

**INK, HEART & SOUL**

## **TECHNICAL DATA SHEET**

# **SICURA JET D K INK**

High Performance single-pass UV-curable inkjet ink for drop-on-demand inkjet printing

## SICURA Jet D K

The SICURA Jet D K is an UV-curable and pigment-based deep black ink designed for industrial inkjet printing specialized for sharp edges and high resolutions in the area of coding & marking. The SICURA Jet D K is targeted at a wide range of label and packaging applications.

The SICURA Jet D K has been developed for single-pass, piezo, drop-on-demand industrial inkjet printing at high resolution using printheads from Konica Minolta, Ricoh, Seiko, Toshiba or Xaar. The ink is able to generate low droplet volumes at high frequencies.

This inkjet ink can be used for printing on rigid as well as thin and flexible materials or in direct-to-object printing projects.

The SICURA Jet D K is designed for extremely good adhesion on many types of substrates including plastic labels or foils (e.g. PP, PVC, PS) and aluminum based substrates. For many of these substrates pre-treatments (corona, plasma or flame) will have a positive effect on the adhesion of the ink.

This ink can be customized and adapted to end-user applications. If needed, Siegwerk can tailor ink properties (e.g. viscosity & adhesion), film properties (e.g. color gamut & fastness) and even address further special customer requirements. Depending on the application, Siegwerk can also advise on suitable primers or overprint varnishes (OPV's).



## Field of use

The SICURA Jet D K ink is designed for single-pass inkjet printing with piezo drop-on-demand printheads including printheads from Konica Minolta, Ricoh, Seiko, Toshiba or Xaar which require regular viscosity ink. It is NOT recommended for thermal inkjet, continuous inkjet of any kind or any other print technology systems. In any case of uncertainty, please contact our application technology experts via [contact.inkjet@siegwerk.com](mailto:contact.inkjet@siegwerk.com).

## Key benefits

CHARACTERISTIC	BENEFIT
<b>Jetting performance</b>	The ink is formulated for high performance piezo drop-on-demand printheads requiring regular ink viscosity. Well suited for high resolution jetting at high frequencies. Good storage stability.
<b>Dried film performance</b>	Excellent adhesion and flexibility on a broad range of substrates.
<b>Coding &amp; Marking</b>	The spreading of the ink is optimized to print sharp edges and small texts. Deep black colorshade.
<b>Shelf life</b>	Long ink shelf life (18 months from production date)

## Functional Specifications

- Single-pass printing using intercolor pinning
- High curing speed with bulbs and/or UV LED
- Excellent barcode / QR-code readability
- Deep black colorshade
- Printing on a broad range of plastic materials as well as other types of materials
- Ink parameters suited for jetting with industrial piezo print heads requiring regular viscosity range
- Very good storage stability, long shelf life
- Good jetting reliability and low print head maintenance need
- Suited for binary print mode (including large drop size) and grayscale printing

Note: the print conditions depend upon the choice of substrate, print mode, print resolution, print speed, printhead, throwing distance, etc.

## Shelf life & storage conditions

- Shelf life is 18 months from production date when stored under recommended condition
  - Storage properly closed in Siegwerk bottles/cans
  - Temperature control between 4 °C – 23 °C (39 °F – 73 °F)
  - No direct sun light
  - Not close to heating elements and UV-light containing radiation sources
- Product should be homogenized before usage
- Before filling the SICURA Jet D K in new ink systems, rigorously flushing is recommended
- Siegwerk products should not be mixed with any other ink products, used together with any non SICURA Jet flush or get diluted
- It is advisable to turn over the inventory according to the delivery date (first in – first out)

## Auxiliary products

We recommend our SICURA Jet flush as a cleaning solution. Depending on substrate, printing conditions, drying and final application, a UV-curable primer and/or overprint varnish (OPV) may improve the final printing result. Please consult with our sales team for specific recommendations.

## Safety Information

Material safety Data Sheets for the SICURA Jet D K ink are available according to EC regulation 1907/2006, informing in detail about all relevant safety data, including labeling according to the present EEC regulations as to health and safety labeling requirements.

The SICURA Jet D K ink is fully compliant with the REACH Regulation including the special provisions concerning SVHC (Substances of Very High Concern - most recent update January 17, 2023).

### SICURA Jet D K ink recipe does not comprise:

- CMR 1 & 2 substances as listed in Annex VI of CLP-regulation 1272/2008
- 2-isopropyl thioxanthone (ITX)
- Benzophenone, 4-Methyl-benzophenone, 4-Hydroxy-Benzophenone
- NMP
- Heavy metals : Lead, Chromium, Cadmium, Mercury

The Ink Safety Portal on our homepage offers condensed knowledge on crucial Product Safety and Regulatory topics with regard to printing ink ingredients, regulatory affairs, exposure assessments and safety evaluations. You can access this via the following link: [www.Siegwerk.com/ink-safety-portal](http://www.Siegwerk.com/ink-safety-portal)

**Note:** Our technical advice whether spoken, written, or through test trials, corresponds to our current knowledge about our products and their use. This is not meant as an assurance concerning certain properties of the products nor their suitability for each application. Our customers are therefore obliged to conduct their own tests with our supplied products to confirm their suitability for the desired process or purpose. The selection and testing of the ink for a specific application is exclusively the customers' responsibility. This data is communicated for information purposes only and is provided without any warranty on our part. We disclaim any liability for applications for which this ink series is not foreseen. If you have any questions, please do not hesitate to contact us at [contact.inkjet@siegwerk.com](mailto:contact.inkjet@siegwerk.com)