



## Uvijet HZ

UV- LED Curing Thermoforming Ink System for Acuity Prime Series Inkjet Printers

Uvijet HZ inks are exclusively designed for use to produce decorative print involving deep-draw thermoforming, line bending and dome blowing applications when printed on the Acuity Prime series.

The table below detail the available data on adhesion and forming performance of the range. Please note that these are generic recommendations and all substrates should be tested before use to ensure that the finish print performs as required for the end application.

Media Type	Adhesion	Forming (Outside)	Forming (Inside)
<b>White Substrate</b>			
PS	✓✓✓	✓✓✓	-
HIPS	✓✓✓	✓✓✓	-
ABS	✓✓	✓✓✓	-
PVC	✓✓✓	✓✓✓	-
<b>Transparent Substrate</b>			
PETG	✓✓✓	✓✓✓	✓✓
PC	✓✓✓	✓✓✓	✓
Cast Acrylic	✓✓	✓✓✓	✓

Key: Excellent ✓✓✓    Good ✓✓    Fair ✓

**Features:**

- Cured by conventional UV-LED lamps
- Developed for deep-draw thermoforming
- Outstanding adhesion range
- High elongation
- Excellent finishing properties, bending, creasing, routing, guillotining
- Fast cure for immediate use
- CMYK W Lc Lm colour set for near photographic print quality
- Recommended for internal and external applications
- Anti-reflective, low satin finish
- Forms perfectly between 150-200°C (302-292°F)

**Ink Properties**

The Uvijet HZ ink range is a high quality UV-LED curable inkjet system designed for piezo drop-on-demand printheads. The inks offer superb dot reproduction, light-fast colours with excellent adhesion and elongation on a wide range of materials commonly used in thermoforming applications.

**Product range**

Product code	Product Description	Pack Size (Pouch)
HZ215	UV LED Cyan	2 L
HZ867	UV LED Magenta	2 L
HZ052	UV LED Yellow	2 L
HZ004	UV LED Black	2 L
HZ021	UV LED White	1 L
HZ255	Light Cyan	2 L
HZ355	Light Magenta	2 L
HM-HC	Flush	1 L

**Application Range**

Uvijet HZ inks are specifically formulated to maximise the performance of the Acuity Prime.

Uvijet HZ inks are designed to decorate rigid plastic materials commonly used in thermoforming. Some forming applications on clear materials may require a white back-up print. In these cases, the use of white as a back-up layer on clear materials can be undertaken with HZ021 White or if a screen printing solution is required, with Omniplus UL021 which has been designed for thermoforming applications.

It is recommended that if Uvijet HZ is used for a non-thermo forming application, that prints are only stacked in small numbers to minimise the weight in order to reduce the risk of blocking. Ideally prints should be racked.

Performance of ink on substrate may vary across substrate manufacturers.

## **IMPORTANT**

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

Excellent cure and adhesion are achieved immediately upon print and UV-LED 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 output of the UV-LED curing lamps being used. Superior through cure may be obtained by reducing the print speed to increase the overall UV-LED dose.

#### **Pre-production Tests**

Uvijet HZ ink has been engineered primarily for thermoforming applications; its use as a general purpose graphic ink needs to be carefully assessed.

#### **Plastics**

Cast acrylics need to be dried out for approximately 24 hours at 80oC. Failure to do so may cause the print to blister when formed. Certain plastics may contain lubricants which, like plasticisers, migrate impairing adhesion and block resistance. There may also be residues from glues and adhesives used on backing sheets. This 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 pass an earthed anti-static brush over the material 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 oC.

#### **Chemical and Abrasion Resistance**

Uvijet HK inks have good water and abrasion resistance.

#### **Print Head Warranty**

Fujifilm warrant that Uvijet HZ inks have been formulated to be compatible with the ink supply system of Acuity printers. These inks must be used in accordance with the operating and servicing recommendations in the Acuity Prime manual and Fujifilm's ink storage conditions.

In the unlikely event that Fujifilm inks are proven to be the cause of a breakdown, Fujifilm will replace the defective parts. In the case of a claim, any defective part will be subject to analysis in our quality assurance laboratory to determine the cause and extent of damage due to ink performance. This warranty is in addition to that set out in Fujifilm's standard terms and conditions of supply.

#### **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 HZ inks equates to approximately 24 months outdoor exposure in a temperate climate such as Northern Europe.

#### **Storage**

Uvijet HZ 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.

## Safety and Handling

Uvijet HZ Inks:

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

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

## Environmental Information

Uvijet HZ 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.

## 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, ISO 45001.
- 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.



Uvijet HZ has gained UL GREENGUARD Gold Certification.

This helps manufacturers create - and helps buyers identify - interior products and materials that have low chemical emissions. GREENGUARD Certification is part of UL Environment, a business unit of UL (Underwriters Laboratories). GREENGUARD Certification. More detail here: [ul.com/gg](http://ul.com/gg).

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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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