

**INK, HEART & SOUL**

## **TECHNICAL DATA SHEET**

# **SICURA NUTRIJET LMX INK SET**

High Performance single-pass UV-curable Low Migration  
inkjet inks for drop-on-demand inkjet printing



## SICURA NutriJet LMX

The SICURA NutriJet LMX product line is an UV-curable and pigment-based ink set designed for industrial inkjet printing on multiple applications, including decorative printing, direct-to-shape printing, coding & marking, packaging and label printing.

The standard set includes cyan, magenta, yellow, black (CMYK), white and flushing solution. It is targeted for both large width full color printing and single color coding & marking. Additional colors tailored to extend the color gamut (e.g. OGV) and spot colors are available upon request.

The SICURA NutriJet LMX has been developed for single-pass, piezo, drop-on-demand industrial inkjet printing at high resolution using printheads from Konica Minolta Ricoh, Seiko, Toshiba and Xaar. The inks are able to generate low droplet volumes at high frequencies.

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

The SICURA NutriJet LMX is particularly well suited for applications with high product safety and regulations (PS&R) demands such as food or pharma packaging. When needed, Siegwerk can support risk assessments and real case migration and fastness testing for PS&R sensitive applications - verifying system compliance.

This ink series 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 NutriJet LMX ink set is designed for single-pass inkjet printing with piezo drop-on-demand printheads including printheads from Konica Minolta Ricoh, Seiko, Toshiba and Xaar which require regular viscosity inks. 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>	Inks 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. Suitable for large width full color printing as well as for coding & marking application.
<b>Color performance</b>	Inks are based on safe pigments with high lightfastness. Prints show vivid colors with high contrast. The SICURA NutriJet LMX CMYK ink set enables a wide gamut, expanded further with the inclusion of Orange, Green and Violet.
<b>Product Safety and Regulations</b>	Low-migration capable. Migration-sensitive applications possible, including pharma, food and hygiene packaging. Risk assessment and real case migration testing need to be carried out individually.

## Functional Specifications

- Single-pass wet-in-wet printing or printing using intercolor pinning
- Curing with bulbs and/or UV LED; curing dose needs to be optimized in function of migration limits
- Ink series allow for prints with vivid colors, sharpness as well as high color strength and contrast. Good barcode / QR-code readability of black
- White ink for printing on colored / transparent substrates; overprinting with CMYK inks
- Printing on a broad range of plastic materials and many more (suited for migration-sensitive applications)
- 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 12 months from production (9 months for White ink) 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
- Note that SICURA NutriJet LMX inks are packed in not completely filled bottles or canisters, this improves the shelf life of the ink.
- Before filling the SICURA NutriJet LMX 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 NutriJet LMX 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 NutriJet LMX 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 SICURA NutriJet LMX inks 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 NutriJet LMX ink set is fully compliant with the REACH Regulation including the special provisions concerning SVHC (Substances of Very High Concern - most recent update January 17, 2023). All ink compounds comply with the EuPIA Exclusion Policy as well as the EuPIA Guideline on printing Inks applied to the non-food contact surface of food packaging materials and articles. Inks and flush are produced according to GMP standards. Furthermore, all compounds are in accordance with the CEPE 'Exclusion List for Printing Inks and Related Products'.

Provided that the product is used according to the information given in the Technical Data Sheet, or in equivalent communications, and correctly processed, and provided that the food packaging is designed in such a way that there is no intended direct food contact, Siegwerk confirms that it will in principle allow compliance of the final product with the Regulation (EC) No 1935/2004, the Swiss Ordinance 817.023.21 and the Nestlé Guidance Note on Packaging Inks requirements (version 5.0, October 2018).

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 no 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)