.

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**DIBOND® FOR PEOPLE WITH IDEAS**

DIBOND® is an exceptionally sturdy aluminium composite panel, comprising a polyethylene core with two aluminium surface layers. This combination of aluminium and plastic makes it a lightweight, easy to process, versatile alternative to solid aluminium sheets. The surfaces of DIBOND® are stove enamelled using a coil coating process which is compliant with ECCA standards. A wide variety of colours and surface finishes are available.

**DIBOND® offers excellent physical characteristics, such as**
- Very high resistance to weathering and corrosion
- Excellent print substrate
- Very high level of stiffness
- Extremely flat surfaces even when sheets are thin
- UV-resistant black polyethylene core
- Fire certification
- Wide range of processing options.

These make DIBOND® the most popular and versatile material for people with ideas for interior and exterior applications.

**PRODUCT LINE**

**DIBOND® FR**
The mineral-filled core of this DIBOND® panel fulfils increased fire protection requirements (EN13501-1 class B). Applications: Signage, exhibition stands and displays, shopfitting, interior design and public buildings.

**DIBOND® digital**
DIBOND® panel with 0.2 mm aluminium surfaces and optimised lacquer system for digital printing surfaces. Applications: High quality digital printing, screen printing, signage, hoardings. DIBOND®digital is recommended for flat applications.

**DIBOND® mirror**
Shatterproof DIBOND® panel in three decorative mirror surfaces for display purposes. Applications: Shopfitting, interior design, furnishing applications. The tough DIBOND®mirror surface limits bending or folding (V-groove).

**DIBOND®decor**
Aluminium composite panels with realistic wood effect finishes. DIBOND®decor is maintenance-free, resistant to moisture and temperature changes and thus also suited for external applications. Applications: Shopfitting, interior design, furnishing applications, exhibition design, POS displays, advertising signage - easy processing for bending, rounding off, contour milling and routing and folding.
STANDARD COLOURS / FORMATS AND PROCESSING OPTIONS

<table>
<thead>
<tr>
<th>Platinum white and aluminium metallic</th>
<th>Other colours</th>
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Not all surfaces are available in all formats. All formats are standard formats ex works. Your local distributor can cut boards to size according to your needs.

In addition to these finishes, we supply 30 complementary colours (matte/matte), anodised surfaces and individual non-standard finishes.

**Gardner Reflectivity**
- Matt: 25 – 40 %
- Gloss: approx 80 %
- Surface combinations: matte/gloss, matte/matte, gloss/gloss

**Screen printing**
- Digital printing
- Conventional printing

**Drilling**
- Punching
- Routing
- Bending
- Riveting
- Screwing
- Mounting
- Engraving

**Contour cutting**
- Corner rounding
- Contour cutting
FOREX®classic
A POPULAR CLASSIC

FOREX®classic is the premium board in the FOREX® product family with the best mechanical properties and a top-grade surface quality. The fine, closed-cell homogenous structure and smooth, silk-matt surface makes FOREX®classic ideal for high-quality, long-term applications, both interior and exterior.

Thanks to renowned product attributes such as:
- High stability despite minimal weight
- Excellent print/mounting substrate
- Simple mechanical processing with standard tools for processing wood and plastic

- Fire behavior according to:
  - DIN EN 13501-1: C - s3, d0 (1-19 mm)
  - BS 476-7, Class 1 (5-19 mm)
- Broad range of processing options, including 3D-forming with cold/hot bending or thermoforming
- FOREX®classic is suitable for internal and external applications, particularly in retail signage, exhibitions, interior design, POS / POP advertising and displays, modelmaking, shopfitting and printing.

FOREX®classic is also used in wall cladings of wet and clean rooms as well as in industrial applications.

STANDARD COLOURS / FORMATS AND PROCESSING OPTIONS

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<th>Sheet thickness in mm</th>
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All formats are standard formats ex works. Your local distributor can cut boards to size according to your needs.

Lightweight, rigid closed-cell PVC foam board
Protective foil on one side or on both sides on request

STANDARD COLOURS / FORMATS

- White

PROCESSING OPTIONS

- Sawing
- Punching
- Contour cutting
- Contour milling
- Varnishing
- Lacquering
- Painting
- Spray painting
- Screen Printing
- Mounting
- Laminating
- Digital printing
- Hot forming
- Cold bending
- Drilling
- Gluing
- Screwing
FOREX® print
THE ECONOMIC SOLUTION
FOR PRINTING

FOREX® print is specially designed to cater for the needs of the printing market. The extremely lightweight board features bright white, smooth and even surfaces and is the optimal substrate, especially for direct digital printing.

FOREX® print is the optimum substrate for high quality digital and screen printing, POS/POP displays and signage.

FOREX® print enables economic solutions in the field of printing applications.

FOREX® print at a glance
- Bright white, smooth, even surface for good printability
- Excellent printability, best ink adhesion and colour fastness
- Good dimensional accuracy
- Suitable for flat applications
- “Ready to use” – can be printed on directly without any pre-treatment required
- Suitable for shorter to medium-term applications for interior and exterior use
- Fire behavior according to:
  > DIN EN 13501-1: C - s3, d0 (2-10 mm)
  > BS 476-7, Class 1 (10 mm)

Sheet thickness in mm 2 3 4 5 6 8 10 19

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All formats are standard formats ex works. Your local distributor can cut boards to size according to your needs.
FOREX®color rounds off the FOREX® product family with a selection of nine vibrant colour shades. As the colouring of the rigid foam sheet is uniform throughout, it offers optimum colour consistency and guarantees the same colour is seen when viewed from different angles.

FOREX®color provides designers with the best possible basis for adding a dash of colour to a comprehensive range of applications in the field of visual communication: as POS/POP merchandising displays, shopfitting and exhibition structures or as signage. FOREX®color can be used everywhere to emphasize advertising messages by means of powerful colour effects.

**FOREX®color at a glance**
- 9 colour shades with a striking colour effect
- Maximum colour consistency throughout the entire sheet
- High stability despite minimal weight
- Recommended for interior applications or seasonal exterior use (6-month duration)
- Resistant to moisture
- Simple, mechanical processing using standard tools for processing wood and plastics
- Fire behavior according to: > DIN EN 13501-1: C - s3, d0 (3-10 mm)

**STANDARD COLOURS / FORMATS AND PROCESSING OPTIONS**

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<tr>
<th>Colour</th>
<th>Light yellow</th>
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<th>Orange</th>
<th>Light blue</th>
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**Sheet thickness in mm**
- 3
- 5
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- 19

**Standard formats**
- (L x W): 2440 x 1220
- 3050 x 1560
- 3050 x 2050

Not all FOREX®color products are available in all offered formats and thicknesses. All formats are standard formats ex works. Your local distributor can cut boards to size according to your needs.
SMART-X®
FOR SMART EXTERNAL ADVERTISING

SMART-X® is a lightweight, all-plastic sheet material with surfaces of UV and weather resistant solid polystyrene (HIPS) and a core of expanded polystyrene that is completely moisture-resistant. These characteristics make SMART-X® the world’s only lightweight foam board for external applications without any significant change in colour for a period of up to two years. Due to its refined surface structure and the large format production (up to 2 metres width) SMART-X® is also perfectly suited for direct digital printing.

SMART-X® stands out, in particular, because of:
- High stability and very low weight
- Very good resistance to weathering – with high UV stability and humidity resistance, no deformation
- Refined surface structure
- Brilliant printing results with direct digital printing, offering vibrant colours even for exterior applications
- Available in 2 metres width
- Ecological - SMART-X® is a mono-material and 100% recyclable

SMART-X® applications include all laminating and printing techniques and applications in the fields of signage, event marketing and product presentation.

STANDARD COLOURS / FORMATS AND PROCESSING OPTIONS

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PRODUCTS

Sheet thickness in mm 5 10 19

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Digital Printing, Laser cutting, Screwing, Varnishing, Laminating, Folding, Gluing, V-groove, 3-D fabrication

SMART-X® applications include all lamination and printing techniques and applications in the fields of signage, event marketing and product presentation.

PRODUCTS

Sheet thickness in mm 5 10 19

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PRODUCTS

Sheet thickness in mm 5 10 19

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Digital Printing, Laser cutting, Screwing, Varnishing, Laminating, Folding, Gluing, V-groove, 3-D fabrication

SMART-X® applications include all lamination and printing techniques and applications in the fields of signage, event marketing and product presentation.
KAPA® TAILORMADE FOR YOUR APPLICATION

KAPA® is synonymous with a range of high-quality lightweight foam boards comprising individual liner sheets bonded with polyurethane foam core. The options for use of KAPA® products range from modelling to multi-purpose substrates for interior applications because each KAPA® variant features different liner materials developed to meet specific application needs.

KAPA® is a high performance foam board with
- Usable surfaces on both sides
- High-quality liners
- Excellent level of stiffness and good dimensional stability
- Perfect flatness - even with thin boards
- Problem-free application of solvent based paints and glues.

Bonded liners
Polyurethane foam core

PRODUCT RANGE

KAPA®line
Lightweight foam board with pigmented chromo-substitute liners and a polyurethane core. Applications: Decorative applications, punching and die cutting, digital printing and screen printing, modelling, presentations and display panel for design purposes.

KAPA®bright
Lightweight foam board with bright white woodfree matt-coated paper liners and a polyurethane core. Applications: Particularly suitable as bright white direct substrate for UV direct printing and screen printing as well as for modelling and display panels.

KAPA®plast
Lightweight foam board with very white plastic-coated cellucarton liners and polyurethane core. Applications: KAPA®plast is the high quality substrate for direct digital printing, screen printing and signage, display panel for design purposes and POS, die cut 3-D logos and lettering, modelling and presentations.

KAPA®tech
The pioneering composition of PUR foam and aluminium skins combines lightweight with rigidity. Moreover, KAPA®tech is Euroclass B certified; it is the first KAPA® board in the category “difficult to ignite”. Applications: In transport and industry as well as in visual communication.

KAPA®flex
Lightweight foam board with high-grade textured and latex-impregnated liners (“Canvas”) on both sides and polyurethane core. Applications: Ideal substrate for digital direct printing, retail signage, photo campaigns and advertising displays as well as decorative applications.

KAPA®text
Lightweight foam board with high-grade textured and latex-impregnated liners (“Canvas”) on both sides and polyurethane core. Applications: Designer material for sophisticated creative applications, for model building, sculptures, presentations, window mounts for framing.

KAPA®color
Lightweight foam board with coloured plastic coated cellucarton liners (two-colour) and polyurethane core. Applications: Display panel for design purposes, moulding and presentations.

KAPA®mount
Lightweight foam board with coloured reinforced UC paperboard liners. Applications: High-quality mounting substrate for digital prints and/or large photographs. KAPA®mount is also ideal for use as fill-in panel for exhibition and display systems. It is not recommended for punching.

KAPA®fix
Lightweight foam board with aluminium reinforced UC paperboard liners and self-adhesive surface on one or both sides of the sheet. KAPA®fix is fire classification as per DIN 4102 class B2, BS 476 part 7 class 1. Applications: Specifically developed as a self-adhesive “rapid-action” mounting substrate for digital prints and/or large-format photographs. KAPA®fix is also ideal for use as fill-in panel for exhibition and display systems.
STANDARD FORMATS

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Not all KAPA® products are available in all offered formats and thicknesses. All formats are standard formats ex works. Your local distributor can cut boards to size according to your needs.

KAPA® – CUT TO SIZE

For all project business that requires special formats e.g. advertising campaigns, 3A Composites offers an extended flexibility in the production of KAPA® lightweight foam boards. The panels are available in any format with widths between 400 – 2030 mm and lengths between 400 – 4000 mm. Minimum order quantity of 500 m².

Thanks to the custom sizes ex works valuable time in today’s short-term project business can be saved.

We will be happy to assist you with your next project!

STANDARD COLOURS AND PROCESSING OPTIONS
DISPA®
100% PAPER – 100% RECYCLABLE

DISPA® is a paper board with a unique structure of embossed formed paper. DISPA® delivers everything you would expect from a sign and display board – flat, smooth surface, excellent printability, rigidity and stability – and a unique design made of 100% FSC®-certified paper (FSC®-C127595).

The advantages of DISPA® at a glance:
- Made of 100% FSC®-certified paper (FSC®-C127595) – 100% recyclable
- Bright white and smooth – graphics look amazing
- Strong, rigid and stable – signs start flat and stay flat
- Lightweight – it’s easy to work with and hang
- Processing is fast, efficient and easy, even using manual tools
- Perfect solution for short term promotional campaigns

STANDARD COLOURS / FORMATS AND PROCESSING OPTIONS

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Embossed formed paper core made of 100% cellulose fibre
LUMEX®
THE CHOICE IS CLEAR

LUMEX® offers the complete range for transparent and translucent applications. The PET polyester sheets are available in two product types: LUMEX® A (amorphous PET), available in 0.8 – 6 mm thickness, for flat applications and “simple” thermforming and LUMEX® G (with Glycol modified PET), in 0.8 – 10 mm thickness, for complex thermofoming and solvent bonding. Both products show extremely good printability with UV inks. In addition, they have a B-s1, d0 fire classification. They are extremely impact resistant, show good outdoor durability and are easy and fast to transform and print.

The flawlessly extruded A-PET and PET-G thermoplastic polyester sheets stand for:
- Excellent resistance to chemicals, solvents, detergents, oil and greases, etc.
- Fire classification B-s1, d0 according to EN 13501-1 (difficult-to-ignite) – approved for public areas
- Fully recyclable
- No drying prior to forming
- Good printability

Cold bending

Hot forming

Sawing

Contour cutting / Contour milling

Digital printing

Gluing (only LUMEX® G)

Not all LUMEX® products are available in all offered formats and thicknesses. All formats are standard formats ex works. Your local distributor can cut boards to size according to your needs.

STANDARD COLOURS / FORMATS AND PROCESSING OPTIONS

<table>
<thead>
<tr>
<th>Sheet thickness in mm</th>
<th>0.5</th>
<th>0.8</th>
<th>1</th>
<th>1.5</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>8</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard formats (L x W)</td>
<td>2050 x 1250</td>
<td>♦♦♦♦♦</td>
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<td>2500 x 1250</td>
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<td>3050 x 2050</td>
<td>♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦ ♦♦♦♦♦</td>
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<td>&gt;2500 – 6050 x 2050</td>
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</tbody>
</table>

Clear transparent
Clear transparent ar (anti reflective)
Clear transparent uv
Clear 30%
White - black (on request)
Bronze (on request)
Others opaque (on request)

STANDARD COLOURS / FORMATS AND PROCESSING OPTIONS

STANDARD COLOURS / FORMATS AND PROCESSING OPTIONS
SIGNAGE INDOOR

SMART-X® advertising displays in a supermarket chain
Processor Punkt1, Larvik, NO

Coca Cola logo – waterjet-cut KAPA® plast

SMART-X® display “Duty Free Store”

FOREX® cut-out figures

Direct digital printing on SMART-X®, shop window advertising at Galeria Kaufhof, DE

State Garden Show in VS, DE / DIBOND® Energy Wheel

APPLICATIONS

SIGNAGE OUTDOOR

DIBOND® monolith in front of corporate building “Le Vigan”, FR

Direction and image signage for the UEFA Euro 2004 – FOREX® classic

DIBOND® “butterfinish” entrance signage

Super-large format signage for the UEFA World Cup 2006 – DIBOND® mounted photo print and lamination
Created by Funktion + Metall Unlimited GmbH, Munich, DE

Direction and image signage for the FIFA World Cup 2006 – DIBOND® with mounted photo print and lamination

Created by Funktion + Metall Unlimited GmbH, Munich, DE

Advertisements, direct digital printing on DISPA®

SMART-X® display “Duty Free Store”

KAPA® cut-out figures

Direct digital printing on SMART-X®, shop window advertising at Galeria Kaufhof, DE

State Garden Show in VS, DE / DIBOND® Energy Wheel

Direct digital printing on DIBOND® car park “Horne Fronnerweid”, Zurich, CH

Displays, direct digital printing on DISPA®

SMART-X® display “Duty Free Store”

KAPA® cut-out figures

Direct digital printing on SMART-X®, shop window advertising at Galeria Kaufhof, DE

State Garden Show in VS, DE / DIBOND® Energy Wheel

APPLICATIONS
DIBOND® store front AmericanSwiss, Johannesburg, South Africa

DIBOND® store front Sunglass hut, South Africa

DIBOND® jet black store front and DIBOND® butlerfinish logo.

Sunglass hut, South Africa

DIBOND® façade in ultramarine blue

DIBOND® jet black (high-gloss) store front

Citi Nails store front, Australia – DIBOND®

DIBOND® mirror lettering

DIBOND® jet black (high-gloss) store front Woolworths, South Africa

DIBOND® butlerfinish gold store front

DIBOND® interior panelling at Leonid Borzenkov – Vnukovo Airport, RU
EXHIBITION STANDS AND DISPLAYS

3A Composites exhibition stand at Euroshop 2014, Dusseldorf, DE made of DIBOND®, FOREX®, SMART-X®, KAPA®, LUMEX®, FOAMALITE®

"Design office Hall A"– DIBOND® monopodium mataki. Created by: Designlah - Office for visual communication and interior design, Munich, DE

3A Composites exhibition stand at EuroShop 2015, Cologne, DE made of DIBOND®, DISA®, SMART-X®, KAPA®, LUMEX®, FOAMALITE®

Outdoor exhibition of art by photo-journalist Hiroji Kubota, Embankment, London. DIBOND® boxes fabricated by using the routing and folding method, photos mounted and laminated. Created by: Standard8, Lewes, UK

Exhibition stand for Kodak. Photographic image mounted on KAPA®mount, lettering cut from FOREX®classic.

3A Composites exhibition stand at Euroshop 2011, Dusseldorf, DE made of DIBOND®, FOREX®, KAPA®, FOAMALITE®, GATORFOAM®

"Design office Hall A"– Aluminum boxes fabricated by using the extrusion method, KAPA®fabricated by using the folding method, photo-montage mounted on KAPA®mount. Created by: Designlah – Office for visual communication and interior design, Munich, DE

Special exhibition "Art & Perfection", Berlin Digital prints on GATORFOAM® Created by: Daddy Creative Communications, Berlin, DE

"Design office Hall A"– DIBOND® test panels. Created by: Designlah - Office for visual communication and interior design, Munich, DE

EXHIBITION STANDS AND DISPLAYS

Presentation of a European open competitive bidding for the architectural platform “wonderland” in Vienna - mounted on KAPA®.

Kohlschein GmbH & Co. KG exhibition stand (photokina 2008) made of KAPA®.

Exhibition “Distinct Ambiguity”, DIBOND® mirror, 3 mm - Created by: Architekturbüro GRAF, Berlin, DE

Exhibition FotoFacta 2007, Osnabrück, DE – pictures laminated on KAPA®

Temporary interior decoration made of KAPA® to mark FAKD’s 50-year anniversary - Created by: Marc Flick

Indoor exhibition of the “BMW-legends”, Siegen Shopping Centre, applications made of DIBOND®

APPLICATIONS
Portable stand for promotional activities at the POS – KAPA®

Exhibition display – laminated and cold bent FOREX®classic.

In-store decoration with counter made of KAPA® for the brand DIOR.

DIBOND® POS display stand for BENETTON.

POS display "colour refill station" – GATORFAME.

Applications:
- Manual lamination on KAPA®fix
- Machine lamination on KAPA®mount
- Machine lamination on KAPA®fix

POS | POP
SHOP FITTING | INTERIOR DESIGN

High-quality designer shelving system – DIBOND®. Created by: C. Maas, duplico, DE

Designer lamp made of DIBOND®. Designed and created by: www.daniel-michel.com

Shelf system – DIBOND® butlerfinish. Created by: YC 2, Kaiserslautern, DE

Shelf system made of DIBOND® light ivory, manufactured using the routing and folding method – Fashionable hair dresser "Schnittzone" in Austria

Designer chair made of DIBOND® decor wenge. Designed and created by: George Hlavacs, NL

Shop window decoration Modehaus Zinser, Singen, DE – made of FOREX® classic. Created by: dfrost GmbH & Co. KG

Bang and Olufsen exhibition – rear walls made of FOREX® classic.


APPLICATIONS
As the leading producer of display materials, 3A COMPOSITES is committed to the development of innovative materials for the rapidly growing digital print market. The increasing significance of continuously improving technologies requires skilled specialist knowledge.

Working closely with the leading manufacturers of digital printing equipment, our printing substrates undergo continuous testing. Our customers benefit from the know-how gained in this process as we are able to optimise our products to suit the latest developments in imaging technologies.

We are on hand with help and advice for our customers, providing them with the most up-to-date knowledge and the best application support for our materials.

On the next page is a summary of our premium products for digital printing.

<table>
<thead>
<tr>
<th>Product</th>
<th>Thickness</th>
<th>Width</th>
<th>Application</th>
<th>Properties</th>
<th>Method</th>
<th>Image Quality</th>
<th>Ink Adhesion</th>
<th>Ink Curing</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIGPR-2ge</td>
<td>2/3</td>
<td>1500</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>DIGPR-delim</td>
<td>2/3/4</td>
<td>1500</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>FORDpaint</td>
<td>2/3/4</td>
<td>2030</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>SMARTF</td>
<td>1/1/10</td>
<td>2030</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CAPRA-i</td>
<td>3/5/15</td>
<td>2030</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CAPRA-ix</td>
<td>5/10</td>
<td>1400</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>CAPRA-tech</td>
<td>5/10</td>
<td>1400</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>DIVA</td>
<td>1/1</td>
<td>1524</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>LUMI</td>
<td>0/1/1/2/</td>
<td>2050</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
</tbody>
</table>
DIBOND®digital has a special stove enamelled surface that is optimised for digital printing and guarantees outstanding ink adhesion – even for high-speed printing.

<table>
<thead>
<tr>
<th>Overview of direct digital print advantages</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature resistant up to 80 °C</td>
<td>No distortion caused by UV lamps</td>
</tr>
<tr>
<td>Low weight/high rigidity</td>
<td>Allows large unsupported spans</td>
</tr>
<tr>
<td>Weather resistant for exterior use</td>
<td>Water and UV-resistant</td>
</tr>
<tr>
<td>Smooth surface optimised for digital printing</td>
<td>Excellent print quality – even the finest details</td>
</tr>
<tr>
<td>Thickness tolerance + / - 0.2 mm</td>
<td>Allows limited clearance of print heads</td>
</tr>
<tr>
<td>Extremely flat, strong and rigid</td>
<td>No distortion at fixing points</td>
</tr>
<tr>
<td>Easy cutting</td>
<td>Clean edges, no deflashing necessary</td>
</tr>
<tr>
<td>Lacquer system optimised for direct to substrate digital printing</td>
<td>Excellent ink adhesion</td>
</tr>
</tbody>
</table>

DIBOND®digital is recommended for flat applications as its surface comprises 0.2 mm thick aluminium layers.

SMART-X® is a lightweight, all-plastic sheet material with polystyrene surfaces and an expanded polystyrene core. SMART-X® stands out due to its weather-resistance and excellent printability.

<table>
<thead>
<tr>
<th>Overview of direct digital printing advantages</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Smooth UV-resistant polystyrene surfaces</td>
<td>For ideal printing results and outstanding ink adhesion – also in exterior applications</td>
</tr>
<tr>
<td>Optimal low weight to high rigidity ratio</td>
<td>Simple to attach, trouble-free handling. Optimal for all types of signage, especially large-format or long and narrow signs.</td>
</tr>
<tr>
<td>Resistant to moisture and humidity</td>
<td>Outdoor applications for up to 2 years</td>
</tr>
<tr>
<td>Excellent surface hardness</td>
<td>Scratch-resistant even after repeated use</td>
</tr>
<tr>
<td>Temperature resistance</td>
<td>Suitable for applications up to 70°C</td>
</tr>
<tr>
<td>Simple processing</td>
<td>Whole range of processing options with standard tools (printing, cutting, assembling)</td>
</tr>
<tr>
<td>Excellent recyclability</td>
<td>Adhesive-free mono-material</td>
</tr>
</tbody>
</table>

Only UV-cured inks should be used in direct digital printing on SMART-X®.
FOREX®print

FOREX®print is a rigid lightweight foam plastic sheet with bright white surfaces optimised for digital printing.

Overview of direct digital print advantages

<table>
<thead>
<tr>
<th>Bright white surfaces</th>
<th>Ideal for applications where printing only partially covers the surface, particularly bright impact in outdoor applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low weight</td>
<td>Simple to attach, problem-free handling</td>
</tr>
<tr>
<td>International fire classification B1 / M1</td>
<td>Approved for public areas</td>
</tr>
<tr>
<td>Wide range of sizes and thicknesses</td>
<td>Sheets cut to size to suit different requirements</td>
</tr>
<tr>
<td>Resistant to humidity and moisture</td>
<td>Suitable for exterior and interior use</td>
</tr>
<tr>
<td>Simple processing</td>
<td>Whole range of processing options with standard tools – as known from FOREX®classic</td>
</tr>
</tbody>
</table>

Digital printing

- Primer-finish for excellent ink adhesion

Surface properties

- Colour intensity and sharp images due to bright white surfaces
- Surfaces in "canvas" look
- Coated aluminium skins

Excellent flatness

Permits high-speed printing

Easy processing, no foam crumbling

- Simple, speedy die cutting possible
- Easy processing with conventional wood- and metal-working machinery

Low weight and high rigidity

- Simple attaching, problem-free handling
- Lightweight and rigid

High heat resistance

- Long-term up to 100 °C
- Short-term up to 160 °C
- Long-term up to 70 °C
- Short-term up to 120 °C (*)

Further advantages at a glance:

- Moisture-resistant
- Three-dimensional structure adds depth to print and images
- For interior and exterior use; euroclass B certified [difficult-to-ignite]

* Avoid large variations in temperature.

KAPA® is a high-grade lightweight foam board with an expanded polyurethane core and individual bonded surface layers. KAPA® offers the most varied interior application options from manual cutting to direct digital flat-bed printing.

<table>
<thead>
<tr>
<th>KAPA®plast</th>
<th>KAPA®tex</th>
<th>KAPA®tech</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital printing</td>
<td>Primer-finish for excellent ink adhesion</td>
<td>Special surface-finish for excellent ink adhesion</td>
</tr>
<tr>
<td>Surface properties</td>
<td>Colour intensity and sharp images due to bright white surfaces</td>
<td>Surfaces in &quot;canvas&quot; look</td>
</tr>
<tr>
<td>Excellent flatness</td>
<td>Permits high-speed printing</td>
<td></td>
</tr>
<tr>
<td>Easy processing, no foam crumbling</td>
<td>Simple, speedy die cutting possible</td>
<td>Easy processing with conventional wood- and metal-working machinery</td>
</tr>
<tr>
<td>Low weight and high rigidity</td>
<td>Simple attaching, problem-free handling</td>
<td>Lightweight and rigid</td>
</tr>
<tr>
<td>High heat resistance</td>
<td>Long-term up to 100 °C</td>
<td>Long-term up to 70 °C</td>
</tr>
<tr>
<td>Further advantages at a glance:</td>
<td>Moisture-resistant</td>
<td>Three-dimensional structure adds depth to print and images</td>
</tr>
</tbody>
</table>
DISPA® is a display board with a unique structure of embossed formed paper. DISPA® stands out due to its smooth, bright white surface and excellent printability.

Overview of direct digital print advantages

100% cellulose fibre product
Made of 100% FSC®-certified paper (FSC®-C127595) – 100% recyclable

Bright white surface
High quality results both for digital and screen printing

Unique structure of embossed formed paper
Stability of the panel

Simple processing
Whole range of processing options with standard tools (printing, laminating, cutting, punching)

Application
Suitable for short term indoor promotional campaigns

LUMEX®, the transparent and translucent polyester sheets (A-PET/PET-G) have optimum performance in digital printing. With an additional backlighting, optical effects can be achieved thanks to the transparency of the material.

Overview of direct digital print advantages

Transparent and translucent sheets
Good printability thanks to optimal adhesion with UV curing inks, backlighting possible

LUMEX® A
LUMEX® G
Excellent resistance to chemicals, solvents, detergents, oil and greases, etc.

Wide range of sheet thicknesses and colours
Sheets cut to size to suit different requirements

Resistant to humidity and moisture
Suitable for exterior and interior use

Fire classification B-s1, d0
Approved for public areas

We recommend that print machines are regularly serviced, in particular, UV-lamps and UV-radiation intensity should be regularly tested.

Avoid fluctuating humidity (ca. 45% RH) or dry environments (dangerous due to static charges).

Boards should be acclimatised to work-room temperature 24 hours before printing, especially when boards have been stored at low temperatures in an exterior storage area. Store the boards flat and not under tension (remove packaging straps).

We recommend wearing white cotton gloves to avoid any grip marks (fingerprints) and prevent oils and dirt particles on the surfaces. Hold sheets only by the edges and do not lift the sheet only on one corner (risk of breakage).

If the sheet carries a protective film, this should be removed slowly and smoothly. Sweep the sheet surface with ionised air prior to printing and consistently apply any available measures to reduce static build-up.

Use a print profile that is optimally suited to each print surface.

Use inks recommended for rigid substrates by the machine manufacturer. Using non-recommended inks can result in poor ink adhesion.

When printing onto DIBOND®digital and KAPA®plast, a high UV intensity can be employed for rapid ink curing without problems. Both materials can be processed at temperatures of up to 80 °C.

Keep thermal load as low as possible for FOREX®print, FOREX®classic and SMART-X® and only use the UV-lamps required for correct ink curing. Normally, not all available UV-lamps need to be turned on to achieve excellent curing.

Ink adhesion can be tested reliably only after 24 to 48 hours due to post hardening (cross hatch test DIN EN ISO 2409).