

## Uvijet KO

UV Curing Ink System for Acuity Select Inkjet Printers

### PRODUCT INFORMATION

#### Features

- Conventional UV ink system
- Suitable for use on all Acuity models
- Fast cure for high production output
- Excellent inter-coat lay down for backlit and solid prints
- Intense colours with a wide colour gamut
- Ultra-low print odour
- Wide adhesion range
- Recommended for both internal and external applications
- Suitable for decoration of uneven substrates

#### Ink Properties

The Uvijet KO ink range is a high quality UV curable inkjet system for piezo drop-on-demand printheads, specifically developed for Acuity Select printers. The inks offer superb dot reproduction, light-fast, bright colours and adhere to a wide range of rigid and flexible uncoated materials.

#### Colour Range

KO052 Yellow  
 KO867 Magenta  
 KO335 Light Magenta  
 KO215 Cyan  
 KO255 Light Cyan  
 KO004 Black

Supplied in 2 litre sealed pouches.

KO021 White

Supplied in 1 litre sealed pouches.

QV017 UV Flush  
 ZE680 Fusion Adhesion Promoter  
 ZE700 Fusion Ultra  
 ZE720 Fusion Adhesion Master

Available in 1 litre containers.

#### Application Range

Uvijet KO inks are formulated specifically to maximise the performance of Fujifilm's Acuity UV curing printers. These printers accept rigid and flexible materials up to 48mm thick and Uvijet KO inks are designed to decorate a wide range of uncoated media. For certain media, however, it is advisable to use a primer to improve adhesion – refer to summary table.

Media Type	Adhesion Characteristics
Display Board	✓✓✓
Corrugated Board	✓✓✓
Foam-centred Board	✓✓✓
Foam PVC	✓ (A)+(C) will improve adhesion to ✓✓✓✓
Acrylic	✓ (A) will improve adhesion to ✓✓✓
Semi Rigid PVC	✓✓ (C) will improve adhesion to ✓✓✓
Self-adhesive PVC	✓✓
Gloss Rigid PVC	✓ (C) will improve adhesion to ✓✓✓
Fluted Polypropylene	✓ (B) will improve adhesion to ✓✓✓
Polyethylene	✓ (B) will improve adhesion to ✓✓✓
Paper	✓✓✓
Polycarbonate	✓ (C) will improve adhesion to ✓✓✓
Polystyrene	✓ (C) will improve adhesion to ✓✓✓ <b>NOTE: DO NOT USE ZE680/ZE720</b>
Digital Dibond	✓✓

**Key:** Excellent ✓✓✓ Good ✓✓ Fair ✓

*A = ZE680 Fusion Adhesion Promoter may optimise performance  
 B = ZE720 Fusion Adhesion Master may optimise performance  
 C = ZE700 Fusion Ultra*

**THE END USER MUST DETERMINE THE SUITABILITY OF THIS PRODUCT FOR THE INTENDED USE PRIOR TO PRODUCTION**

#### Curing

Excellent cure and adhesion are achieved immediately upon print and UV curing. However, maximum adhesion, chemical, scuff and scratch resistance may not be obtained until 24 hours after initial curing. The actual level of cure will depend upon ink thickness, substrate and the UV curing lamps or pass modes being used. Superior through cure may be obtained by reducing the print speed by selection of an alternative print mode to increase the overall UV dose.

#### Pre-production Tests

Uvijet KO ink is formulated to adhere to most plastics. For certain applications where finishing prints may require cutting, drilling or routing, it is recommended that a Uvijet Fusion Primer is used prior to printing to aid adhesion and mechanical performance.

For polypropylene and polyolefin materials such as Correx which are inert by nature, it is strongly recommended that substrates are tested before a commercial run.

Please note: If the machine is stopped for a period of time it is advisable to carry out a nozzle or head test to ensure all nozzles are functioning.

### Plastics

Certain synthetics may be impregnated with lubricants which, like plasticisers, migrate impairing adhesion and block resistance for a considerable period after printing. There may also be surface contamination from residue of glues and adhesives from backing sheets. These can be overcome by wiping the surface with isopropyl alcohol (IPA) before printing.

To reduce the risk of problems generated by the build-up of static electricity it is advisable to take the appropriate precautions. These may include passing an earthed antistatic brush over the material, installing an antistatic bar or using an ionised airgun prior to printing. Allow static generated from protective sheets to dissipate before printing. Ensure that the printer is sited as per recommended humidity/temperature recommendations 40-70% RH, 18-30°C.

### Chemical and Abrasion Resistance

Uvijet KO inks have good chemical and excellent abrasion resistance. However, for optimum resistance over-varnishing with a durable UV screen varnish such as Uvibond UV383 is recommended.

### Outdoor Use

Accelerated weathering tests have been carried out in a Xenon Arc Weatherometer set to the SAEJ 1960 Standard. Under these conditions the accelerated weathering of Uvijet KO inks equates to approximately 24 months outdoor exposure in a temperate climate such as Northern Europe.

For fluted polyethylene materials such as Correx, it is recommended that Uvijet Fusion Adhesion Master ZE720 is applied prior to printing to maximise outdoor weather resistance.

### Storage

Uvijet KO ink should not be stored in direct sunlight or near heat sources and should be kept away from peroxides. For optimum shelf-life, products should be stored at moderate temperatures between 5°C and 30°C. Storage outside of these temperatures may lead to deterioration in the performance of the products.

When stored in a cool environment the inks are expected to have a shelf-life of 12 months from date of manufacture.

### Fujifilm Speciality Ink Systems Limited:

- Has certification to the International Environmental Standard, ISO 14001.

- Has certification to the Quality Management Standard, ISO 9001.
- Has certification to the Occupational Health and Safety Standard, OHSAS 18001.
- Is committed to minimising the risk to users of our products, and also to minimising the impact of our activities on the environment, from formulation through to production and supply.
- Research and development team, work to an in house Health Safety and Environmental policy, termed 'Design for Health, Safety and Environment', with the aim of proactively developing products with the least impact on health, safety and the environment.
- Regularly review and monitor our impacts and activities, setting objectives and targets as part of a continual improvement process.
- Is committed to reducing waste through better use of raw materials, energy, water, re-use and recycling.

### Safety and Handling

Uvijet KO Inks:

- Have a flash point greater than 60°C and are therefore not classified as 'dangerous substance' under the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR).

Comprehensive information on the safety and handling of Uvijet inks is given in the appropriate Safety Data Sheets.

### Environmental Information

Uvijet KO Inks:

- Do not contain ozone-depleting chemicals as described in the Montreal Convention.
- Are formulated free from aromatic hydrocarbons.
- Are free from any volatile solvent and can therefore be considered to have less impact on the environment when compared to solvent-based products.

Uvijet Fusion Adhesion Promoter - ZE680 and Uvijet Fusion Ultra - ZE700

- Do not contain ozone-depleting chemicals as described in the Montreal Convention.
- Are formulated free from aromatic hydrocarbons.

Uvijet Fusion Adhesion Master - ZE720

- Does not contain ozone-depleting chemicals as described in the Montreal Convention.

Uvijet KO inks are approved for Nordic Swan Ecolabelled printers. The Nordic Ecolabel is a well-established and internationally recognised environmental labelling scheme that contributes to sustainable consumption and helps consumers identify environmentally-friendly products.

The information and recommendations contained in this Product Information sheet, as well as technical advice otherwise given by representatives of Fujifilm Speciality Ink Systems Limited and its associated companies, whether verbally or in writing, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing stocks and other materials vary. For the same reason our products are sold without warranty and on condition that users shall make their own tests to satisfy themselves that they will meet fully their particular requirements. Our policy of continuous product improvement might make some of the information contained in this Product Information sheet out of date and users are requested to ensure that they follow current recommendations.

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