

Sihl Digital Imaging - Latest News



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Hello again,

We are back again with a new issue of Sprint, and a new design. To coincide



with the start of the New Year, the Diatec Group completely revamped its corporate identity and has introduced a fresh new layout. Read more about our objective on this page.

SiHL Direct Germany took this opportunity to modernize its website and make it more customer-friendly: see next page for more information.

Alongside our visual changes, we also have a collection of brand new products for you again:

For the photographic sector our TriSolv PhotoArt Paper which is introduced on page 6 and the Aurolux Window Film Solvent on page 7.

Completely new additions to our portfolio are the two sublimation print papers DSSubliColor and DSTackyColor.

In our Facts feature on page 11, you can find out how dye-sublimation works on fabrics.

We hope you enjoy reading the latest edition of Sprint!

Janine Bülten

Janine Bülten
Marketing & Communication

Modern logo for SiHL Digital Imaging:



The brand logo has also been smartened up with a more modern and distinct typeface although it still symbolizes our promise and commitment which we will continue to honor to the full extent.

New logo brings breath of fresh air

The Diatec Group appears with new corporate design:

„The Coating Company“

In addition to their core business, the members of the Diatec Group are expanding into new future-oriented markets which require innovative and sophisticated coating technologies. With our renewed claim „The Coating Company“, we want to communicate our professionalism, experience and dynamism more effectively. Our modern fresh layout underlines this claim.



We are ready to develop product ideas and innovations and help you branch out into new market segments. You have chosen a reliable, success-oriented partner with whom you can optimally implement your coating ideas. Our state-of-the-art equipment is perfectly suited for coating and laminating media as web:

- Investments (including larger investments) in machines and peripheral equipment

The uniform design of the different lettering reflects our team spirit and the sense of coherence within the Group.

- Our company is characterized by broad-based, in-depth technical know-how
- We employ well-trained, experienced and professional staff
- We run special departments for product development and process technology
- We have a tried-and-tested project management with customers and research facilities
- We operate management systems for quality, environmental protection and work safety
- Our coating and finishing machines are state-of-the-art
- We are willing and able to offer:



- Co-development, contract coating, cost transparency
- Organizational adjustments, certifications



Sihl Direct Homepage – updated as of March 1st

Sihl offers a comprehensive range of media, one that grows constantly and is driven by the development of new inks and printers. This makes it important to maintain an overview of products so that users can find just the right medium for a particular application:



Visit our group websites:
www.sihlusa.com,
www.sihl-direct.ch, www.sihl.nl

Sihl considers it important to keep customers and potential customers informed at all times about products, properties, applications, availabilities, etc. Alongside product leaflets, sample swatches and catalogues, Sihl’s website is the company’s most important form of communication. Revised and improved on a regular basis, readers can rely on information being completely up-to-date. The website’s many different features provide readers with an overview of products and enable them to find what they’re looking for quickly. In addition to Sihl’s homepage, which can be accessed via www.sihl.com/www.sihl.de, there are also country-specific portals, some with affiliated webshops. Sihl Direct Germany’s completely revised and more customer-friendly homepage went online on 1st March 2011.



Sihl Asia relocates!

Since 25th February, Sihl Asia can be contacted at the following:

No 7030
 Ang Mo Kio Ave 5 #09-40
 Northstar@AMK
 Singapore 569880
 Singapore

Tel : +65 6481 9558
 Fax : +65 6481 9557
 E-mail: phuan.chua@sihl.com.sg
rina.tay@sihl.com.sg



Do you have any questions about Sihl’s Digital Imaging media?
 Our Area Sales Managers Mrs. Rina Tay and Mr. Phuan Chua will be happy to help you.



FESPA Digital Hamburg

Sihl's new products on show in Hall A3, Stand D11

Photo HMC / Michael Zapf (Z)



Opening times:

Tuesday, 24th May 10.00 – 18.00 hrs.
 Wednesday, 25th May 10.00 – 18.00 hrs.
 Thursday, 26th May 10.00 – 18.00 hrs.
 Friday, 27th May 10.00 – 16.00 hrs.

Admission tickets:

Admission to FESPA is free of charge if you register online by 23rd May 2011. Book your ticket today under: www.fespa.com

Address: Hamburg Messe and Congress GmbH | Messeplatz
 120357 Hamburg | Germany

According to studies, the market for large-format advertisements will continue to grow again in 2011. New technologies, base materials, applications and techniques in this sector will be presented in compact form during the 4 days of FESPA Digital in the media city of Hamburg. The exhibition is a platform for innovative products and materials, showcasing all the important brands from over 380 exhibitors under one roof. As one of the leading partners in the field of digital imaging, Sihl will be represented at the show again with its own stand. By talking personally to our experts, you can find out about our comprehensive range of banners, roll-ups, pop-ups, window films, posters and poster papers.

Allow us to show you our most recent developments. You also have the chance to see a number of our products being

printed on the HP Designjet Z6200, HP Designjet L25500, Roland VersaCamm VS 640 systems.





Photo: www.mediaserver.hamburg.de / Roberto Hegeler

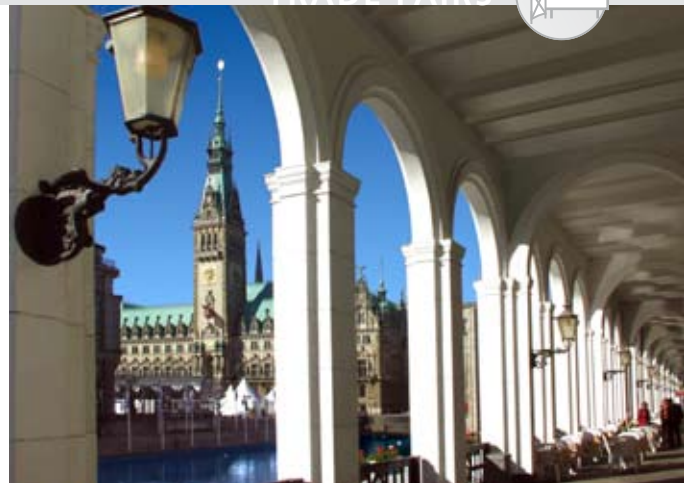









Photo: www.mediaserver.hamburg.de / Christian Spahrbiel

Sihl's highlights at FESPA Digital:

Ink compatibility	Product number + product name	Our expert tip:
 <p>Infrared hardening inks/latex inks as well as aqueous dye-based or pigmented inks</p>	<p>3674 Mirano POS Photo Paper PE 220 satin</p>	<p>Suitable for photo-realistic posters, displays, high-quality photo reproductions, roll-up-displays and advertisements in the indoor sector</p>
 <p>Solvent-based or „mild solvent“ pigmented inks and infrared hardening inks / latex inks and UV-hardening inks</p>	<p>3699 TriSolv PhotoArt Paper 210 glossy</p>	<p>Convincing properties include homogeneous gloss in printed and unprinted areas, even more brilliant image reproduction and significantly improved drying times compared to TriSolv PrimeArt.</p>
 <p>Aqueous pigmented inks</p>	<p>3260 Wallpaper Persomural 170 matt</p>	<p>Inkjet-coated fleece wallpapers for personalized, PVC-free, creative interior decoration.</p>
 <p>Compatible with all water-based dye-sublimation inks</p>	<p>3270 DS SubliColor 95 matt</p>	<p>Fast-drying, matt-coated paper for sublimation inks to finish fabrics made of 100% polyester or polyester coated substrates.</p>
 <p>Compatible with all water-based dye-sublimation inks</p>	<p>3271 DS TackyColor 95 matt</p>	<p>Special matt-coated paper optimized for dye-sublimation inks to finish polyester and polyester coated substrates.</p>
 <p>Infrared hardening inks / latex inks and UV-hardening inks</p>	<p>3746 Vivalux Backlit Film Latex WF 125 matt</p>	<p>Very resistant polyester backlit film – specially developed for use outdoors with latex inks.</p>
 <p>Solvent-based or „mild solvent“ pigmented inks</p>	<p>3565 Aurolux Window Film Solvent EasyTack 240 glossy</p>	<p>Easy handling and application of glossy polyester film thanks to the repositionable EasyTack adhesive.</p>

Outstanding photographic art that leaves a lasting impression

Sihl Digital Imaging introduces TriSolv PhotoArt: a high-quality and versatile photo-realistic poster paper.

To supplement its tried-and-tested TriSolv-PostArt and PrimeArt papers for indoor and outdoor advertising, some with blue reverse side for poster applications, Sihl Digital Imaging now offers a superior poster paper that even beats photo paper when it comes to quality.

This makes it possible to reproduce even higher-class photographic works of art and photos. The advantages of TriSolv PhotoArt are its significantly faster drying time, the higher ink limit and therefore improved color gamut. Compared to many other types of print media for solvent-based inks available on the market, PhotoArt produces a homogeneous gloss in both printed and unprinted areas. Because no rippling occurs when the material is printed with solvent-based or UV-hardening inks, we deliberately dispensed with a PE-filmed base

paper for this wet-strength product. This means we can offer a very interesting and inexpensive alternative to our previous PhotoSOL while maintaining the same printing quality.

TriSolv PhotoArt can be glued easily to wood, metal and wallpaper surfaces and is very scratch-resistant even without lamination.

An ideal print medium for graphic displays, it can be used in a variety of ways the indoor and outdoor sector. Whether high-quality art reproductions in the home, business environment or advertising. Sihl's new TriSolv PhotoArt leaves no wish unfulfilled – colorful, high-contrast posters are perfectly presented and made to last.



Advantages at a glance

- Photo-realistic poster
- Homogeneous gloss in printed and unprinted areas
- Brilliant color reproduction
- Very fast drying time
- High rigidity and stability
- High color saturation saves up to 30% ink
- Ideal for eco and true-solvent inks

Physical properties

Product	TriSolv PhotoArt Paper 210
Product number	3699
Surface	glossy
Grammage	210 g/m ²
Thickness	230 µm (9 mil)
Opacity	>98%
Gloss	78%
Chromaticity:	L* 94.3 a* 1.1 b* - 4,0
Length	45 m
Widths	914 mm, 1067 mm, 1270 mm, 1372 mm, 1600 mm, 1626 mm
Core	3" ø





A combination with added value

Exceptionally popular among our customers are Sihl's easy-to-apply window films, which can be removed without leaving residue thanks to the special EasyTack adhesive.

Until now, the glossy, solvent ink-compatible Aurolux has not been part of this series. In response to numerous requests, however, we now present a combination of these qualities in the form of the 3565 Aurolux Window Film Solvent EasyTack 240 glossy.

The special quality of the Aurolux Backlit compared to Optilux is its glossy, high-quality SOL coating for solvent-based inks, which produces impressive prints with high color density and brilliance both in reflective and back lighting. Thanks to the high ink limit, brilliant colors and a high opacity can be achieved in dark and black areas. The attractive gloss also gives the product a classy look. The coating is ideal for all standard eco, mild and true solvent inks.

Sihl's EasyTack adhesive allows the film to be repositioned several times, has good adhesive properties but is also easily removable. Thanks to its special structure,

bubble and wrinkle-free application is possible without previous training. After application on glass or many other even surfaces, the film can be removed again without any great effort even after a longer period and it leaves behind no residue. This product is also suitable for outdoor use.

EasyTack window films are perfect for shop window dressing and window decoration. Without lettering or numbers, the print is effective both the right way round during daytime through incident lighting, and as a mirror image at night through illumination from behind. This kind of film is also ideal for various kinds of illuminated display systems and represents an interesting alternative to standard films without adhesive reverse side. Combined with Sihl's SOL coating and durable solvent-based inks, the product can also be used in the outdoor sector with no additional protection needed.



Advantages at a glance

- High gloss effect for eco and solvent inks
- Suitable for day and night applications
- Good scratch resistance
- Easy handling and application of film thanks to the repositionable EasyTack adhesive
- Also suitable for areas with a high level of humidity

Physical properties	
Product	Aurolux Window Film Solvent EasyTack 240
Product number	3565
Surface	glossy
Grammage	245 g/m ²
Thickness	240 µm
Opacity	>50%
Gloss 60°	>80
Length	30 m
Widths	914 mm, 1270 mm
Core	3" ø

Backlit Film
 Aurolux Window Film Solvent
 EasyTack 240 glossy
 ■ glossy 3565

Inkjet Backlit Films. Brilliant by day and by night.

Inkjet Backlit Films. For high aims in promotion.

Technical Properties

Thickness	245 g/m ²	ISO 534
Weight	125 µm	ISO 534
Without liner	50%	ISO 2471
	>80	ISO 2813

Printers

Epson R110	Eco-Sol MAX	●●●●
Canon V9050	Eco-Solvent	●●●●
HP DesignJet Z6800	Solvent	●●●●
Epson R110	Eco-Solvent	●●●●
Epson R110	Eco-Solvent	●●●●
HP DesignJet Z6800	Solvent	●●●●
HP DesignJet Z6800	Solvent	●●●●
HP DesignJet Z6800	Solvent	●●●●

● = good
 ○ = fair
 ○ = poor
 ○ = not suitable for water-resistant prints



Striking canvas imitation

Ever since canvas pictures have become such a popular form of decoration, for example, in public buildings, hotels and restaurants, the demand for special media and surfaces that are inexpensive but decorative has increased. The new 3394 Synthetic Canvas Solvent 210 with satin-finish surface has been developed specifically to meet these requirements. It is based on an embossed polypropylene film which looks deceptively like the surface of a real canvas.

Thanks to this design, canvas imitations that look deceptively like the real thing can be printed at minimal expense. The brilliant and also water-resistant prints are suitable for all kinds of decorative purposes in the indoor and outdoor sector as well as for framed applications. The Synthetic Canvas is suitable for va-

rious frame systems. If the film is fixed to the frame with staples, a double-sided adhesive tape is used to reinforce edges because the film is less tear and tear-growth-resistant than real canvas. This little trick makes it possible to produce an inexpensive alternative to the popular canvas prints on stretcher frames.

Even close up, it's difficult to tell the difference between real canvas and Synthetic Canvas.

Compared to genuine linen fabrics, the synthetic alternative actually offers a number of advantages. Apart from being extremely scratch and absolutely water-resistant, the canvas has a sealed surface which means it is also suitable for outdoor use. As a result of its far more homogeneous structure, the typical drawbacks of canvas products, such as texture irregularities, sensitivity to humidity and temperature, etc. are eliminated. The synthetic canvas is also very robust and resistant, for example, to crack formation at the edges. Apart from being used as a canvas substitute, the product is also suitable for a variety of other applications. It has the well-known properties and advantages of polypropylene films, but looks more decorative, stylish and distinctive thanks to its embossed surface texture. The product is suitable for all standard eco, low and true-solvent inks and can also be used in combination with latex inks. Even with a short drying time, this coating produces a high color brilliance and vibrant prints.

The advantages at a glance

- Realistic canvas structure
- Inexpensive and very robust alternative to canvas
- Suitable for all eco and true-solvent inks
- Very durable, water-resistant prints
- Suitable for canvas frame systems

Physical properties

Product	Synthetic Canvas Solvent 210
Product number	3394
Surface	satin
Grammage	140 g/m ²
Thickness	210 µm
Level of whiteness	105
Length	40 m
Widths	914 mm, 1067 mm, 1372 mm
Core	3" ø



Creative window designs with luminous self-adhesive films

If you want to make the most of a shop window, Sihl's EasyTack window films are the perfect solution. The films come in a clear and white-transparent variety and allow maximum creativity. Your customers can advertise creatively and effectively in a simple way and usually on a large area. Sihl's Digital Imaging range includes a large number of self-adhesive window films which turn windows and doors into an attractive eye-catcher.



Apart from looking good, the films can be used as privacy screens for outside windows and glass doors and as sunshields – Sihl's window films are therefore the perfect window decoration. Thanks to their so-called low-tack adhesive, even constantly changing advertising campaigns can be carried out with the appropriate materials. Films with low-tack adhesive allow bubble-free application and easy removal at the end of an advertising campaign, leaving behind no residue. Whether summer or winter, at

work or in the home, the films can be applied to virtually any smooth surface and removed again residue-free. Optimally adapted to different types of printer, the window film produces a high color saturation and an extensive color gamut. An important advantage of the product is that it can be used day and night thanks to its transparency. During the day, the motif is illuminated from outside and is visible indoors, at night, it is backlit by the store lighting and is therefore visible from the outside. Use of superior polyes-

ter films is reflected in the product's very high quality, outstanding dimensional stability and heat-resistance. The antistatic coating on the reverse side is another important feature for processing in printers and subsequent application. The luminous self-adhesive films can be attached to surfaces in two different ways:

1. Wet application with permanent adhesive
2. Dry application with low-tack adhesive

Product	Surface	Product- Nr.	Ink compatibility		Adhesive
			Artificial light	Artificial and Sunlight	
NEW Aurolux Window Film Solvent EasyTack 240	glossy	3565			
WindowGraphx EasyTack WF SA 260	matt	3989			
Backlit Film for Windows EasyTack SA 225	glossy	3903			
SpiriTac Film SA 190	glossy	3675			
Optilux Window Film Solvent EasyTack SA 235	matt	3648			
Transview Clear Film UVC 150	glossy	3360			



Advantages of self-adhesive films at a glance

- High luminosity
- Very high optical density
- Detail reproduction
- Scratch-resistant
- Exceptionally good photographic reproduction
- Very high color saturation for greater color gamut
- Three-dimensional impression
- Fast drying time
- Antistatic reverse side
- Easy application and removal

How is the film applied to a surface?

Here are some step-by-step instructions so that you can make the most of your window decoration.

Step 1



1) Use your fingernail to separate the top corner of the protective film from the self-adhesive material.

2) Remove the first 30 cm of the protective film.

Step 2



Step 3



3) Place the top part of your printed film in the desired position.

4) Remove part of the protective film and press the film to the window, preferably using a squeegee or roller.

Step 4



Step 5



5) Now remove the rest of the protective film.

6) Use the tool to press the complete motif onto the window to prevent bubbles from forming.

Step 6



And there you have your finished window decoration!





Dye-sublimation printing on fabrics

Generally speaking, sublimation in the physical sense refers to the direct transition of a substance from a solid to a gaseous state of passing through an intermediate liquid stage.

Sublimation printing has been traditionally used in the textile industry to dye polyester fabrics or polyester blends. Particularly thick fabrics are dyed on just one side while thinner textiles can be dyed through, for example, flag material. One of the major advantages of this kind of fabric dyeing is the exceptional durability of the colors and their extreme resistance to weather and washing.

The first stage of the dye-sublimation process begins with the printing of a special paper. This is traditionally carried out using the rotogravure printing process, although this is only worthwhile when large quantities are printed because of the effort involved in setting up the machine. This technique is often



Hot calendar

used to print decorative fabrics, such as curtains. Users were always in search of a sample printing and short run process. This is why printing on large-format di-



Banner application

gital printing systems with sublimation dyes became popular in the early 90s. Sublimation inks were initially used in electrostatic printing systems but later, at the turn of the millennium, were also used in inkjet printing. Inkjet systems could initially only be used for very small print runs because the printing speed was significantly slower in comparison to electrostatic printers. These systems have since become significantly faster, however, so that they are now an interesting alternative to traditional techniques.

The second and most decisive step occurs in the hot calendar or hot press, into which the fabric and paper are inserted. The print faces the fabric. How much of the sublimation dye is transferred to the fabric depends on the quality and structure of the special paper. A standard paper usually absorbs a very large amount of the dye during the process so that efficiency is poor. This used to be the problem when good CAD paper was used: although it was compatible with the sublimation pigments and printer, a large

amount of dye bonded with the paper components during the sublimation calendar process. This meant that only a small amount actually dyed the fabric. Simple matt papers are therefore not competitive. The special papers developed by Diatec Group member Diatechnologies for sublimation printing have been optimized in precisely these points. They deliver excellent printing quality, good contour definition and short drying times on standard printing systems with sublimation ink.

We offer two different media in this segment. Our standard paper DS SubliColor has an optimized coating onto which a mirror-inverted image is printed. This paper is placed on the fabric with the printed side facing down and passed through the calendar. The surface does not stick to the fabric's fibres, so that the paper can be easily removed after the transfer process. Our second variety, the DS Tacky-Color, adheres to the surface of the substrate. This helps to prevent the image moving during the hot calendar process and to reduce the



IMPRINT

Published by: Sihl Digital Imaging

Edited by: Janine Buelten

janine.buelten@sihl.de

Sihl GmbH

Kreuzauer Str. 33 · D-52355 Düren

www.sihl.com

Layout: that worx GmbH, Jüchen

Printed by: Pecks-Druck Düren

Images:

„Photo: www.mediaserver.hamburg.de/

C.Spahrbier/R. Hegeler “

copy requested

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Phone +49 (0) 40 29 83 40 04

fabric shrinkage. Depending on requirements, the user now has two optimized media for sublimation printing.

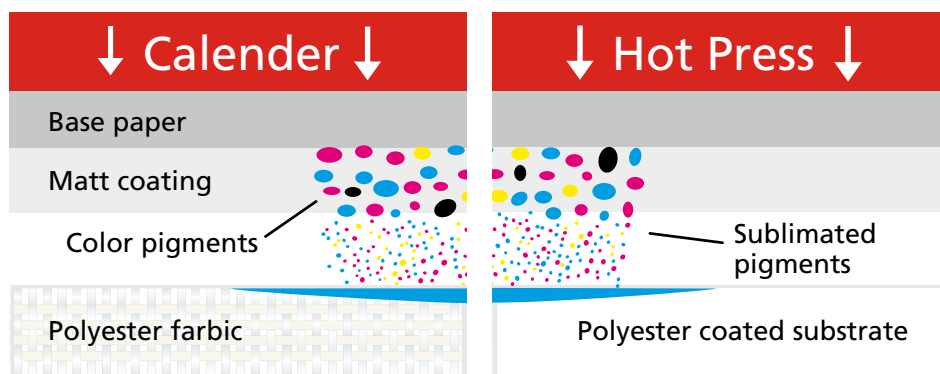
The advantages of this process are, most importantly, that white polyester fabrics or polyester blended substrates can now be easily personalized, which is ideal for team sports jerseys, for example. Individual items can be easily produced. This technique is also an interesting option for banners and decorative fabrics for corporate clients. Sports equipment is also often produced using sublimation printing. Other examples are seasonal runs for skis, surfboards and mugs. All this is now possible at a reasonable price, which is why this way of digitally

printing clothing and other bases has become so popular. The only drawback of sublimation printing is that only light-colored bases can be dyed. One way to print dark fabrics is to use our special T-shirt transfer material for dark fabrics: here, a white film-like coating is placed on the fabric and then pressed on with an iron. Read more about the Transfer papers in Sprint issue 14.

Our product range includes appropriate media for different printing systems:
Inkjet printers: **4232 Transfer paper for dark textiles 175**
Laser printers: **4295 Transfer paper for dark textiles 165**

How does sublimation printing work in practice?

1. Sublimation ink takes on a gaseous form during the hot calender process where temperatures are approx. 180-200°C.
2. The polyester „opens“ its pores, in other words, the fabric fibres absorb the dye.
3. The color bonds with the polyester synthetic fibres and then becomes light-fast, water-resistant and weather-resistant.



Graphic depiction of sublimation during the press procedure

How durable is the print?

Sublimation printing is very resistant to external influences such as UV rays. Thanks to its structure, special protection is not necessary. The print is scratch-resistant and machine-washable. Colors remain bright and are not prone to fading. If you have any questions on the printing procedure, contact Bruno Fouquet bfouquet@diatechnologies.fr

Communication with new logos

If you wish to publish our new logos in your documents, we would be happy to help you. Various file formats and sizes are available for different kinds of applications.

We would also be pleased to send you the latest information for your advertising brochures or exhibition stands.

Simply write to:

Janine.buelten@sihl.de

And remember:

You can also download press releases from our homepage free of charge:

www.sihl.de > news > presse

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