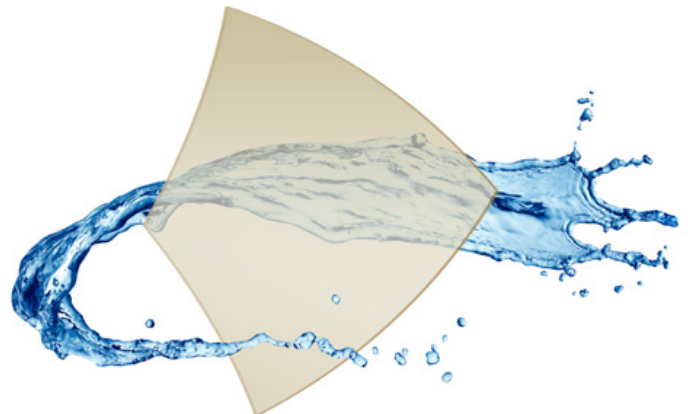




## Flenex

### PRODUCT BROCHURE

High quality, water washable LAM and analogue plates



# **FLENEX**

## Overview

**The European print market has evolved significantly over the last 10 years, both in terms of customer demand and available print technologies. While downward trends have been common for many commercial print applications, printed labels & packaging continue to see growth.**

From a brand owner perspective, the drive is to improve product visibility and shelf appeal in store, while minimising operational costs and maximising production efficiencies. For label converters, this demand is driving the adoption of new technologies, particularly in the flexo process, the predominant technology in Europe for label conversion.

- ▶ Brand owners constantly strive to improve product visibility and shelf appeal in a cost-effective manner
- ▶ Pressure on printers & trade shops to offer quality and consistency
- ▶ Challenge for solution suppliers to address and even anticipate these trends





# Fujifilm solutions for labels and packaging

Fujifilm is a stable, long term partner focussed on delivering high quality, technically advanced print solutions that help printers and converters develop a competitive advantage and grow their businesses. The company's financial stability and unprecedented investment in R&D enable it to develop proprietary technologies for best-in-class printing.

## Labels and packaging

Fujifilm's expertise in the label and packaging market is diverse, with the company already a major supplier of aluminium plates to offset packaging printers and UV ink to narrow web label converters. The company's infrastructure is therefore built around offering exceptional service for critical consumables purchases.

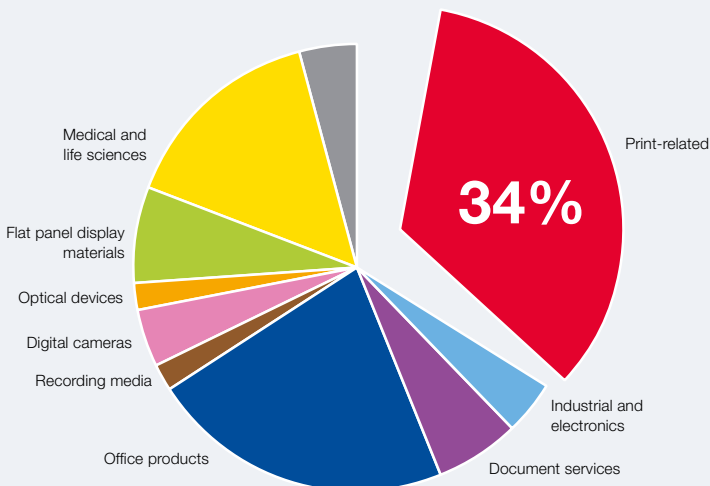
For label converters in particular, Fujifilm offers a comprehensive range of inks

and associated products under the brand name 'Sericol Uvivid' that are designed to maximise throughput and simplify label production. Whether it is simplifying the process of colour matching or reducing the cost of a more expensive production method, the right ink can have a major impact on the printing of a high quality label. And with a high density white ink within the Sericol Uvivid range, Fujifilm is well placed to add value to any label production process.

Fujifilm is now adding a high quality, water-washable flexo plate to its portfolio, allowing label converters to improve the simplicity and efficiency of flexo plate production. In addition, Fujifilm's emerging inkjet portfolio means the company is also in an excellent position to offer high quality solutions for sample and prototype making, along with shorter run label and packaging production applications.



| Technology                   | Label          | Flexible packaging | Folding carton  | Corrugated      |
|------------------------------|----------------|--------------------|-----------------|-----------------|
| <b>Flexo</b>                 | Flenex, Uvivid | Flenex, Uvivid     | Flenex          | Flenex          |
| <b>Offset</b>                |                |                    | Brillia plates  |                 |
| <b>Digital - prototyping</b> |                | Acuity LED 1600    | Acuity LED 1600 | Acuity LED 1600 |
| <b>Digital - production</b>  | Graphium       |                    | Jet Press 720F  | Onset           |



## Fujifilm and print

Fujifilm's business is diverse, but within this diversity is a focus on technologies that enhance many different types of print, with around one third of the company's total global revenue connected to print production.

Whether it's the printing of photos, newspapers or books for consumer use, document printing for office environments or posters and billboards advertising the latest brand campaigns, Fujifilm technologies are leading the way in improving the quality and efficiency of print production all over the world.



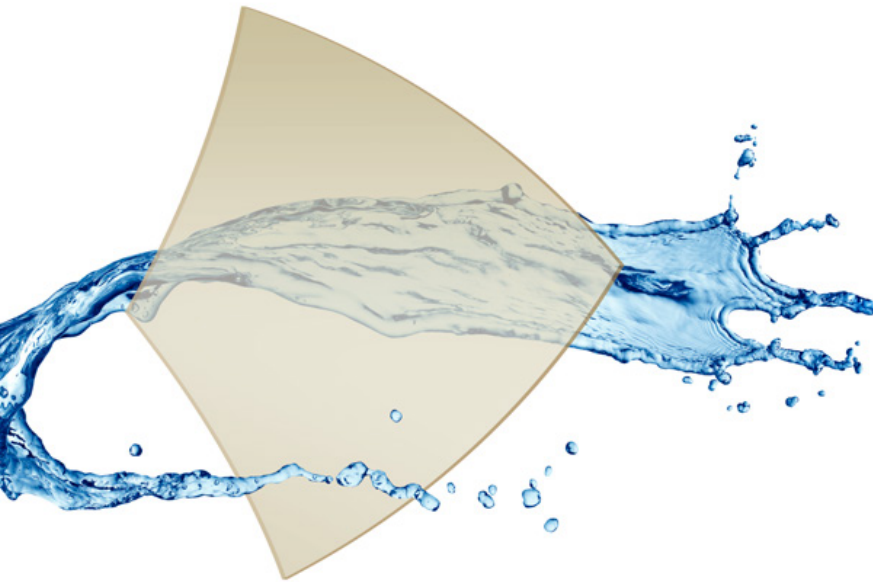
## Flenex water-washable plates

### **FLENEX**

Flenex is a water-washable flexo plate that provides the highest print quality and productivity, while significantly lowering the cost-in-use compared to thermal, solvent or other water-wash plate technologies.

The key benefits of Flenex water-washable plates are:

- ▶ Total platemaking time under 40 minutes
- ▶ Highest flexo quality (up to 200lpi, 1% process dot)
- ▶ More output per shift for class-leading productivity



### **Technology overview**

Flenex photopolymer plates contain a special rubber-based compound that offers a number of inherent advantages over other elastomeric materials from which most other flexo plates are made. In particular, rubber is not oxygen sensitive, which minimises the effect oxygen in the air has on the dot shape and the complexity of the system to eliminate oxygen from the plate production process. The other advantages of a rubber-based plate material include:

- ▶ Reduced dot gain
- ▶ Better ink transfer for cleaner, brighter print results
- ▶ Faster exposure and washout times
- ▶ Much more durable
- ▶ Mild washout with water and dishwasher soap
- ▶ Reduced plate swell

### **Compatibility**

Flenex plates are compatible with leading Flexo LAM CTP devices such as Screen PlateRite FX, Esko CDI and Xeikon ThermoflexX Series as well as with the main water wash processors in the industry.

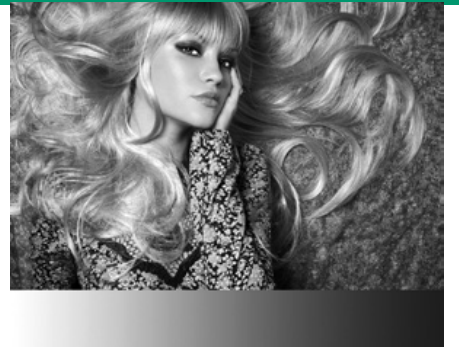
Both the analogue and digital versions of Flenex can be used with any UV, water-based or solvent-based inks.





## High quality print

The Flenex water-washable plate system does far more than simply eliminate the need for solvents and wicking cloths. It delivers longer runs while producing a consistent 200lpi at 4,400 dpi, 1% process dot structure for superb high quality print.

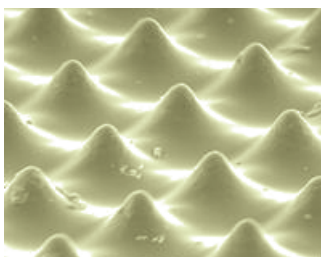
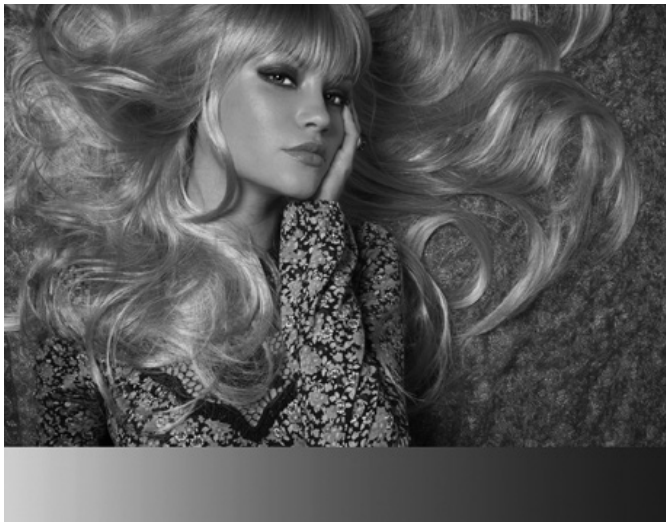


Original image

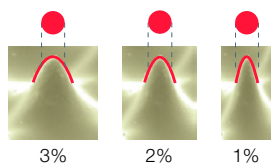
### Flat top dot structure

The rubber-based compound means a 1% flat top dot can be achieved without complex systems to eliminate oxygen, and results in lower dot gain. In addition, better ink transfer produces noticeably cleaner and brighter print results.

#### Solvent plate (round-top-dot)

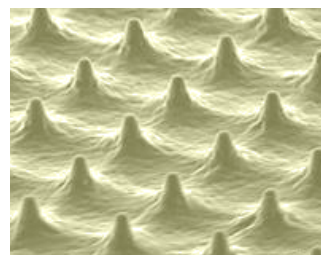


Round-top-dot

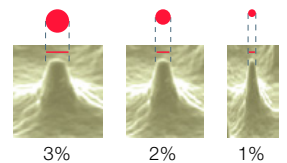


Poor gradation

#### Flenex plate (flat-top-dot)



Flat-top-dot



High gradation

### The benefits of higher image quality

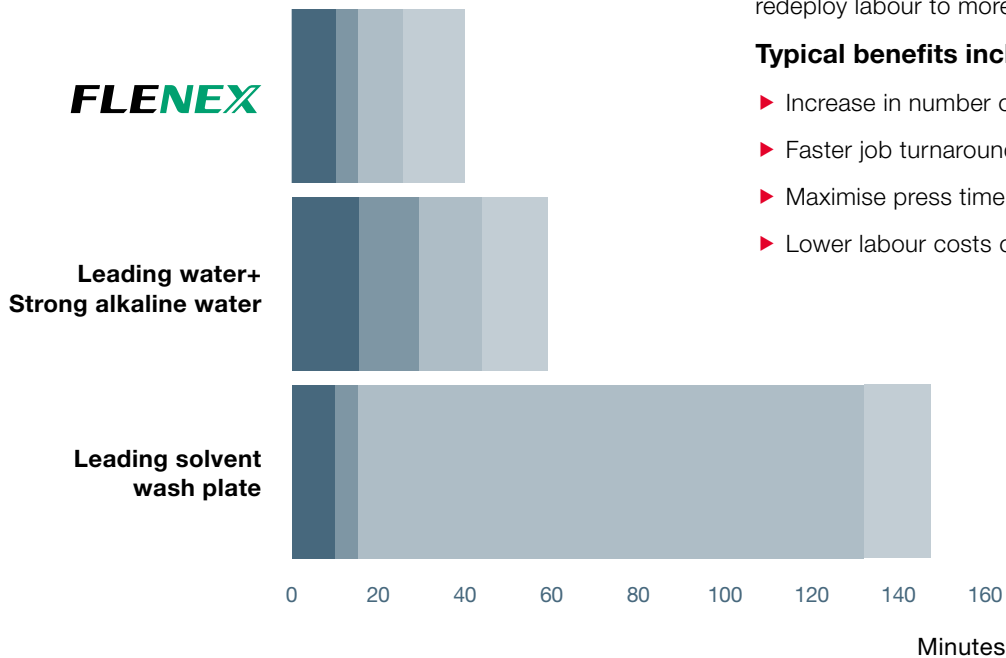
Opportunity to grow higher quality, high end business

Crisper, cleaner edges and bright colours

More consistent print results

## Flenex benefits your business

- Exposure
- Washout
- Drying
- Post-exposure and detack



### Higher productivity

Flenex water-washable plates reduce platemaking processing times to less than 40 minutes, 300% faster than leading solvent systems and 1.5 times faster than current thermal and water-wash technologies. Faster platemaking means more time on press and a dramatic increase in output per shift, freeing you to redeploy labour to more value-added activities.

#### Typical benefits include:

- ▶ Increase in number of plates produced
- ▶ Faster job turnaround
- ▶ Maximise press time
- ▶ Lower labour costs or opportunity to redeploy

### Lower cost-in-use

Because of the simplicity of Flenex plate processing, the expense of higher-cost solvent and thermal processors as well as potential upcharges on associated consumables is avoided. The Flenex system therefore represents the lowest cost in use for the production of flexo plates. Here is a simple comparison of the costs of solvent and thermal systems:

#### Additional costs of solvent systems

- ▶ Solvent used to process the plate
- ▶ Film or nitrogen consumables
- ▶ More expensive solvent processing equipment
- ▶ Energy use
- ▶ Waste disposal and associated regulatory and safety costs

#### Additional costs of thermal systems

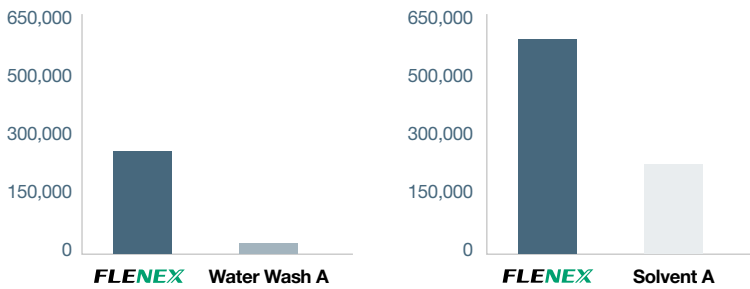
- ▶ Thermal wicking cloth and thermal processing
- ▶ More expensive thermal processing equipment
- ▶ Waste disposal and associated regulatory and safety costs



### More durable

Flenex is proven to deliver significant improvements in plate durability and reductions in plate swell, thanks to its unique technology. This means each plate is able to perform longer on press than competitive plates. This increases overall press uptime and results in longer print runs and greater overall profitability.

#### Durability



| Plates            | Flenex            | Water Wash A |
|-------------------|-------------------|--------------|
| Durability (feet) | 262,467           | 16,404       |
| Application       | Stickers/Labels   |              |
| Printing Press    | Mark Andy         |              |
| Paper Type        | Tack Paper        |              |
| Press Speed       | 70 - 100 m/minute |              |
| Plate Type        | Digital 1.14 mm   |              |

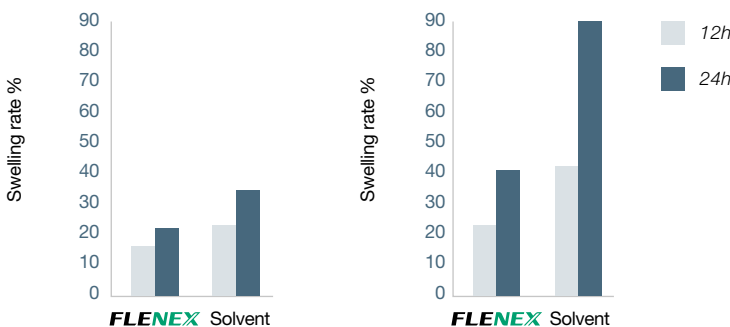
| Plates            | Flenex          | Solvent A |
|-------------------|-----------------|-----------|
| Durability (feet) | 590,051         | 262,467   |
| Application       | Cartons         |           |
| Printing Press    | OMET            |           |
| Paper Type        | Coated Paper    |           |
| Press Speed       | 55 m/minute     |           |
| Plate Type        | Digital 1.14 mm |           |

Flenex plates were 4 to 10 times more durable than the most commonly used water washable flexo plates and more than twice as durable as solvent technologies.

### Plate Swell

UV-ink (Golden), 50°C

Monomer



In 12 and 24 hour plate swell tests, Flenex resulted in 25% to 45% less swelling compared to solvent plates.

### Less impact on the environment

The processing of Flenex plates is accomplished with only a mild detergent and typically allows for the residual solution to be treated as waste water after removing a small amount of residual particulate. This particulate can normally be treated as common waste with minimal, if any, environmental impact.\* Compare this to the known impact solvents and wicking cloths make on the environment during their life cycle of manufacture, application and disposal, and you'll see how Flenex is a much more sustainable solution.

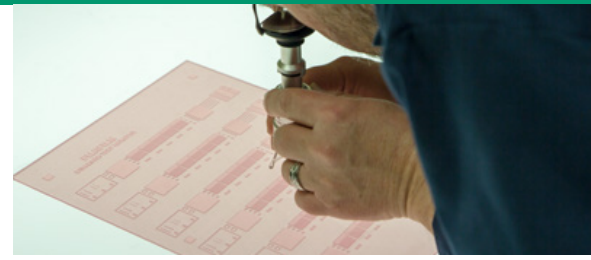
Not working with solvents is also a huge benefit from a health and safety perspective. In fact the unique low pH level of Flenex provides a safer environment for even those working with other water-wash plates requiring high alkaline cleaning solutions, with no more residual industrial waste.

\* Local regulations should always be checked to ensure correct disposal

### Fujifilm and sustainability

Fujifilm's basic approach to Corporate Social Responsibility (CSR) is to contribute to the sustainable development of society by putting into practice the Group's Corporate Philosophy: "Our overarching aim is to help enhance the quality of life of people worldwide with leading-edge, proprietary technologies, achieving this vision through sincere and fair business activities."

Fujifilm has a long history of responsible and sustainable business development, acknowledged regularly through its inclusion in the Dow Jones Sustainability and FTSE4Good global indices, and is proud to publish its results in an annual Sustainability Report.



## Specifications

| Main applications     | Flexible packing, stickers/labels, envelopes, cartons, paper/plastic bags, varnish coating |                         | Varnish coating           |
|-----------------------|--|-------------------------|---------------------------|
| Plate types           | Analogue plates  | Digital plates          | Analogue / digital plates |
| Support               | Polyester film 0.125 mm  | Polyester film 0.125 mm | Polyester film 0.250 mm   |
| Thickness             | 1.14 mm  | 1.14 mm                 | 0.95 mm                   |
|                       | 1.70 mm  | 1.70 mm                 | 1.14 mm                   |
|                       | 2.54 mm  | 2.54 mm                 | -                         |
|                       | 2.84 mm  | 2.84 mm                 | -                         |
| Size*                 | 610 x 762 mm   | 533 x 508 mm            | 850 x 1070 mm             |
|                       | 762 x 1016 mm  | 635 x 762 mm            | 900 x 1200 mm             |
|                       | 900 x 1200 mm  | 900 x 1200 mm           |                           |
|                       | 1067 x 1524 mm **  | 1067 x 1524 mm **       |                           |
| Hardness (Shore A)*** | 74/77/79 (°) 1.14 mm   | 74/77/79 (°) 1.14 mm    | 80 (°) 0.95 mm            |
|                       | 62/68/74 (°) 1.70 mm   | 62/68/74 (°) 1.70 mm    | 78 (°) 1.14 mm            |
|                       | 66 (°) 2.54 mm   | 66 (°) 2.54 mm          | -                         |
|                       | 60/66 (°) 2.84 mm  | 60/66 (°) 2.84 mm       | -                         |
| Ink compatibility     | Water-based ink  | Water-based ink         | Water-based/UV varnish    |
|                       | UV ink   | UV ink                  |                           |
|                       | Solvent ink  | Solvent ink             |                           |
|                       | Water-based/UV varnish   | Water-based/UV varnish  |                           |

\* The number of sheets per case may vary by product grade. Please contact your Fujifilm representative with any questions

\*\* Only available in 1.14 and 1.70 mm thicknesses

\*\*\* Fujifilm measurements

Please contact your local Fujifilm partner or visit [www.fujifilm.eu/print](http://www.fujifilm.eu/print)

### For further information:

**Web** [www.fujifilm.eu/print](http://www.fujifilm.eu/print)

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