



FUJIFILM

# Uvijet HZ

UV-LED CURING THERMOFORMING INKS

## Uvijet

Uvijet HZ inks are exclusively designed for the production of decorative print in deep draw thermoforming applications printed on Acuity Prime LED inkjet printers. The ink 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.*

### Uvijet HZ Features

Developed for deep-draw thermoforming, forming perfectly between 302-392° F (150-200° C)

Cured by LED lamps for immediate use and recommended for both internal and external applications

Excellent finishing properties including bending, creasing, routing and guillotining

Outstanding adhesion range and elongation

CMYKW color set for near photographic print quality

Anti-reflective low satin finish

## 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 colors with excellent adhesion and elongation on a wide range of materials commonly used in thermoforming applications.

## APPLICATION RANGE

Uvijet HZ inks are formulated specifically to maximize the benefits of Fujifilm's Acuity Prime UV-LED curing printers. 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, Fujifilm recommends HZ021 White which has also been designed specifically for thermoforming applications.

In some cases the use of Uvijet HZ can lead to excessive sticking to the mold after forming, especially with thin materials. Where this occurs, a silicone release agent (ZEA09), should be wiped on the mold prior to forming in order to optimize release.

It is recommended if Uvijet HZ is used for a non-thermo forming application, prints are only stacked in small numbers to minimize 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.

*The end user must determine the stability of this product for the intended use prior to production.*

## 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.

## CURING

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.

## CHEMICAL AND ABRASION RESISTANCE

Uvijet HZ inks have good water and abrasion resistance.

## PLASTICS

Certain plastics may contain lubricants which, like plasticizers, 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 cited as per recommended humidity/temperature recommendations 40 - 70% RH, 64°F to 86°F (18°C to 30°C).

Adhesion Chart			
Media Type	Adhesion	Forming (Outside)	Forming (Inside)
Polystyrene	★★★	★★★	-
Styrene (HIPS)	★★★	★★★	-
ABS	★★	★★★	-
PVC	★★★	★★★	-
PETG	★★★	★★★	★★
Polycarbonate	★★★	★★★	★
Cast Acrylic	★★	★★★	★

Excellent ★★★ Good ★★ Fair ★

## OUTDOOR USE

Accelerated weathering tests have been carried out in a Xenon Arc Weatherometer set to the SAEJ1960 standard. Under these conditions the accelerated weathering of Uvijet HZ inks equates to approximately 12 months outdoor exposure in a temperate climate.

## 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 41°F to 86°F (5°C to 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.

## PRINT HEAD WARRANTY

Fujifilm warrant that Uvijet HZ inks have been formulated to be compatible with the ink supply system of the Acuity Prime printers and will not cause damage to the print heads, providing these inks are 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, then 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 from date of manufacture.

*The information and recommendations contained in this Technical Data Sheet, as well as technical advice otherwise given by representatives of our Company, 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 Technical Data Sheet out of date and users are requested to ensure that they follow current recommendations.*





## Uvijet HZ Specifications

### COLORS & SIZING

Supplied in 2 liter pouches:

- HZ-052 Yellow
- HZ-867 Magenta
- HZ-215 Cyan
- HZ-004 Black

Supplied in 1 liter containers:

- HZ-021 White
- HM-HC Head Conditioner

### SAFETY & HANDLING

Have a flash point greater than 131° F (55° 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 ink is given in the appropriate Fujifilm Safety Data Sheets. Sheets available upon request.

### ENVIRONMENTAL INFORMATION

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 HZ ink is approved for Nordic Swan Ecolabelled printers.

## Fujifilm Specifications

- Certified to the International Environmental Standard ISO 14001.
- Certified to the Quality Management Standard ISO 9001.
- Certified to the Occupational Health and Safety Standard ISO 45001.
- Committed to minimizing the risk to users of our products, and also to minimizing the impact of our activities on the environment, from formulation through 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). Find more detail at [ul.com/gg](http://ul.com/gg).





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