

# 2018 Guide to Substrates

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digitalprinter

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## Challenge Antalis

<b>NAME</b>	Sham Ahmed
<b>ROLE</b>	Digital Sales Manager
<p>Digital Sales Manager Sham has been with Antalis for 20 years. So he knows what makes the company great – the people.</p> <p>He built the digital team and continues to keep his colleagues at the top of their print game. With print turning increasingly digital, he takes a strategic approach to printing challenges.</p> <p>Clients know he'll go the extra mile, literally, to help with their digital operations. What most don't know is he played hockey for England U21s!</p> <p>When Sham's not around, everyone in the digital team provides helpful expertise. We've got specialists in media, hardware, training and support. But not all can whack a hockey ball.</p>	

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**D**espite the challenges facing the print industry, mainly the proliferation of digital media, there is a renewed sense of optimism in our sector. Here at Antalis, in fact, we feel incredibly excited about the year ahead and the opportunities it will bring as print continues to reaffirm its position in an increasingly digitally-saturated world.

Of course, that's not to say that some traditional parts of the industry won't continue to face challenges – we are clearly seeing a shift to shorter print runs and, in turn, overall paper volumes are being affected as companies continue to explore alternative forms of communication.

But the good news is that this will be offset by an influx of exciting new growth opportunities. In the marketing world, for example, as print runs are generally getting shorter, customers are now able to afford better quality materials and are therefore increasingly leaning towards premium, creative and custom papers as a way to offer maximum visual impact and sensory appeal.

Aligned to this, we are continuing to see rapid technological advances within the print, paper and creative industries that allow printers to push boundaries in quality and finishes, while offering greater design freedom than ever before.

In addition, diversification will remain the watchword of 2018, enabling printers to expand their business and open up into new markets. This can be found in everything from the need for niche, specialist applications through to the growing large format media category.

Clearly then, the market is far from staid but is rather evolving to become more innovative and inspirational than ever before which, in turn, offers much greater opportunity for the printer. As an industry it is up to us all to remain hungry, ambitious and aspirational and to embrace the evolving landscape. There is huge potential out there and we at Antalis see our role as being a strategic partner to our customers, supporting them in leveraging these opportunities.

#### **Bruce Munro**

*National sales director  
Antalis UK*



**Cover image: Pop'Set  
Cosmo Pink. Manufactured by Arjowiggins,  
supplied by Antalis.**

# Sign of the times

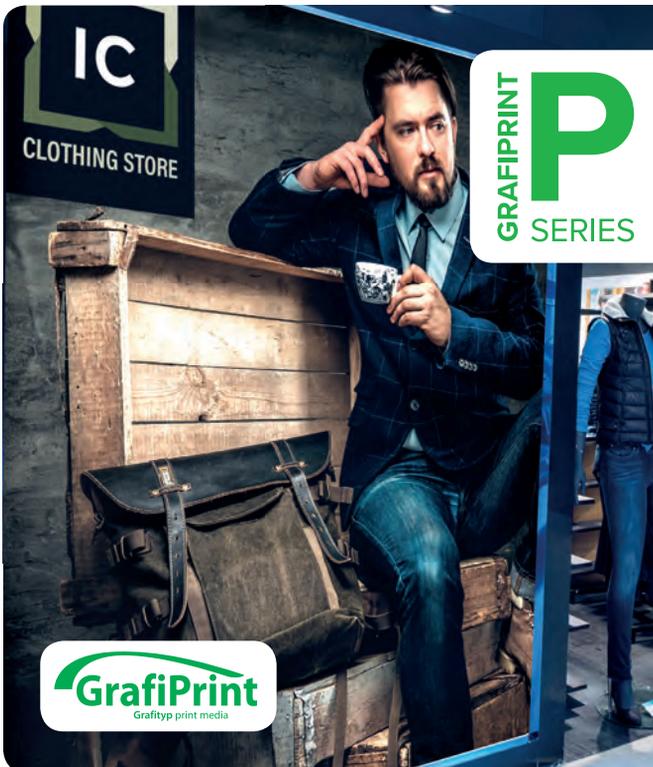
Grafityp UK Ltd boasting more than 65 years of outstanding service to the sign industry.

**G**rafityp UK Part of the International Grafityp Self-Adhesive Products Group located in Houthalen, Belgium, is a manufacturer and distributor of self adhesive sign making films, digital print media, laminates and automotive and deco films. Based in Tamworth, Staffordshire, the company is strategically situated within easy reach of local motorway networks ensuring next day delivery to the majority of its customer base.

A trusted supplier to the signmaking trade for many years, Grafityp prides itself on the quality and value of its products but is constantly striving to improve all areas of its business. The company's latest innovation is a new polymeric P-Series digital printing vinyl that has been developed for high performance at a low cost. The film offers vibrant and reliable print quality without the expensive outlay of most polymeric printing vinyls.



P-Series is a 75-micron digital printing vinyl that is designed for use on latex, eco solvent, solvent and UV printers. The film is available in P20 clear gloss which can also be used as a laminate, P22 white gloss, P23 white matt, P24 white gloss with grey adhesive and P26 white gloss air escape with grey adhesive.



## Polymeric Print Media

Manufactured in Europe by Grafityp Self-Adhesive Products to REACH compliant standards.

FROM **£89.59** 762mm x 50m

*Air Escape (bubble free) option available in white gloss from £110.11 762mm x 50m*



# Contents

5

## Stock options

From magnetics to textiles



31

## Recycled stocks

They keep getting better and better



47

## Dirty business

Digital deinking's challenges



54

## All that's fit to print

Non-paper substrates abound



- 1 **Sponsor's foreword: Antalis**
- 5 **Taking Stock**  
New substrate developments
- 22 **Merchant services**  
Making the most of the material world
- 26 **Conference report: The Power of Print**  
Pitching paper against digital
- 31 **Recycled stocks**  
They keep getting better and better
- 38 **Inkjet papers**  
It's not just about inks and printheads
- 47 **De-inking**  
Digital print demands a new approach
- 54 **Novel substrates**  
Wood, glass, plastics, metal – digital does them all

### EDITORIAL

#### Michael Walker

Editor  
michael.w@whitmar.co.uk

#### Rebecca Gibbs

Deputy editor  
rebecca.g@whitmar.co.uk

### CONTRIBUTORS

Vince Collins  
Simon Eccles  
Laurel Brunner

### PRODUCTION

#### Jamie Bristow

Production manager  
jamie.b@whitmar.co.uk

#### George Bristow

Production assistant  
george.b@whitmar.co.uk

Administration &  
Circulation tel:  
**01892 779597**

Editorial tel:  
**01892 542099**

### ADVERTISING

#### Kelly Morris

Advertising manager  
kelly.m@whitmar.co.uk

#### Simon Nana

Sales executive  
simon.n@whitmar.co.uk

Advertising tel:  
**01892 51499**

### PUBLISHER

#### Rob Mulligan

rob.m@whitmar.co.uk

 Tweet us @digitalprintmag

Printed and bound by:  
Buxton Press, Buxton,  
Derbyshire.  
Repro by: Whitmar Publications  
Online version:  
www.paperandprint.com  
Text: Lumi Art 100 g/m<sup>2</sup>  
Cover: Lumi Art 200 g/m<sup>2</sup>  
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### Acquerello & Nettuno sample book

This new swatch from Fedrigoni reinterprets the patterns of Acquerello and Nettuno papers through diagrams taken from the history of astronomy and graphic depictions of orbits and rotations.

Nettuno's renowned lined felt-markings on both sides ensure impressive characterisation thanks to the huge range of colours. Both Nettuno and Acquerello papers and boards are said to be ideal for any kind of publishing, packaging and commercial printing. They are held in high regard in converting systems for packaging and shoppers, special publications, brochures, booklets and coordinated graphic materials.

**Type:** Text and Cover papers and boards

**Manufacturer:** Fedrigoni



### Aslan MetalEffect Rosegold

A metallic colour rosegold has been added to Aslan's MetalEffect Aslan CA 23 series of polished and brushed metal-effect films. The glossy rosegold film has been designed for the creation of plotted lettering, logos and designs on smooth surfaces as well as full-surface designs.

With an identical effect on both sides, the film is particularly suited for glass applications. Applying a plotted design inversely on the inner side of the glass also protects it from deliberate damage and other external factors. The rosegold film has a minimum outdoor durability of two years and is suitable for interior as well as exterior applications. The 50-micron self-adhesive film comes in rolls of 25m x 1.25m.

**Type:** Metallised film

**Manufacturer:** Aslan



**Duncan Webster**  
Technical Manager

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### CenturaPack paper and board

The CenturaPack range developed by Swaneline Paper & Board in collaboration with Slater Harrison is a metallic effect paper and board for the luxury packaging market that is both recyclable and compostable.

Combining Slater Harrison's Centura Pearl and Metallic coatings, CenturaPack is designed for coated materials used in the creation of luxury and tactile packaging, rigid printed tubes, creative cartons and matching self-adhesive labels for the food and beverage and personal care markets.

It is suitable for most printing methods. The range is non-acidic; does not contain film or foil, and is biodegradable, compostable and recyclable, offering an environmentally strong alternative to metallised polyester (Metpol).

**Type:** Recyclable metallic effect paper and board for packaging

**Manufacturer:** Slater Harrison

**Merchant:** Swaneline Paper and Board

### Century Soho for Digital Technology

Century Soho for Digital Technology (CSD) is a new swatch book featuring papers for digital toner-based printing.

Designed for advanced functionalities such as special metallics, white ink and more, CSD replaces the former Xerography (CSX) swatch and includes a wider selection of finishes, formats, weights and colours.

The "Remote Places" booklet within the swatch takes you on a photographic journey of Tibet through the lens of Veronese photographer Mattia Passarini (third place in National Geographic's Travel Photographer of the Year 2016). A combination of these stunning images and high-quality papers demonstrate the potential of this well-established digital print technology.

**Type:** Digital toner based papers

**Manufacturer:** Fedrigoni



### Chromolux

Zanders, German manufacturer of high quality speciality papers and boards, is pleased to announce Fenner Paper, one of the UK's leading speciality paper merchants, is a new partner for the distribution of premium brand Chromolux. Samples, collection books and other information materials can be ordered from Fenner Paper now.

Fenner Paper provides the complete Chromolux range, which encompasses high-gloss label papers and premium board grades with a wide variety of finishes. The cast-coated qualities set off high-end products such as exclusive perfumes and cosmetics, confectionery, champagne and spirits, upmarket tobacco goods and many other luxury articles; it is also suited for graphic applications.

**Type:** Cast coated paper and board

**Manufacturer:** Zanders

**Merchant:** Fenner Paper

## Coala Magnetics

The Coala magnetic range of renewable large-format display graphics allows outlets to re-apply and reposition graphics and messaging, offering a cost-effective solution for retail POS & branding where information needs to be regularly refreshed.

It combines a magnetic adhesive base (Coala Magnetic Base Films) with printable ferrous films (Coala Ferro Films).

To create a permanent magnetic display surface that can be updated with seasonal promotions, users are encouraged to place the Coala Magnetic Base Film on a surface. Available in a variety of formats and thicknesses, this material serves as the base onto which the Coala Ferro Films are positioned.

The Coala Magnetics range also includes printable magnetic PVC in a variety of thicknesses, attractive force strengths and surfaces, suitable for applying directly to any metal object, including vehicles and electrical appliances for applications such as magnetic signage and fridge magnets.

**Type:** Large format display

**Printing technology:** Eco solvent and solvent inks, UV and latex inkjet.

**Merchant:** Antalis



## Coala Silky Wallcover

The Coala Silky Wallcover Textile from Antalis is a PVC-free, woven, self-adhesive fabric for interior decoration. Featuring a blockout layer, which ensures existing graphics do not show through the textile, the Coala Silky wallcover can cover existing, hard-to-remove graphics. With a specially designed adhesive, the Coala Silky wallcover textile makes it possible to reposition and remove the product, without leaving a residue or damaging the surface it is applied to, making it easy to change designs and decorations around.

StandOut Graphics worked with customer Juice Creative Design to create a display at the King Richard III Visitor Centre, Leicester, using Coala Silky Wallcover.

**Type:** Woven self-adhesive fibre 170gsm

**Available sizes:** 30m rolls in 1067, 1370 and 1520mm widths

**Merchant:** Antalis



**Giles Bristow**  
Digital Support Manager

## Challenge Giles on training and education

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# Myth buster

Kernow Coatings sets the record straight on five myths about printing on synthetic materials.

## Myth #1: Synthetic media is just too expensive for my print needs

Actually, printing on synthetics often has a lower total cost than printing on paper and laminating! Since you don't need to laminate synthetics for durability, on a single job customers have saved up to 150 man-hours in labour, hundreds in lamination film costs, and final pieces don't have to be replaced as often... meaning happier customers, time saved, and easily produced pieces.

## Myth #2: There's no difference in synthetics, and materials like polyester are just over-engineered

Polyester synthetic papers have the perfect balance of toughness, stability, and peace-of-mind for today's demanding digital printers. Many cheaper synthetics like BOPP, PP, Styrene and rigid vinyls are prone to distorting, cracking, and can be damaged by chemicals! In toner devices ONLY polyester is fully chemically resistant, heat tolerant, and still easy enough to use every day.

## Myth #3: My printer won't run synthetics and I've even had them melt in my machine

Chances are it's not your printer, but a poor-quality synthetic. Most dry toner printers are designed to run a wide variety

of interesting and special materials. Unfortunately, there are many cheap synthetics on the market that can melt easily and aren't designed to hold on to print. Synthetics such as KernowPrint are specifically optimised and certified to run hassle-free in today's laser, toner, and digital printers.

## Myth #4: I've asked my customers, but no one I know is currently using synthetics

Synthetics are so common in the world around us, many people forget how often they use them! Whether it's gift cards that hold up in a wallet or menus that can be put in a dishwasher, synthetics keep printed pieces secure, crisp, and long-lasting. Book covers, maps, labels, signs, documents, and IDs are just a few of the many ways customers use synthetics every day.

## Myth #5: Synthetics are full of chemicals and are not good for the environment

While it's true that some plastics contain harmful chemicals, polyester is not only environmentally friendly, but long lasting... meaning less long-term waste. Kernow specialises in synthetics that are PVC- and phthalate-free, sourced from responsible suppliers, and safe for use in applications such as deli counters and restaurant menus. •



*You get what you pay for – cheaper synthetics can distort and crack*



KERNOW COATINGS



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Print Media

Your Print Solution Specialist for EVERY print need!

#### KERNOWPRINT DRY TONER

Synthetic media that's waterproof, tear-proof, and grease proof.

Durable enough to survive hand sanitiser WITHOUT lamination.

#### KERNOWPRINT FOR HP INDIGO

Tough, tear-proof film for HP Indigo press.

Delivers versatile performance and flawless prints.

#### KERNOWPRINT METALIK

Metallic film with mirror like finish for a range of printers. Demand attention with metallised effects in Silver, Gold, Copper & Rose Gold.

**CONTACT US FOR MORE INFORMATION ABOUT KERNOW'S PRINT SOLUTIONS**

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*Check out [www.kernowcoatings.com](http://www.kernowcoatings.com) for more Print Solutions from Kernow Coatings*



## Cocoon

Cocoon from Arjowiggins Graphic will be an official partner to the HighDr'O eco-friendly cloud-seeding project which uses bacterial substances dispersed into the air to alter the microphysical processes within clouds to generate rain. Cocoon is a range of extra-white, 100% recycled FSC Recycled-certified papers made from high-quality waste office paper.

Cocoon will offer the financial support needed to continue testing and development, whilst launching a campaign to help generate awareness and visibility of the project with the aim of gaining more sponsorship.

In partnership with Antalis, the worldwide promotional campaign was launched in November to over 30 countries including the UK, France, Spain, Russia, South Africa and Middle Eastern nations. The campaign is supported through a social media campaign, as well as direct mailers and e-shots sent out to graphic designers, corporates and printers.

**Type:** 100% recycled paper

**Manufacturer:** Arjowiggins Graphic

**Distributor:** Antalis

## DGcal vinyls

A manufacturer of face films and vinyls that use water-based adhesive technology, DGcal offers materials with a low shrinkage rate and high UV resistance.

'With DGcal now focusing on growing their own brand vinyls, customers can be confident that they are buying from a tried and trusted source,' said Kieran Dallow, marketing manager for East Midlands-based distributor Innotech Digital.

Over the next 12 months, through Innotech Digital, DGcal will be announcing new additions to its range including high tack and low tack options, floor laminates and floor graphic vinyls. The range includes a selection of Air Escape vinyls with air egress technology to allow easy air flow when gently rubbing down the film, reducing time and application costs, whether on flat and smooth or on gently curved surfaces.

**Type:** Self-adhesive vinyl

**Merchant:** Innotech Digital

**Manufacturer:** DGcal



## Display textiles

Soyang Europe is seeing a substantial increase in demand for its dye sublimation and UV printable grand format fabrics and has developed new products accordingly, offering materials up to 3.2m wide.

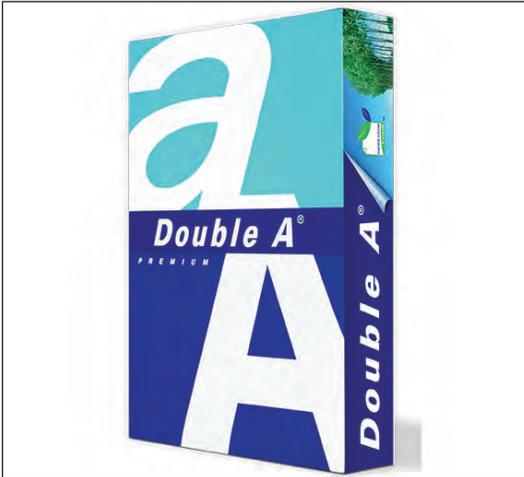
Aimed retail and exhibition graphics, Soyang's new display polyester has a dense and compact structure achieved through careful yarn selection and is printable with dye-sub and UV curable inks. The company's new black-back fabric is suited to applications that require total blackout with no rear show-through. The range features four different finishes, available in lightweight woven or even knitted structures up to 3.2m wide.

Soyang's new SoTex Backlit is designed to meet the continuing demand for oversized lightboxes in retail stores, public spaces and exhibition halls that require a premium finish.

**Type:** Dye sublimation and UV printable fabric

**Distributor:** Soyang Europe





## Double A office papers

Premier Paper Group has become a stockist of the Double A brand of office papers, which are produced and manufactured at the Alizay pulp and paper mill in Northern France.

The Double A brand of office papers includes 75, 80, 90 and 100gsm weights in A4 and A3. Double A - Business, Premium, Colorprint and Presentation are now available throughout the UK.

Double A is a premium paper known for its high quality and superior performance. Double A's high fibre content makes it the best copy paper for high-speed machines, with good runnability, printing sharpness and excellent smoothness, together with a high bright whiteness.

Its smooth surface allows for good toner transfer, making copies as sharp as the original, whilst its smoothness provides a high-quality touch providing effortless printing capabilities. Its bright white appearance provides a high print contrast and also resistance to fading.

**Type:** Inkjet copier paper

**Manufacturer:** Double A, Alizay

## Duraluxe

Duraluxe, a new powder-coated aluminium sublimation panel can be printed in full colour using most sublimation ink transfer printers and a suitable professional transfer heat press. The finished product offers anti-graffiti qualities against inks and sprays and comes with a certified minimum five-year guarantee for use outdoors. The panels are 1.2mm thick, available in various standard sizes up to 2.4m with HD imaging quality together with scratch and chemical resistance. Duraluxe also provides UV resistance for outdoor signage.

The Duraluxe panels are compatible with most recognised sublimation ink brands including Sawgrass, Jtec, Kiian, Sensient, STS and Epson.

Under its DyeSubMagic sublimation brand, TheMagicTouch has been confirmed as exclusive distributor for Duraluxe HD metal in the UK and Ireland.

**Type:** Aluminium sublimation panel

**Distributor:** TheMagicTouch



## Challenge Paul on large format substrates and hardware

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**Paul Duffy**  
Technology and Sales  
Support Specialist

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# PRO-DESIGN: now for laser and inkjet printing

Long the proven choice for professional laser printers, PRO-DESIGN is now optimised with ColorLok to offer excellent results for high-speed inkjet printing as well. The true power of design has become even more powerful.

**P**RO-DESIGN was originally designed by International Paper for use with laser printers as a top-shelf product for full colour, high-quality print applications. Taking advantage of developments in high-speed inkjet technology, the new PRO-DESIGN now provides the inkjet market with the same outstanding results that professional laser printers have depended on for a decade and a half. This optimisation thus expands options for the professional printing industry, and for desktop and office printer users too.

With this change, will the new product maintain its leading reputation for professional laser printing? No worries here. Blind tests conducted with laser equipment have demonstrated that the product performs as well as previously in laser applications.

## Vivid colours, bolder sharper blacks

The key to the PRO-DESIGN optimisation is the application of ColorLok technology, incorporated into the paper during manufacturing. When printing occurs, ColorLok interacts with the ink pigments to "lock" them at the surface.

In an inkjet printer, PRO-DESIGN with ColorLok provides more vivid colours, bolder and sharper blacks, faster drying time and reduced smearing. For laser printing, it delivers consistent sheet moisture content and surface smoothness. And the standard filler particle size reduces wear and tear on critical printer components.

There are other benefits too. They include validated surface electrical properties and improved performance to help reduce paper jams and misfeeds.

## Higher reliability

All PRO-DESIGN papers are manufactured on a single machine, ensuring perfect consistency, along with a 99.99% jam-free guarantee. The product is suitable for all finishing treatments – from stapling, perforating, folding and binding, to laminating, varnishing, sealing and embossing.

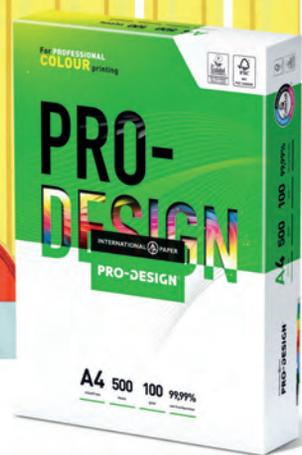
To learn more about the new PRO-DESIGN and to receive samples, please contact [prodesign@ipaper.com](mailto:prodesign@ipaper.com)

## The true power of PRO-DESIGN

- **1st choice for digital**  
Designed for professional, high-speed applications.
- **Perfect consistency**  
All papers manufactured on a single machine.
- **99.99% jam-free guarantee**  
Flawless results every time.
- **All professional applications**  
Wide range of weights and sizes. Suitable for all finishing treatments.
- **Optimum environmental performance**  
Certified by FSC and EU Ecolabel. Recyclable packaging.

Grammage (g/m <sup>2</sup> )	90	100	120	160	200	250	280	300	350
Whiteness (CIE)	168	168	168	168	168	168	168	168	168
Thickness (um)	98	109	125	158	196	250	280	300	350
Smoothness (Bendtsen)	130	140	140	140	135	100	80	75	75
Formation (Kajaani index)	110	110	110	110	110	110	110	110	110
Opacity (%)	min 92	min 95	min 95	min 96	min 98	min 98	min 98	min 99	min 99
Stiffness (m/N)	125/65	165/85	255/145	455/260	700/400	1060/640	1380/800	1500/940	2150/1300

# New PRO-DESIGN<sup>®</sup> with ColorLok



The true power of design becomes even more powerful

Long the proven choice for professional laser printing, PRO-DESIGN now offers excellent results for inkjet printers.

## E Photo papers

The E Photo range comprises four papers which offer lustre for the look and feel of traditional photographic paper, metallic for an added 'wow' factor, matt for a tactile appeal and a pyramid texture for adding a new dimension to any design.

Water and dirt-resistant, the papers are suitable for photobooks and brochures through to cookbooks and menu cards. The range has full FSC accreditation.

E Photo has been designed for HP Indigo and Xeikon digital presses but is also compatible with dry toner and laser technologies.

**Type:** Cut-sheet and roll photo paper

**Printing technology:** HP Indigo, Xeikon, dry toner, laser

**Manufacturer:** Antalis



## Extract of coffee cups

Extract is G F Smith's contribution to the challenge of recycling disposable coffee cups that are lined with plastic. In the UK, we use over seven million cups a day and less than one in 400 is recycled.

The problem is partly chemistry – the polyethylene that stops the cup getting soggy makes recycling difficult. The special process to separate the plastic from the paper waste is expensive. So, G F Smith is partnering with CupCycling by James Cropper to offer a solution by design.

Ninety per cent of the waste is converted back into FSC certified paper fibre. The remaining 10% of waste, which is plastic, will become something else entirely, in a zero-waste process.

Extract is available in 10 colours, all inspired and drawn directly from nature.

**Type:** Recycled paper from disposable cups

**Merchant:** G F Smith

**Manufacturer:** James Cropper



### Kinetix magnetic media

Kinetix is a tried-and-tested range of magnetic materials that works on Latex, UV, Eco Solvent and Solvent machines, provided they have a non-ferrous media transport path.

Kinetix is ideal for applications where the requirement to quickly change graphics in house without the need for specialist installers. Applications where this is especially relevant include retail displays and wall graphics, fridge graphics, vehicle signage and displays, office environments, hotels and reception areas.

The Kinetix Magnetic range is a high quality wide format media offering that includes Magnetic and Ferrous Sheets as well as Self-adhesive vinyl magnet, Textile Ferrous material and car magnet material. With a woven textile/canvas appearance, the Kinetix Ferrous Sheet Textile looks and feels like a high quality wallpaper, but without any of the mess, and can be removed or changed according to season, sale products and promotions.

**Type:** Magnetic Media

**Distributor:** Innotech Digital

### Natura Media

InkTec has secured an exclusive UK distribution partnership with South Korea-based manufacturer of digital printing media Natura Media. The range includes Flat Dot, which uses micro dots to create air channels to ensure easy application without bubbles and removal without residue, and Easy-Tex, which can be installed on almost any surface and removed/reused multiple times without leaving any residue or losing adhesion.

The full range covers banner, backlit, canvas and photo paper; window film, adhesive and speciality and UV.

'Natura are a natural fit with InkTec in terms of cultures, business approach and product ranges,' commented Peter Davidson, senior business development manager at InkTec. 'We are very much looking forward to broadening awareness of their fantastic product range.'

**Type:** various wide-format

**Merchant:** InkTec

**Manufacturer:** Natura Media



**Sham Ahmed**  
Digital Sales Manager

## Challenge Sham on digital printing and product innovation

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### Polymeric P Series

Following from the launch of its M series GrafiPrint monomeric media range, Grafityp has brought out another new core product range: the all-new Polymeric P Series.

The new film is tested and manufactured at Grafityp's production plant in Belgium to ensure it conforms to the latest REACH standards. The seven-year polymeric printing vinyl is initially available in 762, 1370 and 1525mm widths, with a material thickness of 75 microns.

The GrafiPrint range comprises: P20P – a clear gloss polymeric material; P22P – a white gloss media with clear glue; P23P – a white matt media with clear glue; P24 – a white gloss media with grey glue for increased opacity; and P26P – a white gloss media with grey air escape glue for easy application and greater opacity.

**Type:** Polymeric printing vinyl

**Distributor:** Grafityp

### PowerCoat Alive

Adding mobile interactivity to print, PowerCoat Alive allows customers to connect and engage with brands in new ways through the use of creative papers and smartphones.

A sheet of PowerCoat Alive comprises three layers of paper – two layers of conventional creative paper between which a layer of PowerCoat Alive with a pre-printed RFID circuitry and silicon chip is inserted. The three sheets are then laminated to create a sheet of connected PowerCoat Alive. The result is an NFC-ready paper that can be linked directly to a web page on any NFC-enabled device.

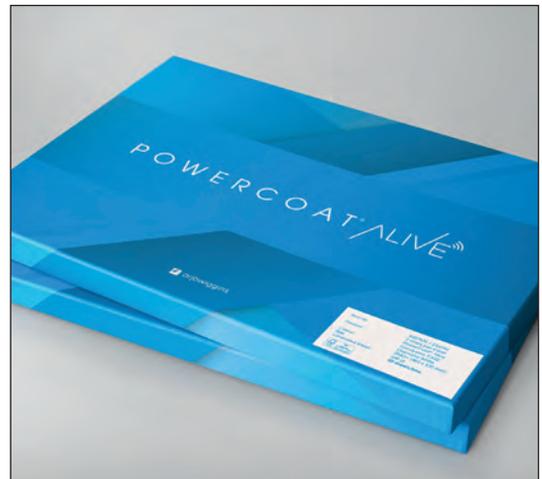
PowerCoat Alive can be printed, finished and handled as any other paper. This enables any printed materials such as magazine adverts, packaging and labels to be interactive and deliver additional content such as special offers and product information. Businesses using the paper can obtain data via a dedicated analytics platform to measure the impact of their campaigns and better understand customer behaviour.

**Type:** Paper

**Type:** NFC technology paper

**Manufacturer:** Arjowiggins

**Merchant:** Antalis



## Pro-Design inkjet

The most recent addition to the Pro-Design range from International Paper has been optimised to work with high-speed inkjet printers.

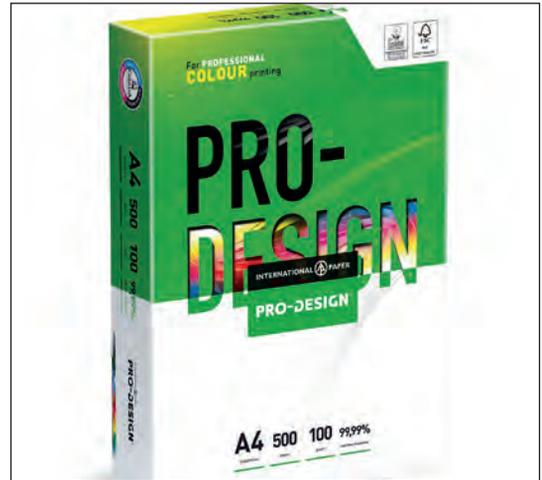
A key update is the application of ColorLok technology, incorporated into the paper during manufacturing. When printing occurs, ColorLok interacts with the ink pigments to 'lock' them at the surface. In an inkjet printer, Pro-Design with ColorLok is said to provide more vivid colours, bolder sharper blacks, faster drying time and reduced smearing. Due to its smooth surface, it is best suited to sheet-fed machines, such as the Océ VarioPrint i300 or Xerox inkjet models.

All Pro-Design papers are manufactured on a single machine for consistency and to offer a 99.99% jam-free guarantee. Available in A4, A3, SRA3, SRA2, folio sheets and reels, the paper is suitable for all finishing treatments, from stapling, perforating, folding and binding, to laminating, varnishing, sealing and embossing.

**Type:** Cut-sheet and reel paper

**Printing technology:** High-speed inkjet

**Manufacturer:** International Paper



## Scodix Cast&Cure

Cast&Cure is the latest addition to the Scodix portfolio of applications, designed to make 3D holographic effects more accessible to brands and provide another differentiator for printers looking for a competitive edge.

The Cast&Cure process works by inkjetting the clear polymer directly onto the sheet before passing through a foiling unit which leaves a micro-embossed pattern on the polymer, creating holographic effects by refracting light. Employing a variety of standard off-the-shelf holographic patterns, as well as customised designs, the application can be used to enhance and add security features to brochures, packaging, displays, book covers, greeting cards, and bags.

**Type:** 3D holographic polymer

**Manufacturer:** Scodix

## Challenge Paul on large format substrates and hardware

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**Paul Duffy**  
Technology and Sales  
Support Specialist

antalis <sup>EM</sup>  
Just ask Antalis



## Shimmerdisc

Shimmerdisc has used new printing and product technology to create a 170,000-sequin display for Nando's in Soho. It runs around the top fascia of the restaurant, spanning over 30 metres using 170,000 sequins printed on an Agfa Anapurna wide-format UV printer. Shimmerdisc produces HD photographic quality displays. For the Nando's display, each module was reverse printed and optically clear to produce a finished effect that looks almost 3D and allows movement.

'With so many moving parts the display is constantly changing – almost LED and at night with the illuminated signage and street lighting the effect is simply stunning,' commented Andrew Ainge, founder and inventor of Shimmerdisc. 'Our displays are ordered in 200 x 200mm modules with 225 printed 13mm discs per module – scalable to any size from 1 square metre to billboard size and can be custom printed – plain or reflective.'

**Type:** Wide format display

**Printing technology:** UV

**Manufacturer:** Shimmerdisc

## SpotOn White M50

The SpotOn range of printable adhesive films from Drytac now includes SpotOn White M50 which offers increased opacity.

SpotOn White M50's light blocking properties make it up to 50% more opaque than the standard SpotOn White product, according to Drytac. The latest introduction to the company's product line is a 100-micron printable white matte monomeric PVC film, coated on one side with Drytac's dot-patterned removable pressure-sensitive polyacrylate adhesive. The adhesive is protected by a single-sided Kraft release liner. The new film was 'developed in response to customer demand for an easy-to-apply printable film with greater opacity,' explained Steve Broad, sales director for Drytac Europe.

The film is suitable for short-term indoor wall and window applications. It can also be repositioned and cleanly removed within 12 months of initial installation.

**Type:** Self-adhesive PVC film

**Merchant:** Antalis

**Manufacturer:** Drytac





## Sublimis and Alterra

Two new backlit textiles for direct and transfer sublimation printing are available from the Decoprint range.

The first of the new releases is the Sublimis, a coated woven polyester for direct and transfer sublimation printing. It is non-stick, lightweight and offers light diffusion suitable for lightbox displays.

Suitable for indoor backlit displays, Alterra is an eco-friendly backlit fabric woven with recycled fibres. 'Not only does it incorporate 65% recycled fibres into the manufacturing process, it is PVC-free and suitable for more eco-friendly ink types such as UV and latex,' confirmed Andrew Simmons, Soyang Europe's sales director.

Both Sublimis and Alterra are available from stock on next day delivery from Soyang Europe's distribution centre.

**Type:** Backlit display textiles

**Printing technology:** Direct and transfer sublimation

**Distributor:** Soyang Europe

## Textiles for HP Latex

A new range of HP Latex-certified textiles is available from Soyang Europe. The range comprises a variety of products, including Supernova knitted backlit, DigiFascination lightweight woven fabric, DigiPanorama 250g display fabric and the lightweight DigiCompetition display fabric. All the new fabrics pass ISO 105-X12 test for dry rubbing, ensuring that the prints are vibrant and sharp as well as being sufficiently robust for soft signage applications.

'HP and Aurich have worked jointly to optimise this range of fabrics in order to achieve the best latex ink adhesion and thanks to the unique finishing agent, print companies with the latest generation HP Latex printers will see significant benefits,' stated Soyang Europe managing director, Mark Mashiter.

**Type:** Soft signage textile

**Printing technology:** HP Latex

**Manufacturer:** Aurich Textilien

**Distributor:** Soyang Europe



## Challenge Sham on digital printing and product innovation

We'll solve your print challenges.  
Get in touch today.

[antalis.co.uk/challenge3](http://antalis.co.uk/challenge3)

**Sham Ahmed**  
Digital Sales Manager

antalis <sup>EM</sup>  
Just ask Antalis

# DENMAUR DIGITAL

Denmaur Independent Papers has been supplying paper into the UK commercial print and publishing market since 1983.

As a growing stockist merchant we provide competitive, innovative and highly sustainable paper solutions for next day delivery throughout the UK - and this includes a comprehensive range of coated and uncoated stock grades to meet the latest requirements for digital print technology.

Our digital stock grades, held in both ream and bulk pallet. Samples, dummies and trial sheets are available from us on request.

	TYPE OF PAPER	GSM	Certified		Compatible		Sustainability*
			HP	LASER	HP	LASER	FSC®
Arctic Matt	Coated	80-250	✓	✓			✓
Arctic Volume White	Coated	90-300	✓	✓			✓
Amadeus primo digi Gloss	Coated	115-350	✓	✓			✓
Amadeus primo digi Silk	Coated	115-350	✓	✓			✓
Titan Silk	Coated	90-350	✓	✓			✓
Titan Gloss	Coated	90-350	✓	✓			✓
Ensocoat 2 Sided	Graphic Board	220-500	✓	✓			✓
Performa Brilliance	Graphic Board	180-400			✓	✓	✓
Innovation Digital	Premium Offset	100-350	✓	✓			✓
Revive 100 Silk	Recycled Coated	100-350				✓	✓
Revive 100 Offset	Recycled Offset	80-350			✓	✓	✓
Fixter	Self Adhesive Label	80			✓	✓	✓
Explorer	Offset	80-120			✓	✓	✓
Explorer Preprint	Preprint Offset	80-110	✓	✓			✓
Explorer Cut Size	Cut Size Office	80-110	✓	✓			✓
UPM Fine	Offset	60-350			✓	✓	✓
UPM Fine SC	Premium Offset	100-250			✓	✓	✓
Colorit	Tinted Office & Cut Size	80-270			✓	✓	✓
Fabrizio Smooth White	Premium Offset	100-400			✓	✓	✓

\* all above grades can be Carbon Balanced upon request

## Warehouse and Distribution

It's all about providing the paper you want, when you want.

**Our state-of-the-art warehousing facility in Central England is equipped to service the immediate requirements of today's commercial print market; and our fleet of Euro 6 rated vehicles ensures an efficient next day delivery service.**

- ✓ 20,000 tonnes of stock
- ✓ Wide ranges held in depth
- ✓ Press specific sizes for digital such as 530x750
- ✓ Next day UK delivery
- ✓ Denmaur is ISO9001, ISO14001, BRC and Carbon Balanced certified



## Services

**Our professional customer support teams are at hand to provide you with a range of value added services – free of charge, of course!**

- ✓ Samples and Dummies
- ✓ Paper Health Check Audit
- ✓ Environmental Profiles, Reports and Statements
- ✓ Paper Management and Usage Reporting
- ✓ Bespoke MIS Reports



## CASE STUDY

### Innovation Digital

**Innovation Digital is a ground-breaking paper exclusive to Denmaur in the UK, and the result of close development with the manufacturer to create an ultra-white smooth uncoated paper HP Indigo certified.**

- ✓ No need for sapphire treatment
- ✓ HP certified
- ✓ 70-400gsm
- ✓ Matching folio and digital availability
- ✓ FSC certified and available Carbon Balanced via The World Land Trust Carbon Balanced Paper Scheme.



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Bardon 01530 275500  
Bristol 01173 320863

Leeds 01132 515127  
St Albans 01727 738750  
Sittingbourne 01795 426775

  
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# Ask the experts

We asked three merchants to update us on product and service developments in 2017. Their responses show that innovation, new and extended products and value-added services are still important to quality suppliers.

## What services do you offer?

**Chris Bosworth, sales director, Swanline Paper & Board:**

Swanline Paper and Board (SPB) is a rapid turnaround stockist and converter of multiple substrates encompassing paper, board, plastics and self-adhesives.

**Pari Blackbeard, head of marketing & promotion, Fedrigoni:**

Century Soho Digital Starter Kit, which contains a variety speciality products suitable for Digital Printing in A3 format. Very useful for testing papers on dry-toner digital printing presses. Next day delivery on all products from UK stock. Samples and perfect bound dummy service. Dedicated and informed inside sales team accessible: 9am–5:30pm, Mon–Fri.

**Katie Farr, head of marketing for print and visual communications, Antalis:**

Antalis is the leading paper, packaging and visual communications merchant in Europe. The group employs 5,800 people serving over 123,000 clients, companies and printers, in 43 countries via their 107 distribution centres. Antalis carries out 14,000 deliveries each day in the world.

## How can printers work with you to get the best out of your products?

**Chris Bosworth:** We are more than 'stockist merchants'; we are problem solvers and innovators who look at things through experienced, yet up-to-the-minute eyes. As part of the Swanline Print Group, SPB has such a powerful overall proposition that we are offered leading-edge products by new



**Katie Farr, head of marketing for print and visual communications, Antalis**

and existing suppliers ahead of our competitors. When working with SPB, printers benefit from these advantages and are assured of an exceptional service that extends beyond a buying and selling relationship.

**Pari Blackbeard:** Fedrigoni have a dedicated sales team who are on hand to visit printers with our sample books to discuss the many products on offer and to advice on the most suitable for the printer's requirement.

## How can printers make the best use of the services that you offer?

**Chris Bosworth:** As well as coming to us for their regular, standard requirements, printers can talk to us about innovations and switching to environmentally sound products at no commercial

uplift. We have extensive knowledge of substrates, all print processes, design and finishing – printers should utilise our expertise so that we can deliver solutions and services that bring multiple enhanced benefits to their business.

**Pari Blackbeard:** Utilise our very knowledgeable sales teams and or visit our London Imaginative Papers Studio to view many inspiring printed samples on display. The studio also hosts many industry events and seminars where printers can not only learn more about Fedrigoni products, but also network with designers and printers alike.

## Are there any services that you offer that you think are under utilised?

**Chris Bosworth:** Introducing environmentally sound alternatives at no extra cost is a key element in a lot of clients'

thinking right now. Often, we substitute an environmentally sound but totally different generic product into the same space with the same or better performance but commercial savings along with 'green' credentials.

**Pari Blackbeard:** The Imaginative Papers Studio as a base for printers (Especially those out of London) who can use the office facilities to grab a coffee, use the WIFI, meet with clients and have a base to catch up between their client visits – free of charge.

### Have you launched any additional products or services to your customers during 2017?

**Chris Bosworth:** Our unique product, Cygnus Outdoor Display Board – a fibre-based board suitable for both external and internal applications. It combines strong environmental credentials with water resistance lasting up to 15 weeks and offers a revolutionary solution to retailers and those operating in other sectors requiring outdoor signage, such as leisure, construction and horticulture. Developed under SPB's Cygnus brand of packaging and display products, Cygnus Outdoor Display contains up to 60% recycled fibre, is FSC certified and is 100% recyclable. Its innovative 100% paper fibre composition enables an unrivalled resistance to moisture, even compared to less ecologically sound polyethylene (PE) coated alternatives.

**Pari Blackbeard:** A new Century Soho Digital Swatch, Specially designed for advanced functionalities such as special metallics, white ink and more, CSD replaces the former Xerography (CSX) swatch and includes a wider selection of finishes, formats, weights and colours.

**Katie Farr:** We recently introduced PowerCoat Alive to the market, a paper range featuring NFC (Near Field Communication) technology which works in conjunction with smartphones and other devices to showcase a programmed web-link, capturing useful marketing data in the process for brands and advertisers. Set to revolutionise the market, this is a brilliant example of multi-channel communication at its best – truly bridging the gap between printed and online communication in a way which far surpasses what QR codes have done in the past.

Another major hit this year has been our Arjowiggins Digital range – a vibrant, colourful range of papers which has been specially adapted for digital printing, be it the special ready-to-use digital sheet formats, for a number of toner presses – while delivering exceptional results. In this way, for us it's about helping customers to evolve and expand their business amid the changing landscape and embrace new technologies

in order to gain a competitive edge and enter new markets.

### Do you offer any unique services?

**Chris Bosworth:** The closed loop supply chain incorporating Swanline Print; Swanline Paper and Board and Corboard UK. Corboard was established in 2014 by a consortium of prominent corrugated sheet plants to supply quality corrugated materials for their own manufacturing purposes.



**Chris Bosworth, sales director, Swanline Paper & Board**

**Pari Blackbeard:** It's not just about providing customers with access to a leading product portfolio; we also couple this with the expertise and learning needed to unlock the full benefits to be had by it. This is seen in our recently launched 'Challenge Antalis' initiative which invites customers to put their challenges forward to the Antalis team who will use their knowledge and expertise to find the best solutions.

**Katie Farr:** Our Digital Academy provides the ultimate resource for customers across the spectrum who are looking to invest in digital print, expand their business portfolio or maximise the potential of their digital print machinery.

Based at the Antalis head office in Leicestershire, it's a unique facility equipped with the latest digital kit, enabling live demonstrations and real-life application case studies. Delivering 70 workshops across the UK and Ireland, each year we welcome hundreds of printing professionals into our specialist sessions which include courses on vehicle wrapping, colour management, laminating and much more. •

# Inspiration and Innovation in 2018

As we look to the New Year ahead, the winners will be the ones who stay ahead of the innovation curve in order to create stand-out and meet their customers' evolving requirements, says James Jarvis, channel director for print, Antalis UK.

**W**ith this in mind, here are our top four 'ones to watch' in 2018:

## Bridging the gap between print and digital

While high volume prints may be down, the good news is that the demand for premium, creative and custom designs are on the up as marketers rethink the value of print as a way to create cut-through.

Here, we are likely to see the gap between printed and online

formats closing in favour of multi-channel communication.

A good example of this is our recently introduced PowerCoat Alive, a paper range which features NFC (Near Field Communication) technology and works in conjunction with smartphones and other devices to showcase a programmed web-link; the result is a true physical-to-digital connection.

## Carbonless paper

Although very much a traditional product, there will always be a large market for carbonless paper, it being the favoured product where a duplicate copy of an original document is



**Multi-channel communications link the printed and digital worlds in compelling ways**



***Powercoat Live is near-field communication (NFC)-enabled paper range from Antalis***

required, such as contracts, invoices and receipts. A good recommendation here is the reacto range, as available from Antalis, which is incredibly easy to print and handle.

### **A creative overhaul**

Creativity will remain king. After all, as print jobs are generally getting shorter, customers are now able to afford better quality materials and are therefore increasingly leaning towards creative concepts as a way to create a tangible brand experience.

With this in mind, 2018 will see a complete overhaul and modernisation of our flagship Arjowiggins' creative papers range. Although we can't disclose details at this stage, what we can say is that the re-engineered range, constituting the biggest range refresh of its kind, will see a number of introductions designed to bring even more creative possibilities for our customers.

### **Perfecting personalisation**

The boom in demand for personalised print products shows no signs of abating as our customers seek to create a sense of 'uniqueness' to delight and surprise their customers. This has been met with a range of digital printing presses that



***James Jarvis, channel director for print, Antalis***

allow for short-runs on a wide range of products, such as photo albums, books and canvases, through to customised marketing communications and more. The result is a perfect new revenue avenue for the printer in the know. •

**For further information please visit [www.antalis.co.uk](http://www.antalis.co.uk)**

# Taking the power back

The 2017 Power of Print seminar held at Stationers' Hall in London on 24 October covered topics such as print's role in building brand impact and trust, and its value in an increasingly digital world.

Charles Jarrold, CEO of the BPIF opened proceedings at the gloriously heraldic Stationers' Hall on a pragmatic note: 'We spend our time on different things [now] and print has had to adapt to that,' he told the packed audience. How has it done this? Well in part by standing up to the competition by offering something traditional, tangible and worthy of gifting – 'You don't give e-books; you give books,' noted Mr Jarrold, and by maintaining its standards. Print will become increasingly personalised and varied, with shorter lead times decreasing quantities, he predicted. 'Getting really great print to the right people' is the objective, surmised Mr Jarrold, assuring the assembly that the print industry is in a 'robust and reliable place.'

On that positive note it was over to Dave Birss, "chief thinker" at Right Thinking, who offered some interesting suggestions for maintaining and boosting one's creativity. 'You need to release people from their desks,' he stated, holding up a model brain to illustrate how it decreases in size from under-use. A typical office environment is detrimental to creativity as it keeps the brain in an "elevated state" – what it needs is a relaxed state more conducive to the alpha waves that stimulate creativity, explained Mr Birss, who recommended a sauna, the Seychelles, or somewhere equally non-corporate...

'Disruption is not something you aim for,' he continued, demonising the notification-happy Apple Watch. 'Technology is giving us a to-do list that never ends.' It's also stealthily taking away our ability to memorise phone numbers, navigate without GPS and do mental arithmetic. Mr Birss made his point more emphatically by bashing away at a smartphone and an iMac with a hammer. Whether it's actually feasible to replace a planning meeting with a yoga class or a run in the park is debatable, but we should still aim to ditch the tech every once in a while and leave the "doing" to the machines in order to take back the "thinking" for ourselves.

## Reading the signs

'I love print', announced William Sitwell, editorial director at John Brown Media, but it must be employed strategically to

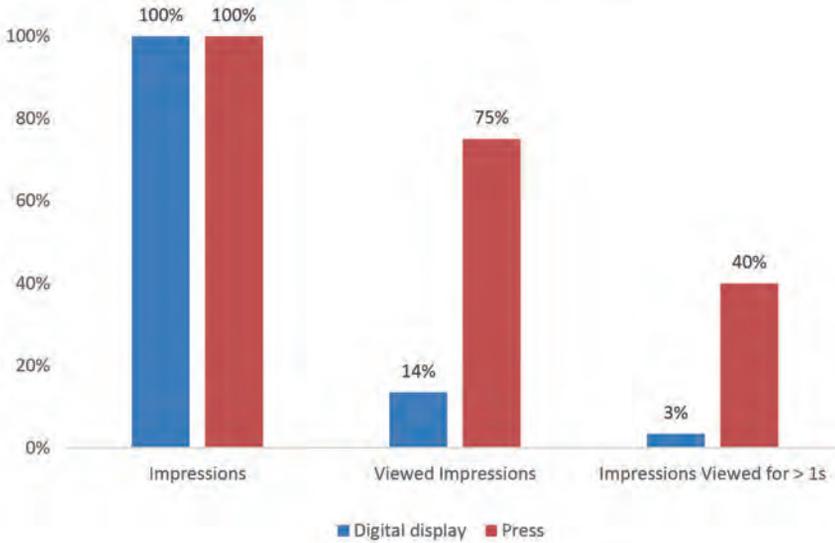


**Abba Newberry shared data from the world's largest eye-tracking panel**

be effective, he qualified. 'Print is not just there for the sake of print' – in any campaign, it must be part of the overall creative strategy, and process of amplification, he explained, in conjunction with digital. Used well – 'the products need to be right', with 'considered design' – print can be an incredibly powerful tool, as shown from the fact that *Waitrose Food* readers spend five times more at the store than non-readers. 'All supermarkets we talk to want a magazine,' revealed Mr Sitwell. 'Print is alive and well at the forefront of marketing.'

Abba Newberry, marketing director at Lumen Research, examined the digital/print crossover in greater detail, noting that 'engaged print readers tend to be very high online users', who will seek reputed sources and spend more time on the pages they scroll through, according to sophisticated eye-tracking technology. Average dwell time with print advertising is 2.2 seconds compared to 0.9 for digital advertising, the Lumen Research data showed.

## Viewing rates- Digital vs. Press



**Data from Lumen Research suggests that printed ads are noticed more and viewed for longer than digital alternatives**

'Print is overwhelmingly more successful at capturing attention,' emphasised Ms Newberry, citing 75% of printed adverts seen vs 14% of their digital equivalent, but there are 'attention slots' (such as Christmas) when customers will be more receptive, so 'sell on those', she advised. And 'be obsessive about your data,' she urged, in order to better understand – and target – your audience.

### Added value

Seirian Hanner, insight lead at Royal Mail MarketReach again branded digital "disruptive", but made the point that a response to direct mail is often digital: e.g. making an online purchase as a result of a coupon, or visiting a banking website after receiving a statement in the post. However, unlike the ubiquitous email, printed mail tends to be retained; 'it elicits attention', maintained Ms Hanner.

The final presentation that *Digital Printer* attended was given by Dino Myers-Lampthey, managing director at MullenLowe

Mediahub, who examined the value of print in an increasingly digital world. 'The future still needs the human touch', he proclaimed. 'Consumers want personalisation, as long as it's not too creepy.' Print encourages – and deserves – better judgement calls than those produced by a bunch of algorithms; print is better at editing, accountability and judgement, Mr Myers-Lampthey explained. And its audience is more focused; you rarely see anyone walk into a lamppost whilst reading a magazine... Tesco returned to print and its publication is now an established bestseller in the UK, continued Mr Myers-Lampthey; 'brands need to hear these stories!' Print is essentially more effective than digital and 'is becoming more effective over time', he concluded. •



**Dave Birss gleefully destroyed "smart" technology devices during his presentation**

# Europoint On Track

Since its launch onto the UK market just over two and a half years ago, Europoint has been carefully and steadily carving itself a position as a well-respected plastics specialist, delivering to digital printers and sign makers up and down the UK.

**O**wned by Vink UK Limited – a member of the Plastics Family, one of the largest independent plastics businesses in the world – Europoint can source the widest range of print, sign and plastics materials from the world's foremost suppliers.

## Bringing quality and choice to digital printers

Quality and choice are important criteria for Europoint when sourcing products for its digital print customers. Its range of rigid sheets and printable roll media from leading brands – including Orafol, dtec, Foamalux, Avery Dennison, Neschen and Skybond – is tailored to meet the needs of digital printers looking to create a comprehensive portfolio of products and services for their customers.

Europoint understands the pressures facing its customers to keep up to date with new trends and opportunities. For example, innovations in printable media for point of purchase/sale have opened up new opportunities for many digital printers, and for their retail customers. Easy to apply vinyls for walls, windows and floors, for example, are a key aspect of many digital printers' portfolios, and increasingly in demand from retailers because they can often be applied in-house by their own staff.

The print roll media range from Neschen includes EasyDot Chalk Board, a printable chalkboard film that can be written on with standard or liquid chalk – perfect for food retailers; EasyDot Transparent can be reverse printed for inside-mounted window advertising, while highly opaque, matt white EasyDot WhiteOut is perfect for preventing backgrounds



***Europoint offers a wide range of roll media for a variety of applications***

shining through; and award-winning Print & Walk is a unique floor graphics film that requires no lamination.

Europoint's own-brand dtec range includes a REACH and RoHS compliant soft-PVC film, dtec Digital Print Floor Media, which is perfect for short-term application on smooth floors. And for internal hanging signage, POS dtec PET Portable Display Material is ideal as both sides can be printed on.

Its range of rigid media includes products suitable for print and fabrication, including Skybond aluminium composite sheet, Foamalux foam PVC sheet, and Euroflute polypropylene sheet. These enable digital printers to offer a wide variety of high quality permanent and temporary applications ranging from indoor and outdoor signage to point of sale/purchase, and displays and exhibitions.

## Cutting Edge Conversion

Europoint's extensive cutting and conversion service helps its customers to get maximum yield from its products. And for when the pressure is on, a next-day conversion service is

available. The company's conversion teams have a wealth of technical expertise in clean and precise cutting, and slitting and rewinding. For example, when size and precision matters, the Cauhe Guillotine can convert sheets up to 3.6m of large format PVC, Vinyls and 1mil PETg, all without a trace of swarf.

### Clean and careful delivery

When a customer takes delivery of a product, Europoint understands that they expect it to arrive in perfect condition, free from static and ready to print. From a product's arrival into one of the company's three warehouses – in Glasgow, Manchester and Northampton – until it is delivered to the customer, Europoint takes every aspect of the product's handling very seriously. Great care is taken to ensure products remain pristine throughout the process, from picking and packing through to loading onto one of the company's own delivery vehicles.

### How a vehicle wrapping enquiry led to sponsorship

British Superbike rider Shaun Winfield has a van that really stands out from the rest. It's wrapped in Roaring Thunder from the Avery Supreme Wrapping Film ColorFlow series. Shaun, who rides for the Anvil Hire Tag Yamaha team, approached Europoint to ask if they would work with him to wrap the van that he uses to transport his bike throughout the MCE British Superbike season. Europoint agreed and was supported by customer Reade Signs in Aldershot to wrap the van.

Europoint will be continuing to support Shaun through the 2018 British Superbike Season.



**Three warehouses cover distribution across the UK**

### Supporting local causes

Each of Europoint's three centres works to support causes that are meaningful to their local community. The Glasgow centre has supported customer Signpost to provide vinyl for logos

for Red Crosses, lifebuoys, and signage throughout the MV Forth Hope medical vessel that delivers medical care to Peru, while the Manchester centre provided Orajet 3628 Gloss White Wall Art and Basik Textured Laminate to a local customer who used the materials to produce mouse mats to raise funds for the "We Love Manchester" emergency fund.

To find out more about Europoint, its products, and the activities it supports, a visit to [www.europoint.co](http://www.europoint.co) will reveal a wealth of information. And if you're looking for a supplier who really understands client requirements then give Europoint a call now at one of their three centres. Northampton 01604 494115, Manchester 0161 876 4050 or Glasgow 01698 843400. •



**Man with a van (and a bike) Shaun Winfield**

# Adding value and creativity to digital print

Shorter print runs for premium quality, personalised, functional items that create high visual impact? Ashgrove can help

Here at Ashgrove, the UK's innovative digital print materials and added-value equipment specialist, we are passionate and enthused about the future of digital print. We believe that short runs are here to stay, and that in today's digital age items are printed because of the need to make a visual impact in a way that only print can.

Ashgrove is a friendly, family-run business established in 1998. Our product range for digital print rooms and marketing departments across the UK is continuing to grow and evolve, always with the goal of enabling our clients to produce more versatile and more attractive printed goods more easily with the quickest possible turnaround; meanwhile giving them a needed and valued level of personal interest, advice, service and care that is unmatched within our industry.

Our range includes specialist printable materials such as Ultra digitally printable metallic boards, Picofilm digital tear-proof polyesters for outdoor use, Mastertac digital adhesive stocks, as well as innovative equipment such as F-mark digital short-run die-cutter, FT12 desktop digital foiler, and the Neptune B3 fully auto laminator/foiler.

Our mission is to be the UK's most recognised and loved supplier of innovative products and solutions for digital production printing and finishing; contact us today to find out how we can work together to add creativity and profitability!

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# Shedding the stigma

Recycled papers are moving up the agenda with mills and merchants, losing the 'second-best' label and delivering an increasingly strong sustainability impact, finds *Vince Collins*

The recycled debate in the printing industry has been with us for many years now. When is it right to use recycled papers and boards and what are the benefits? It's no longer good enough to tick the "green" box to satisfy our customers' customers. There have to be good reasons why the recycled route is followed. Opinions on the subject are many and varied.

*Digital Printer* asked two industry experts, both committed to recycling within the paper industry, for their views. We spoke to Ernst Brunbauer, general manager at Lenzing Papier in Austria, one of the leading manufacturers of uncoated recycled papers in the world. We also sought the opinion of Matthew Botfield, corporate social responsibility manager at Antalis, one of the UK's major paper merchants. Mr Brunbauer has long been a passionate advocate for recycled papers. Lenzing Papier specialises in the manufacture of high-speed inkjet papers. The papers are

used in both transactional and promotional applications. He comments, "From an environmental standpoint there are a number or reasons why recycled products should be considered over virgin fibres, mainly due to lower consumption of resources. This is particularly true when you consider the use of raw materials and energy. In addition, there are papers available in the market now which perform competitively against virgin fibre products. Recycled papers now boast high whiteness and good runability. There are far fewer dirt specks within the product, due to improved production techniques. The finished product imparts a quality appearance."

He continues, "Quite simply, good paper requires good fibres. Our high standards are achieved by careful selection of waste papers, deinked in specialised production lines. All our products are manufactured from 100% post-consumer waste. As a result of this careful and painstaking selection process, Lenzing Papier's products are renowned for their low ink consumption. This is an important factor, as ink is usually the most expensive element in the value chain. Therefore, low ink consumption at a given colour density can help the printer to save money. Printing speed is an important factor too. Lenzing Papier's products consistently run at high speeds, which give additional cost benefits."

Mr Brunbauer is keen to expand on Lenzing Papier's particular strengths in this area. "Recycled mills are not



**Ernst Brunbauer, general manager at Lenzing Papier, Austria: integrating recycling with the pulp mill**



**Matthew Botfield, corporate and social responsibility manager at Antalis: using recycled only increases costs by 2 – 3%**

# Better the second time around?

Lenzing Papier continues to refine and develop its recycling production techniques.

Lenzing Papier is an independent paper mill situated in the Austrian lake district, between Linz and Salzburg. Lenzing Papier is one of the leading manufacturers of recycled papers and has been making paper for over 100 years.

The mill was founded in 1892. It currently produces over 85,000 tonnes of paper a year and employs over 160 people. Some of these people are fourth and fifth generation staff.

The mill specialises in products in a number of areas – uncoated recycled offset papers; recycled copier paper; envelope paper; and flexible packaging and specialities, particularly in self-adhesive markets.

for landfill. All solid waste is either used in other production processes or is burnt in the waste-to-energy plant, providing power for the paper mill.

The manner in which Lenzing Papier deinks its pulp a crucial element of the recycling process. Deinking is usually achieved by using a flotation system in combination with air and enzymes to separate the ink from the paper fibre. Lenzing Papier's technicians have developed a process using enzymes instead of standard chemicals. This process has proved to be both effective and gentle. None of the mill waste ends up in landfill sites. The waste products generated are re-used as much as possible. At the end of the process any remaining substances are taken care of in an extremely efficient

incinerator plant. The energy created in the incineration plant is returned to the manufacturing process and utilised by the mill.

Lenzing Papier's expertise and attention to enables the company to manufacture products which match and, in many cases, exceed performance levels of similar virgin fibre papers.

Whilst the mill produces a considerable amount of paper for its domestic market, it has always concentrated on developing and expanding its export markets. Germany is its strongest export area, whilst

European sales are strong and the mill has a significant and increasing business in the United Kingdom and also Ireland.

Lenzing Papier's products are distributed in the UK by Denmaur Independent Papers, Elliott Baxter and Premier Paper Group.

**For more information please contact Lenzing Papier's UK agent, Papico on 01977 605360.**



## ***PM1 at Lenzing Papier***

Lenzing Papier is genuinely different. The staff take great pride in their tagline "Simply sustainable". All their actions and decisions are made with a conscious effort to preserve the local environment. There is a strong ethic of continuing progress and improvement within the manufacturing process.

Producing some of the finest uncoated recycled papers, Lenzing Papier is also very sensitive to the environment around the mill ensuring that no waste leaves the paper mill

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***Lakeside: living near Austria's Lake Attersee, Lenzing Papier's staff have a direct interest in the local environment***

normally integrated with a pulp mill. We are in a unique position as our mill is integrated with a deinking plant and a pulp mill. There are two categories of recycled paper producers: the ones like Lenzing Papier, who operate their own waste paper facility and deinking plant, and the ones who buy deinked pulp on the market. Making the deinked pulp in-house gives us a significant advantage in terms of reduced carbon emissions, because there's no need to dry the deinked fibres for transportation and shelf-life, as it's made and used simultaneously. The fibres are made-to-measure for the paper machine, giving a consistent output. Our manufacturing site also produces a dissolving pulp grade, which is used to make textile fibres. We use this energy, which is generated as a side product of making the dissolving pulp. The carbon footprint is very low because the energy is from renewable sources.'

### Great lake

Lenzing Papier's impact on the local environment is also a high priority for Mr Brunbauer – the mill is situated on the edge of Lake Attersee, in the Austrian Salzkammergut, an area of breathtaking natural beauty. He explains why he has such a passion about the mill's environmental performance, 'I, and most of the mill's employees, live in the immediate vicinity of the mill, close to Lake Attersee. We swim in the lake. We sail on the lake. We fish in the lake. We take a great pride in the natural beauty that surrounds us. Water is taken from the lake's outflow for our manufacturing processes. We then clean it carefully and return it to the lake. It's in the interests of all of us

to protect our beautiful local environment.'

Matthew Botfield, Corporate Social Responsibility Manager at Antalis, is equally passionate about recycled products. He comments, 'While corporate social responsibility (CSR) was once regarded as a nice-to-have "tick in a box", it is now a vital part of the commercial mix – particularly when it comes to going green.

'One of the main reasons for this is the rise of more 'conscious consumers' who increasingly want to deal with companies that are seen as part of the community and committed to lessening their environmental impact. And this trend is only going to continue. According to a report by global market insight specialist Nielsen, almost three quarters (72%) of millennials are willing to pay more for products and services that come from companies committed to a positive social and environmental impact.

'The immediate reaction for some customers then might be to reduce their paper count in favour of e-communications – this being widely perceived as the more environmentally friendly of the two. However, the reality is that this isn't necessarily the case.'

Mr Botfield adds, 'Many customers may be shocked to know, for example, that displaying a page for three minutes on a screen consumes more energy than producing a printed



version of that page. Perhaps, what's more alarming is that sending 20 emails a day over one year emits as much CO<sub>2</sub> as driving 1000km by car. Even an electronic invoice isn't as carbon-free as your customers may think, generating around 242g of CO<sub>2</sub>.'

### Green power

Also, it's important to point out that the paper industry is actually one of the biggest users of renewable energy, with 54% of its energy consumption coming from renewable resources. Many people consider paper to be less environmentally friendly because of worldwide deforestation, however for example in the Amazon rainforest, deforestation is actually predominantly due to livestock (79%) and the cultivation of soya beans (16%), with illegal harvesting for paper production measured at less than 1%. In reality, 70% of paper is recyclable and it can even be recycled up to seven times.

With this in mind, the recommendation is for dealers to encourage their customers to consider more environmentally friendly paper options when looking to improve their green credentials.

Mr Botfield concluded, 'The good news is that thanks to innovation in technologies, the production of greener paper options has improved tremendously, meaning they won't have to compromise on quality, performance, appearance or whiteness. Also, despite the perception that recycled papers can be more expensive, a study we recently carried out alongside EcoAct, one of the world's leading experts in carbon strategies, CSR policies and eco-innovation, found that recycled paper only increases the cost of an entire

**'Almost three quarters of millennials are willing to pay more for products and services that come from companies committed to a positive social and environmental impact.'**

communications project by between two and three per cent. Therefore, the recommendation for dealers who aren't already

doing so is to add environmentally-friendly options to their paper stock and communicate the benefits to customers. Not only will it provide a way to stand out but keep them one step ahead of the green curve.'

It's evident that both manufacturers and distributors continue to see the necessity and benefits of recycled options for printers in the United Kingdom, Ireland and many other markets. They will continue to invest money, resources and time to enhance and improve the recycled offers available. •

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This product is currently available in 80, 90 and 100gsm sheets (SRA3, B2 and B3) as well as in reel format for all major high-speed inkjet presses.

It is adaptable to many applications such as leaflets, mailings, catalogues, brochures, newsletters, invitations, posters and magazines, particularly where high quality, variable data printing is required.

### Conclusion

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# Inkjets still pose real challenges for paper

Paper compatibility is still a major factor in many printers' deliberations over sheet-fed inkjet versus other digital print technologies, says *Simon Eccles*

It's been about a decade since the introduction of commercially viable inkjet webs, so paper mills are increasingly getting to grips with their requirements, while ink chemistry is being refined to work with more standard paper grades. Primers are available where neither mill nor ink can do the job.

Inkjet is now firmly established as the main digital process for high volume printing on continuous webs of paper. The major applications are transactional, direct mail and monochrome book blocks, mostly on papers that are uncoated or only lightly treated for inkjet compatibility.

Sheet-fed inkjet presses are still only selling in small numbers and have yet to establish a particular niche of applications. They cost more than equivalent-size toner presses, so inkjet manufacturers have concentrated on B2 and larger formats that dry toner can't manage. Their marketing tends to stress working alongside B2 offset litho, to share the same finishing lines and – ideally – the same papers.

However, inkjet ink is almost always aqueous, meaning the carrier fluid is primarily water. This has a lot of advantages – it's non-toxic and dries with heat without emitting many VOCs. However, paper loves water, so if the ink absorbency isn't controlled, the image can spread and fibres will swell to give misregister and finishing problems. Conversely, if the paper has a "size" or coating that rejects water then the ink runs before it can be dried – a problem with high gloss papers.

There are four ways to control ink absorption into paper: the mill can apply an inkjet-receptive coating at the point of paper production; standard papers can be coated post-mill but pre-printing; or a primer (sometimes called a bonding agent)

can be applied by the printer before the inks, using either an overall coater or by an extra set of print heads that only spray primer under the colour ink drops; and finally the ink can be formulated with resins that reduce absorption to work with more-or-less standard papers. All these workarounds add



**Mondi partnered with Canon at drupa 2016 to show its range of papers**

costs to either the paper or the ink, reducing the commercial appeal of inkjet.

Thus HP's B2 format Indigo presses comfortably outsell all the B2 inkjets put together, partly because its well-proven ElectroInk liquid toner works with most paper grades including high gloss, a particular challenge for aqueous inks, though some papers need a primer even for ElectroInk.

## Mill grades

Paper mills can certainly make inkjet papers that perform well at high speed with aqueous inkjets. Mitsubishi HiTec Paper was an early entrant, offering papers for continuous inkjet printers in the mid-2000s. These special coated papers

established a reputation for excellent quality and drying, but at cost levels significantly higher than uncoated grades.

All but one of Mitsubishi's current Jetscript range is made in its Bielefeld Mill in Germany. These grades are suited to presses from HP (T-series), Kodak (Prosper), Canon/Océ (JetStream, ColorStream, ProStream, ImageStream), Ricoh (InfoPrint), Screen (TruePress Jets) and Xerox-Impika, plus the Fujifilm Jet Press 540W, no longer sold.

Ralph Buhl, marketing manager for Mitsubishi HiTec Paper, says 'All our Jetscript high-speed inkjet papers are coated with an ink-receiving layer. Of course this has a certain higher cost compared to treated or uncoated papers, but there are benefits in print imaging, print densities, ink saving possibilities, as well as higher speeds during production due to fast drying. We continuously optimise our media to remain competitive for high quality print jobs.'

Mondi is a large Austrian-based paper supplier with a significant presence in digital papers, including inkjet. Mondi's current grades include BioTop (chlorine-free off-white); DNS (smooth high white); DNS high speed CF ("coated feel") or NF ("natural feel"); Neujet (high density smooth for wide gamuts in matte, matte premium, silk and silk premium; and ProCycle, a recycled grade in "classic" low-white and super-white.

Christina Fadler, communications and events manager for Mondi Uncoated Fine Paper, says, 'We have been working closely with all major inkjet printer OEMs since we started to develop papers optimised for various high-speed inkjet printing presses.'

Ms Fadler explains the way inkjet papers are formulated: 'At Mondi, we apply a treatment which reacts with the colorants in the ink and we broadly distinguish between slightly treated papers, fully treated papers and pigmented papers.' Treating pigmented papers costs 'a little more,' she says. 'Our aim is to provide an overall commercial benefit to



***Impika, bought by Xerox in 2014, uses HD inks that don't require paper pre-treatment***

the printer, either by allowing an ink reduction during printing or by superior quality when compared to untreated papers – thus allowing the printer to earn higher margins.'

Crown Van Gelder is a small-to-medium sized paper manufacturer, based in the Netherlands. It was an early entrant into the inkjet market and its current extensive LetsGo High Speed Inkjet range includes bright silk, silk, matte, universal, high performance, eco and grades, in dye or pigment ink



***Mondi's Neujet offers wide-gamut printing in a choice of finishes and reel widths***

# Increasing inkjet printing speed challenges the media



Technology today evolves quickly and businesses need to keep up or lose out. The digital printing world is no exception. Recently the inkjet markets have experienced revolutionary changes, a high-speed printing revolution. Yet with change come opportunities for those with a keen eye. But one thing is for sure: in print the right media is essential, as is the right paper partner.



**Offline Coater no.3 - Mitsubishi HiTec Paper Bielefeld Mill**

**F**ixed array print-head technologies have massively increased inkjet printing speeds while maintaining valuable colour capabilities and quality expectations. Combined, such hardware advances now open up the opportunity to review all popular traditional (analogue) printing applications and seek out the jobs that will benefit from variable data interventions made possible through digital solutions – applications such as **labels, corporate customisation, gift wrapping, point-of-sale signage, publications and personalised marketing or promotional materials**, to name just a few. In fact, with a little thought the opportunities are now endless.

## New challenges

Nevertheless, all capable business leaders know that with technical advances come new challenges. High-speed inkjet printing technologies, from **roll-to-roll, roll-to-sheet productions machines to multi-feed plotter or larger format printers** are now able to print at mind-blowing speeds. Speeds which inevitably mean that the media used must be able to receive and manage huge amounts of ink in a blink of an eye. Using the wrong media for the job can easily create a bottleneck slowing down the process considerably, a very costly mistake.

## Market-leading inkjet media

Mitsubishi HiTec Paper, part of the Mitsubishi Paper Mills group, has a long history in developing and manufacturing market-leading inkjet coated paper-based media. The **JETSCRIPT inkjet papers are designed specifically to manage the increasing ink demands and ensure maximised productivity** regardless of the application employed. Ralf Buhl, marketing manager for Mitsubishi HiTec Paper, says,





**Colourful large format printing**

'All our JETSCRIPT high-speed inkjet papers are coated with an ink-receiver layer. Naturally this has a certain higher cost when compared to treated or uncoated paper alternatives. But there are many valuable benefits in print imaging, print densities, ink saving possibilities, as well as higher speeds during production due to the increased drying capabilities as a result of the inkjet-dedicated coating technologies applied to the surface of the paper. We continuously optimise our media to remain competitive for the quality print jobs.'



**Colourful flyers, mailings and post cards**

**'Coated media plays and will continue to play a key role in the fast expanding high-speed printing markets, especially in the full colour commercial application arena'**

Dr. David Croll, strategic programme manager Graphic Arts Media, Canon Océ

#### But what exactly is an "inkjet coated" media?

In the aqueous inkjet world a coated media generally means a specifically designed off-line coating applied using an advanced, sophisticated and dedicated coating machine. The coating is laid down on the surface of the substrate, i.e. paper, to manage the ink colourant and water absorption and is able to hold the colourant higher on the surface while releasing the water to evaporate efficiently and therefore maximising densities and increasing the colour gamut. Furthermore, such coatings are designed to minimise other, often more physical challenges such as cockle and curl, which are also key concerns as speeds increase.

Claudia Vogel, sales and marketing director for Mitsubishi HiTec Paper, states, 'Mitsubishi is dedicated to providing the right products, enabling our customers to utilise today's technologies and maximise their potential. In fact we don't stop there, but we are continuously improving our inkjet paper portfolio's ability to meet current demands and developing products to suit future application or print requirements. Inkjet today is an exciting place to be and we are proud to be a market leader in coated media and of our high quality reputation. It's a colourful world but in order to do it justice in print **the right media is essential, as is the right paper partner**'.

Mitsubishi HiTec Paper supplies a range of coated papers for digital printing applications, such as direct thermal, inkjet, label papers and carbonless (self-copy) paper. For more information visit [www.mitsubishi-paper.com](http://www.mitsubishi-paper.com)



***Mitsubishi HiTec Paper adds a coating to its Jetscript paper but says the cost is offset by faster drying and potential ink savings***

versions (or both). The spec sheet lists all the main inkjet web presses as compatible with the higher quality grades, while the rest will basically run with anything. There's a good choice of reel formats.

'We work closely with all printer manufacturers like Canon Océ, HP, Ricoh, Screen, Xerox Impika, Memjet, Domino and Fujifilm,' says Jan Rops, inkjet product manager. 'It is good for them and for us. By working and testing together we know that our customers will get the maximum print result on our papers. As we have tested all our papers at the different OEM printer manufacturers, we know what works best. We also help our customers with colour management and we can make customer specific colour profiles.'

Are costs coming down? 'Treated inkjet papers are a bit more expensive than standard woodfree uncoated (WFU) papers,' Mr Rops says. 'Prices have come down, but the treatment has its cost – though you should look at the total cost of print rather than the cost of the individual components of the print process. Printing on treated inkjet papers is more economical than printing on standard WFU uncoated papers which are off-line primed or have a bonding agent applied, especially when colour is used. Treated inkjet papers offer better print quality, better layflat-

ness and better runnability. Also cleaning and maintenance costs are lower. A glossy coated inkjet paper is more than double the price of a standard glossy coated litho paper. Only specific print jobs are printed on this type of paper. In the high end, which needs gloss, a lot of developments are going on.'

The suppliers we talked to here aren't the only ones with digital papers, of course. For instance Felix Schoeller Group in Germany introduced its Jet-Speed continuous inkjet papers in 2015. They use HP ColorPro technology to print on HP's PageWide T-series web inkjets without bonding agent primer. Stora Enso offers two classes of reel-fed inkjet paper: BergaJet for books, catalogues, direct mailing, manuals and transpromo work; and SuperiorJet, a bright white paper for higher quality applications including books and brochures.

Stora Enso has two ranges of papers for high speed inkjet, intended for applications such as books, direct mail, transactional and transpromo, manuals and catalogues. BergaJet is a high bulk woodfree suited to multi-colour work with pigment or dye inks. It can also be used for litho or laser print. SuperiorJet is a bright white paper intended for pigment inkjets, again good for multi-colour work. Both types can be supplied as A4 sheets or fanfold as well as reels.



***Crown Van Gelder has long experience in the inkjet market and offers the LetsGo High Speed Inkjet range in many variants***

a range of smaller mills are also offering inkjet grades too. For instance Arctic Papers in Sweden makes GPrint Highway, a high bulk, stiffness and opacity woodfree paper, with a thin coating suited to 'almost all' high speed inkjets. The main target applications are direct mail and publishing. Amber Highway is intended for transactional printing with inkjets.

**Inks for standard papers**

As mentioned previously, some printers can run special inks that work with almost any paper. For instance Fujifilm's B2 Jet Press 720S ink has a resin coagulant that works on uncoated litho papers. The same head and ink technology is used in Heidelberg's Primefire B1 carton press.

Screen can supply high polymer aqueous ink called SC for its TruePress Jet 520HD inkjet web press, that can work with gloss coated litho papers. Xerox's Impika inkjets also use a high-resin ink.

The paper compatibility problem doesn't arise with UV-cured inks, but so far only Konica Minolta has taken this route for sheetfed presses, with its Accuriojet KM-1

(also sold by Komori as the Impremia IS29).

Landa also claims that its Nanography technology will print on a wide range of papers and plastics with no need for inkjet-receptive coatings, because the water is evaporated out of its ink on a heated transfer belt, leaving only sticky resin to reach the substrate.

It's also possible to get too hung up on paper compatibility, says Tim Taylor, Ricoh's head of continuous feed market, production printing. Ricoh sells the Screen TJ 520HD under its own name as the InfoPrint VC60000, but has chosen to stick with conventional aqueous ink. 'It's a matter of balancing what you expect to print on against the costs,' says Mr Taylor. 'The special ink costs more, so

you always have to pay that premium even if you are running uncoated papers that don't need it.'

For many types of work no special coating or ink is needed, he states. 'Normal uncoated litho book or photocopier type uncoated paper works fine with inkjets. For book wove, and bonds, this is fine. It is only when you start to go up the quality ladder that you need either a special coating or a special ink.' •



***Papers made at Mitsubishi HiTec's Bielefeld mill in Germany suit all the major inkjet press types***

# Stora Enso: high speed inkjet papers

**Stora Enso is a leading provider of renewable solutions in paper packaging, biomaterials and wood to global markets. Customers include packaging paper, joinery and construction industries as well as publishers, printing houses and paper merchants.**

**W**e in Stora Enso believe that everything that's made with fossil fuels today can be made from a tree tomorrow. Our purpose is to replace fossil-based materials renewable solutions. Our focus is on fibre-based packaging, plantation-based pulp, innovation in biomaterials, and sustainable building solutions.

The Group has some 25 000 employees in more than 35 countries, and is publicly traded in Helsinki and Stockholm. Sales in 2016 were €9.8 billion, with an operational EBIT of €884 million.

Stora Enso uses and develops its expertise in renewable materials to meet the needs of its customers and many of today's global raw material challenges. The company's products provide a climate-friendly alternative to many products made from non-renewable materials, and have a smaller carbon footprint.

Being responsible – doing good for people and the planet – underpins Stora Enso's thinking and approach to every aspect of doing business.

It produces a wide range of papers and boards for the digital sector. Examples include BergaJet and SuperiorJet. Both products are woodfree uncoated papers designed for high-speed inkjet web presses using dye or pigment inks. BergaJet adds lustre, appeal and profile to all kinds of message carriers. It also brings forth a truly personalised visual approach needed for a high response rate – for example, in direct marketing pieces or market research questionnaires.

White paper solutions based on BergaJet enable increased flexibility to make rapid changes to documents, thus reducing waste and providing a response to today's marketing requirements. BergaJet is ECF (Elementary Chlorine Free) and carries the Nordic Ecolabel, the EU Ecolabel and it is available as PEFC certified.

It is designed to give excellent multicolour print in both pigment and dye ink applications. It also delivers good runnability in printing and post processing (mechanical converting and automatic inserting). Typical end uses for BergaJet include transpromotional printing, statements, direct mail, books, manuals and catalogues.

SuperiorJet is a premium paper which takes inkjet printing based on pigment ink to new levels of image reproduction within a wide colour gamut. It is now possible to combine data mining and inkjet printing to bring new personalisation possibilities to invoices, statements and direct mail.

SuperiorJet is Elementary Chlorine Free and carries the Nordic Ecolabel, the EU Ecolabel and it is available as PEFC or FSC certified. SuperiorJet delivers very good runnability during printing and post-processing. It has enhanced whiteness, bulk, opacity and formation. Typical end uses for SuperiorJet include books, brochures, direct mail, inserts, invoicing and transpromotional printing.

Both BergaJet and SuperiorJet perform well during reel-to-A4, reel-to-reel and reel-to-fanfold converting processes. Both grades are ideal for post printing processes such as automatic inserting, cutting and folding, collating, OCR and MICR.

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# Waste not want not

Digital print is upending the established paper recycling models, so there's plenty of work to do, says *Laurel Brunner*

In most developed economies print waste streams function well and communities have mostly bought into the concept of recycling, especially of paper. But waste management is as much about commerce and locale as it is about ethics and environmental protection.

Institutions such as the European Union (EU) do much to support cross-community recycling and waste management. Directive 2008/98/EC outlines basic waste management concepts and defines terms such as waste, recycling and recovery. The EU has worked with the Confederation of European Paper Industries to classify different paper grades, including specific requirements for grades that may be recycled in the future. The EN643 classification uses a scorecard for the recyclability of different printed products,

based on International Association of the Deinking Industry (INGEDE) Method 11, an outmoded testing model designed for deinking offset and gravure prints.

## Deinking defined

To deink a substrate requires removal of ink and coatings from its surface. In Europe INGEDE Method 11 is the preferred test for paper deinkability but it was developed long before digital printing's wholesale assault on the graphics landscape. Method 11 is a measure of quality assurance for paper destined for recycling. According to Barry Read of the Paper Industry Technical Association, "the biggest challenge facing those dealing with paper for recycling (PFR) is the quality of PFR coming through the system and in this context "quality" typically means "cleanliness".'



***Axel Fischer, INGEDE's communications officer, was surprised at the results with print from the Fujifilm JetPress 720S, but not all digital print is so easy***

Over the years Method 11 has evolved, but many digital printing ink and substrate combinations still fail its test. And yet, they can still be deinked and recycled, so INGEDE Method 11's processing and testing methods may be in need of another revamp. Chemistry is at the heart of the problem, and what constitutes the ideal de-inking chemistry varies with the ink or toner recipes and how the printed papers are processed. Dry toner behaves in a not dissimilar way to offset inks for deinking purposes, so these prints are not a problem.

Toner and offset inks both lift off the substrate under similar processing conditions and pass INGEDE Method 11 for deinkability. But prints which fail INGEDE Method 11 may still be deinked and recycled

# A specialist with a broad range

**T**he Folex group specialises in the finishing and coating of films and specialties with production companies based in Switzerland (Schwyz) and Germany (Cologne and Erlangen) that offer high-quality products and tailor made services for a wide variety of markets. Today it offers solutions for digital press, large format InkJet, labels, the office and home, as well as products for traditional offset printing, all the way to products for the electronics industry.

Digital printing is one of the fastest growing markets within the print industry. It offers great advantages in terms of personalisation, short runs, proofing; and of course, on demand printing. What's more this can be achieved on a wide selection of specialist materials.

Markets served in its Digital "Print On" division – include materials for digital presses for HP Indigo and colour laser technology as well as a wide portfolio of media for inkjet large & small format printers. Close relationships with printer manufacturers and private label brands has ensured that Folex, including its own brand, is today one of the largest global producers.

Folex is also an official HP Indigo Alliance One Partner; HP Indigo materials include clear, white, metallic and matt translucent films as well as adhesives, clings and fabric transfer media. It introduced its own in-house coating formulation for HP Electroink in 1994 and has developed a worldwide reputation for reliable, consistent quality products which have no limited shelf life. New for 2018 are a range of films approved for the HP 10000 & 12000 presses.



**Clean room coating conditions ensure high quality and consistency**



## ***Folex works closely with equipment vendors to optimise coatings and materials***

Colour laser products were established in 1988 with a range of clear and white tear proof films and followed by a family of adhesive films in clear, white and today also gold and silver. For creating T-Shirts, a transfer material with high reliability and compatibility with oil and oil less printers is available. High fusing temperatures of colour laser technology demands a very stable, consistent range so that whether you print 500 or 20,000 prints you achieve the same runnability and reliability.

The company also manufactures a complete portfolio of materials for large format inkjet printers. In 2013 Regulus GmbH joined the group and introduced an impressive portfolio of materials including Roll-up, Pop-up, backlit, banner, repro films, canvas & fine art papers. Today Folex offers a strong and consistent range for the important sign and display, fine art photo & repro markets. Materials are coated for compatibility with solvent, latex, UV and water based inkjet prints.

Finally, the digital label market continues to grow rapidly and here materials are available for inkjet including the new high speed Memjet printers. These are capable of printing at 30cm per second and require very demanding coatings which can absorb ink quickly. Latest developments include glossy and matt coatings onto PP and PET substrates with permanent and removable adhesives. Where a 'glue less tack' label is needed this is also available on matt white PP, again with an instant drying coating.

Folex's sales operations in UK, Germany & Switzerland are able to service your local needs. Please find more information at [www.folex.com](http://www.folex.com) or call us on 0121 733 3833.

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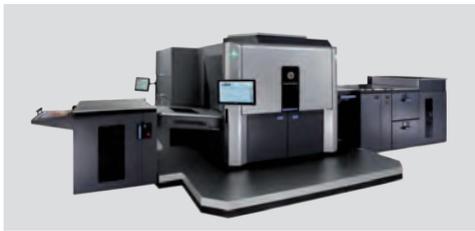
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***This is an infinitesimal fraction of what printers generate every day, and increasing volumes are being printed digitally.***

in standard mill processes. Most standard mills include multiple loops and some bleaching to deink and recycle a wide range of digital prints, including liquid toner and inkjet inks. HP Indigo prints fail INGEDE Method 11 but that doesn't mean they cannot be deinked, despite claims to the contrary.

### The Digital Printing Deinking Alliance

The Digital Printing Deinking Alliance (DPDA) was established in 2008 by HP, Kodak, Océ and Ricoh 'to ensure that water-based inkjet inks perform as expected on press and in the deinking process'. The organisation conducts its own research and curates industry data on the topic. According to the DPDA, many inkjet prints can meet the requirements of Ingede Method 11 and can be deinked with standard mill processes; it all depends on the composition of the paper, the deinking chemistry, the acidity or alkalinity (pH) of the processing solution and the washing required.

But UV printed materials and printed materials coated with resin films are another matter. It's a question of process, economics, chemistry and, of course, volumes. Current volumes of digital print entering waste streams are small, however they are rising, and as more challenging forms of print find their way into recycling streams, the need to address the problem becomes more urgent.

Digital press manufacturers have been quietly working with INGEDE and other deinkability testing facilities to test sample prints and tweak ink recipes and processing chemistries. Results with conventional deinking test methods have been mixed: Fujifilm, for example, has worked with INGEDE and Axel Fischer, the association's communications officer, has said that 'We do these kinds of trials on a regular basis but we were very surprised with the levels of deinking that were possible with the Jet Press 720 samples. These types of results are in the same league as those achieved with offset inks but we've never before seen such great results with inkjet print.' Digital press and ink manufacturers are also looking at other methods and processes, which vary across geographies.

### Boffin watch

Various research studies from independent industry associations such as FOGRA, the German print industry research association, suggest that pigment-based inkjet prints can be recycled in mixed paper grades, but only when they comprise 10% or less of the incoming paper mix. Anything more could impact the quality of the final deinked pulp. This is where the problems arise, so in order to cope with the rising volumes of digital print entering recycling streams we definitely need upgraded processing systems. Pulp and paper professionals have an incentive to consider developing new models that can handle all forms of print.



### ***Pulp and paper recyclers have their work cut out to accommodate digital print.***

Despite the cost and upheaval, they really have no choice but to do this to ensure sufficient supplies of recycled pulp for making new papers. The alternative is for printed papers to be recycled as energy in incineration plants, and this might be the way things are heading in the UK. For Barry Read incineration is 'a valid end-of-life option for very aged, heavily contaminated or difficult to reprocess material' but it is not ideal for papers that might otherwise be recycled into new products.

None of this is easy to solve. It requires a complete rethink of paper recycling so that deinking testing and processes can be updated. The starting point is collection and sorting, however it is unrealistic to expect consumers to know how to sort conventional print from print that is digitally printed, especially as the quality distinction between the two gets harder and harder. So what to do?

It makes sense for mills to invest in updated processes to account for the wide variety of inks being used in digital print, but this is no easy task. The range is huge: ink recipes are optimised for performance in the printhead, on press and on the substrate. So the question is one of volume and economics because there doesn't seem to be any universal way of deinking prints ready for recycling.

### **ISO 21331 is a start**

ISO is working on a standard to establish some basis of commonality. The goal of ISO 21331 (Assessment guidelines for the deinkability potential of printed matter), is to help print buyers, printers and manufacturers to decide how to invest in print, based on the printed matter's deinkability potential. The document is progressing slowly because it faces intense opposition from vested interests in the European paper industry. However, once published, it will be a useful tool for companies who want to invest in print, confident that they know that their print products can be recycled into a specified paper type.

### **Managing the waste stream better**

Technological innovation creates new production options for printed materials, and new options for deinking and recycling. For instance, Nippon Paper of Japan recently filed a European Patent Application for sorting printed matter using light to identify prints that will be hard to recycle. It's a welcome positive step because rampant resistance to digital printing is no way to encourage progress. When it comes to the recycling of digital print, the pulp and paper industries have more work to do, but plenty of scope to capitalise on new opportunities. •

# Two Sides Campaign

Two Sides dispels common environmental misconceptions by providing users with verifiable information on why Print and Paper is an attractive, practical and sustainable communications medium.

## Print and Paper Packs a Punch in a Digital World

In June 2017, a survey of over 10,700 consumers was commissioned by Two Sides and carried out by leading research company Toluna. Nationally representative surveys were undertaken in ten countries: Australia, Brazil, France, Germany, Italy, New Zealand, South Africa, Spain, the United Kingdom and the United States.

The results reveal a strong preference for print when it comes to recreational reading e.g. books, magazines, news etc. 72% of global respondents prefer printed books, compared to only 9% preferring e-books. Significant country differences were also identified: in Germany, 75% of consumers prefer a printed newspaper, but in Spain, only 42%.

Not only is there a global preference for print, there is also greater trust in print. 76% of all respondents believe “fake news” is a worrying trend and only 24% trust the news stories they read on social media. In addition, 63% of all respondents believe reading news in a printed newspaper provides a deep understanding of the story.

The survey also revealed consumers have a negative perception of online advertising. 68% of global respondents say they don't pay attention to online ads and 62% find them annoying and usually not relevant. 57% of global respondents do their best to block or avoid online ads.

Despite the shift towards receiving digital communications, 89% of consumers believe they should have the right to choose how they receive communications (printed or electronically) from financial organisations and service providers, with a further 77% agreeing they should not be charged more for choosing paper bills and statements. The common claims assisting this drive to digital, such as “Go Green - Go Paperless” and “Save Trees”, are creating consumer suspicion as 62% of global respondents believe the switch to digital is because the sender wants to save money, not because it is “better for the environment”.



Concerns about security and privacy were also evident. 71% are concerned their personal information held electronically is at risk of being hacked, stolen, lost or damaged and 73% keep paper copies of important documents at home for safety and security.

Overall, findings conclude that consumers trust, enjoy and gain a deeper understanding of information read in print, with signs of digital fatigue and concern for electronic information security and privacy evident.

[www.twosides.info](http://www.twosides.info)

## Two Sides actively tackle Greenwash

Two Sides reports a 61% global success rate in removing misleading environmental claims made by some of the world's biggest corporations as they seek to replace paper-based communications with lower cost electronic alternatives.

Research into more than 600 of the world's leading corporations, including banks, utilities, telecoms and insurance giants, has shown that a total of 460 of those companies have been using misleading and unsubstantiated environmental statements, despite specific advertising legislation to protect consumers in many countries. To date, 278 of those companies have removed such statements as a result of ongoing engagement by Two Sides.

Internationally, Two Sides teams are continuing to tackle greenwash in their respective countries, and this has yielded positive results.

<http://www.twosides.info/what-is-greenwash>

## We need you!

These campaigns are funded by the industry and to continue this work, we need your support. This support also gives you access to use all the tools and resources to use within your own marketing communications plus many additional benefits.

For more information, contact Tandy Wakeford on [tsw@twosides.info](mailto:tsw@twosides.info) / 01327 262920.

# LOVE PRINT? LOVE PAPER? JOIN US!

Print remains one of the most **powerful** and **sustainable** forms of **communication**

Yet consumers and users in the world of media are now distracted and enticed by a wide range of alternative media choices.

By uniting all those who wish to see print and paper flourish, the Two Sides and Print Power campaigns deliver powerful messages to ensure that print media remains a vital communications channel for generations to come.

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# Going paperless

Paper isn't the only substrate that can be printed by the various digital processes. *Simon Eccles* provides a quick overview of digital-compatible materials that don't involve dead trees.

## ACM

Aluminium composite materials are a sandwich of two sheets of thin aluminium over a plastic foam core, often used as wall or exhibition panels. The best known brand is Dibond, which has become a generic name, although there are other suppliers. Direct printing can be done on UV flatbed inkjets, but it's also common to apply self-adhesive vinyl that has been pre-printed on a roll-fed solvent or eco-solvent inkjet.

## Chalkboard

Popular with restaurants and shops, real wood or plastic chalkboards can have permanent image sections directly printed by UV inkjet, or heat transfers from toner presses. Neschen supplies a self-adhesive PVC chalk-writable film called EasyDot Chalk Board, printable with solvent, eco-solvent, latex and UV-cured inks (preferably with a white undercoat).



**Foamboard is a popular wide-format substrate for display use**

## Foamboard

Also called foamcore. Generally a lightweight expanded polystyrene sheet with smooth coated paper on the outer surfaces. Widely used as a lightweight display panel material for exhibition or in-store stands and the like, and as a mount for photographs and posters. A more rigid, weatherproof foamboard made from closed-cell PVC foam is often used for durable signage. Foamboard can be printed directly by a UV flatbed inkjet, or pre-printed paper or vinyl can be applied.

## Glass

This can be printed directly in a flatbed UV-cured inkjet,

though a primer coat will probably need to be applied. Alternatively clear self-adhesive vinyl or clingfilm can be printed by a roll-fed solvent (or UV) inkjet. It's often used for architectural work, for decoration or privacy on windows and wall dividers.

## Dye sublimation blanks

Dye sublimation ink will bond to any substrate that is either made with a high polyester content or can be given a polyester coating. Polyester or high polyester mix textiles can

be printed directly (on the roll) by a dye sublimation inkjet and fixed by heat, or alternatively images can be printed onto release paper and transferred by a heat press or roller.

A surprisingly wide range of solid objects can be coated with polyester. Blanks available from dye-sub specialists include mugs, plates, wood, acrylic or metal plaques, key fobs,

phone and tablet cases. They need low cost heat-presses, sometimes with specially shaped platens. Aluminium sheets can also be coated to become decorative wall panels or table tops – Chromaluxe is a particular specialist here.

## Lenticular plastic

This is an extruded plastic material with horizontal lenses running on one side and a flat surface on the other. With a printed image on the back it can create animations, image changes and dissolves (called flips) and even give a true 3D stereoscopic effect without special viewing glasses.

Direct digital printing can be done by UV flatbeds and some

©image Simon Eccles

HP Indigos. Alternatively, pre-printed paper can be laminated onto the back, though accurate positioning is critical. High resolution is needed for the thinner materials used for book covers.

Pacur has been the main supplier into Europe via its distributor DP Lenticular. Alternatives include Chinese company KDX, which exhibited at Ipex and has European warehousing.

### Magnetic

Magnetic media is mostly used for fridge magnets and also for temporary vehicle and other signage that can attach to steel surfaces. It's a flexible rubbery material mixed in with magnetic steel particles. You can buy it ready to print with attached paper, either ready magnetised or able to be magnetised after printing, or you can buy bare material in rolls (often with pressure-sensitive adhesive pre-applied) for lamination with paper or self-adhesive vinyl.

### Metal

Aluminium and steel with suitable anti-oxidant coatings are the most commonly used (also see ACM at the top of the list). Flatbed UV inkjets can be used for direct digital printing onto sheets, otherwise self-adhesive vinyl printed by solvent, eco-solvent, latex or UV can be applied.

The specialised ToneJet dry pigment projection system is used for direct printing onto aluminium cans. Shrink sleeves can be printed by HP Indigo ElectroInk and UV inkjets.

### Metallised papers and boards

Metallic inks are poor substitutes for the mirror-like finish of real metal foils, so metallised paper and boards are popular. These are usually standard substrates with a factory-applied metallic foil laminate, though you can laminate your own.

Celloglas has established a particular reputation with its Mirri board range. If used with a digital press that can apply an opaque white, these substrates can be used to give show-through effects as an alternative to hot foil. Metallised media



**Xerox NeoverTear (supplied by Antalis) suits items that have to withstand repeated handling**

works with HP Indigo ElectroInk and UV inkjets, but not dry toner. Some solvent inks might work.

### Plastics

This is a huge category of printable materials, often with different characteristics that may affect print. Broadly speaking, UV-curable inks can be used for most of them, but softer formulations may be needed for flexible plastics. Many plastics can be printed by solvent and eco solvent inkjet inks, which will partially dissolve the top layer so that pigments are permanently bonded. Latex inkjets work with some plastics. HP Indigo ElectroInk works with many plastics. Dry toner may work, but the heat fusing can be a problem.

Here are some of the most popular plastics, with brief details of applications and compatible digital inks.

Acrylic (also called Perspex, Plexiglas, Lucite, Acylite). Usually transparent clear sheets or blocks. Mainly UV-cured flatbed printed, as there are no solvent flatbeds.

Mylar. DuPont's trade name for transparent PET film with a thin metallised layer on one side. The print application is mainly novelty balloons. Printable by solvent, eco-solvent, UV, and possibly latex.

PET. Also called Polyethylene Terephthalate, polyethylene (PE), polyester, Mylar. Widely used in bottles, also as sheets for backlit materials and pop-ups. Printable by solvent, eco-solvent, UV, sometimes dye sublimation.

Polycarbonate, also called Lexan, Makrolon, MakrocLEAR. A clear shatterproof plastic used in CDs, DVDs, car headlamp covers, bottles and containers. Printable by UV flatbed inkjets, or others if a print-receptive coating is applied.

Polyester (PE). A class of plastics that includes PET and polycarbonates. Printability depends on material, but may be solvent, eco-solvent, latex, UV or dye sublimation. Polypropylene (PP). Used for packaging (bottles, tubs, containers, bottle caps), boxes, posters, wall charts, POS, overlaminating films and some synthetic papers. Oil-resistant and water-repellent, so hard to print on. Some flexible UV inks will work.

Polystyrene (PS). Mostly used for packaging. Direct digital printing is rare and mostly confined to solvent ink coding and marking. Printed adhesive labels are more commonly used. Vinyl, also called polyvinyl chloride or PVC. A flexible, waterproof material that can be white, translucent or clear. There are rigid sheets for POS, semi-rigid types for packaging, and thinner flexible rolls for self-adhesive films used in labels, signage, pop-ups and banners, vehicle wraps, overlaminating film, wall coverings, mesh building wraps and floor graphics. Digitally printed by solvent, eco-solvent, latex, UV.

### Synthetic papers

A category of paper-like materials that aren't made from 'natural' cellulose fibres. They are used where tear-resistance, waterproofness, durability and/or very light weight are needed. DuPont's Tyvek range is best known (see below), but other brands include Xerox Never Tear (dry toner), PPG Industries' Teslin (for dry toner or inkjet) and Hop Industries' Hop-Syn (for UV-cured inkjet).

### Tyvek

This non-woven olefin synthetic material has many of the characteristics of bright white paper but it is tear-proof, water-resistant, oil resistant and well-nigh indestructible. It can be



©image Simon Eccles

**White ink applications printed by the Mutoh ValueJet 1638UH**

easily cut and folded. The real thing is patented by DuPont. Tyvek is compatible with digital print processes including inkjet (UV-curable, solvent and aqueous, but check you've got an inkjet-compatible grade) and phase-change. Many of the current Tyvek materials are certified for printing on HP Indigo digital presses. Dry toner processes cannot be used because the fuser may melt the material.

### Wall coverings

Digitally printed wall coverings can easily be customised or personalised for a particular location, and they can easily carry huge photographic or patterned murals across multiple strips. Some are self-adhesive, including some with repositionable adhesive that can be peeled without residue. Biocide-infused papers are available for kitchens, schools and hospitals where hygiene is a priority.

Xeikon roll-fed dry toners can print on most smooth wallpapers. Inkjet-friendly papers and fabrics are available for eco-solvent, latex or UV. HP particularly emphasises its non-toxic but waterproof latex inks for schools and hospitals.

### Wood

Bare wood, even with a coarse grain or rough surface, can be printed directly by flatbed UV inkjets. Some UV inkjets can print their own white undercoat. Wood is also commonly decorated by paper, plastic or thin wood lamination, which can be pre-printed by any process. •



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