



Uvijet KV inks

The art (and science) of thermoforming

Color, design, finish effects, images

Thermoformers have long been able to print designs and mould them. Suitable solvent-based screen inks were developed more than 25 years ago, followed by UV-curing screen inks around ten years later. These are easier to handle and less harmful to the environment. But screen printing demands skill, is time-consuming and therefore costly. Additionally, it's not possible to obtain near-photo images.

Consequently, much graphic printing has moved to UV-curing inkjet inks. These dry instantly, producing strong colors, and adhere well to a wide range of substrates, including board, metal, glass and plastic. They produce consistently high quality print. Our aim was to produce equally excellent results after thermoforming, which poses a number of challenges.

Elongation – over 1000%

Fujifilm has reinvented its UV-curing ink specifically for thermoforming. Uvijet KV jets exactly like a normal UV ink, but during the forming process becomes thermo-plastic, elongates, and finally cools to its original properties. Its elongation is excellent – right up to the usable limit of the substrate – even on 90° corners.

Thermoforms perfectly at 302 392°F (150-200°C)

Some substrates and thermoforming processes work better with higher temperatures. Uvijet KV is formulated to perform perfectly in a wide range of situations, all the way up to 392°F. It's as flexible as you need it to be.

First-surface and Second-surface forming - Polystyrene, PETG, Polycarbonate, Acrylic, PVC, ABS

If you can thermoform it, Uvijet KV will give excellent results. Its unique properties mean it works well on all the materials your customers choose in thicknesses of 0.8mm to 2mm.

No cracking, no flaking, no defects

To work perfectly every time, Uvijet KV's components must be absolutely pure, which entails rigorous scrutiny and testing. We make sure the entire process keeps it that way, constantly analysing at each stage throughout production.

The manufacturing process uses Fujifilm's proprietary 'Micro-V' dispersion technology, which mills pigments down to an ultra-fine, sub-micron scale. It's a demanding ink to produce, but the results are worth it.

Global research, excellent science

Developing Uvijet KV was a complex challenge. Along the way we made discoveries that have enabled Fujifilm to register a number of patents relating to thermoforming ink.

Thanks to a global collaboration from our scientists we were able to fine-tune the elastic modulus and manage precisely the glass transition temperature of the ink. These properties control how the ink deforms then resets during and after thermoforming, all the while having to give the same outstanding colors and definition as with two-dimensional media.



NEW Uvijet KV

UV inkjet thermoforming inks

Uvijet KV inks are designed for the production of decorative print in deep draw thermoforming applications but also maintain the ability to produce general purpose prints. KV inks have been developed to be printed on Fujifilm Acuity presses opening up many creative design and customization opportunities for thermoformed products.

The balanced 4 color process set delivers excellent graphic reproduction with near-photographic image quality and vibrant colors. The unique formulation of the product enables use in certain applications where the draw is in excess of 1000% elongation.

Features

- ▶ Developed for deep-draw thermoforming
- ▶ Outstanding adhesion range to wide range of thermoformed media
- ▶ Excellent finishing properties, bending, creasing, routing, guillotining
- ▶ UV cure for immediate use
- ▶ Vibrant CMYK color set
- ▶ Near photographic print quality
- ▶ Recommended for both internal and external applications
- ▶ Anti-reflective low satin finish

Uvijet



Uvijet KV Color Range

- KV215 Cyan
- KV052 Yellow
- KV867 Magenta
- KV004 Black
- KV021 White

Available in 2 liter sealed pouches.

Some forming applications on clear materials may require a white back-up print. In these cases, Fujifilm recommends the use of a UV screen printed ink, Uviform 3D, which has also been designed specifically for thermoforming applications.

Please contact your local Fujifilm partner or visit www.fujifilminkjet.com/uvijet-kv-inks

For further information:

Web

www.fujifilminkjet.com/uvijet-kv-inks
www.fujifilmusa.com/products/graphic_arts_printing