

# Legend inks of the series Elpejet® IJ 2593

The legend inks of the series **Elpejet® IJ 2593** are applied by digital drop-on-demand technology and are used for marking purposes in assembly, control and service, e.g. for printing letters, figures, symbols, surfaces and lines (barcodes).

- Application by means of inkjet technology
- compatible with Konica Minolta printheads 512 or 1024i (S, M and L)
- excellent definition and resolution
- excellent covering power
- good resistance to solder baths
- very good adhesion on copper, base materials and solder resists
- high colour stability
- suitable for UV LED pinning (365 and 395 nm)
- tack-free directly after printing due to process integrated UV LED lamps

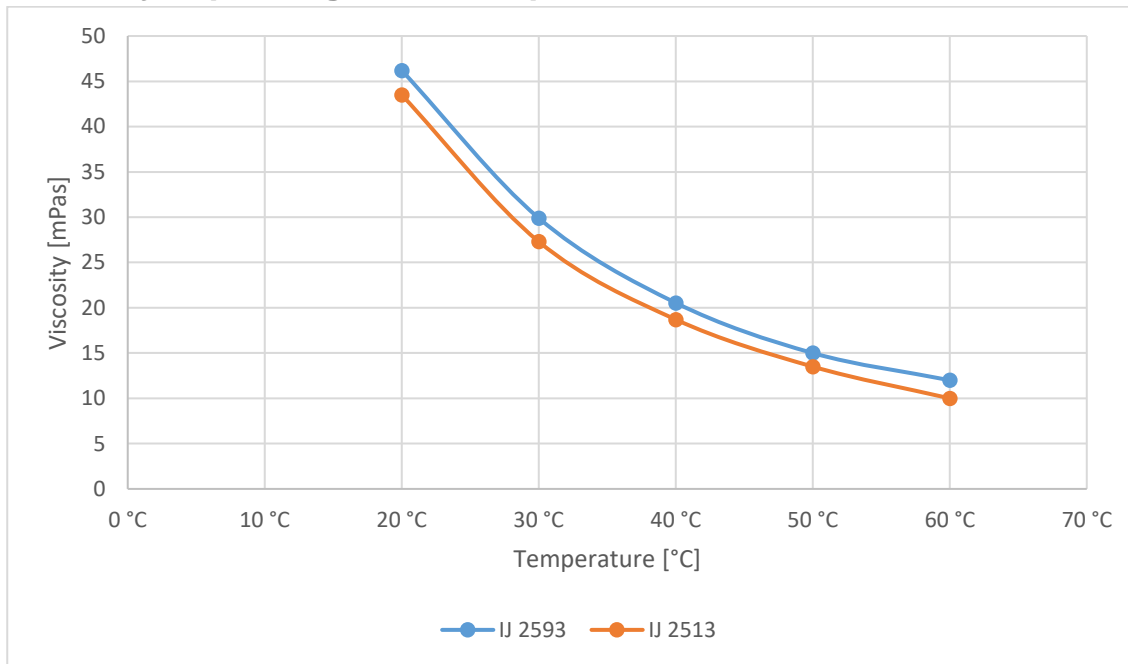
## Characteristics

	<b>IJ 2593</b>	<b>IJ 2513</b>
Colour/appearance	white	yellow
Solids content	100 %	100 %
Viscosity* at 20 °C [68 °F] DIN EN ISO 3219 (see also diagram below)	≈ 46 mPas	≈ 43 mPas
Density at 20 °C [68 °F] DIN EN ISO 2811-1	1.19 ± 0.05 g/cm <sup>3</sup>	1.16 ± 0.05 g/cm <sup>3</sup>

\* measured with Haake RS 600, C 35/1°, D = 100 s<sup>-1</sup>,  
viscosity measuring unit supplied by Thermo Fisher Scientific, [www.thermofisher.com](http://www.thermofisher.com)

Index: IJ = inkjet printing

## Viscosity depending on the temperature



## Processing



Please read this technical report and the publications listed below carefully before using the product. These sheets are enclosed with the first shipment of product or sample.

### MSDS

The corresponding material safety data sheet contains detailed information and characteristics on safety precautions, environmental protection, transport, storage, handling and waste disposal.

### TI

[Technical information TI 15/3](#) "Protective measures when using chemicals including lacquers, casting compounds, thinners, cleaning agents"

The legend inks of the series **Elpejet® IJ 2593** are applied by means of inkjet printers (DoD technology).

→ Ensure that the surface to be coated is clean, dry and grease-/oxide-free.

Application before the final hardening of the solder resist is recommended, as the final hardening only has to be carried out once.

These following processing parameters are meant for orientation purposes and must be optimised and adjusted to the prevailing production conditions.

#### Waveform (KM 1024i)

Pulse 1 – high	5,4 µs
Pulse 2 – low	10,8 µs
Pulse 3 – zero	10,8 µs
Printhead Voltage	100 % of the manufacturer's specifications
Temperature	47,5 °C [117,5 °F]

Since it is a UV-curing lacquer, exposure to UV radiation (sunlight or fluorescent lamps) leads to curing of the lacquer. Therefore, yellow light or yellow filters/UV protective foils are necessary.



Protect from UV light



Stir before use

Since the many different permutations make it impossible to evaluate the whole spectrum (parameters, reactions with materials used, chemical processes and machines) of processes and subsequent processes in all their variations, the parameters we recommend are to be viewed as guidelines only that were determined in laboratory conditions. We advise you to determine the exact process limitations within your production environment, in particular as regards compatibility with your specific follow-up processes, in order to ensure a stable fabrication process and products of the highest possible quality.

The specified product data is based upon standard processing conditions/test conditions of the mentioned norms and must be verified if necessary while observing suitable test conditions on processed products.

Feel free to contact our application technology department (ATD) if you have any questions or for a consultation

### Auxiliary products recommended

- **ELPESPEC®** cleaning agent HP 5870  
for the cleaning of print heads and hoses
- [ELPESPEC® cleaning agent R 5821](#)  
for the manual cleaning of screens and tools

### Drying/curing

Pinning is performed with the UV LEDs (395 nm) integrated in the printhead with an energy of approx. 180 mJ/cm<sup>2</sup>.

This is followed by a UV bump (Hg lamp) with an energy of approx. 2700 mJ/cm<sup>2</sup>, alternatively an LED bump with an energy of approx. 2700 mJ/cm<sup>2</sup>.

Final curing is carried out for 60 min at 150 °C [302 °F].

### Packaging

The packing units available are indicated in our offer which we will send you upon request.

### Shelf-life and storage conditions



Shelf life: In sealed original containers at least 6 months



Storage conditions: +5 °C to +25 °C [+41 °F to +77 °F]



Protect from UV light

For warehousing reasons, isolated cases may occur where the shelf life upon shipment is less than the shelf life indicated in this technical report. However, it is ensured that our products have **at least** two-thirds of their shelf life remaining when they leave our company. Labels on containers show shelf life and storage conditions.

## Disclaimer

All descriptions and images of our goods and products contained in our technical literature, catalogues, flyers, circular letters, advertisements, price lists, websites, data sheets and brochures, and in particular the information given in this literature are non-binding unless expressly stated otherwise in the Agreement. This shall also include the property rights of third parties if applicable.

The products are exclusively intended for the applications indicated in the corresponding technical data sheets. The advisory service does not exempt you from performing your own assessments, in particular as regards their suitability for the applications intended. The application, use and processing of our products and of the products manufactured by you based on the advice given by our Application Technology Department are beyond our control and thus entirely your responsibility. The sale of our products is effected in accordance with our current terms of sale and delivery.

**ATTENTION! For new products, according to preliminary technical reports, adequate practical results are not always available which would permit a comprehensive assessment of such a product. It is therefore imperative to exercise particular care in the testing of such products with regard to the application intended!**

Any questions? We would be pleased to offer you advice and assistance in solving your problems. Samples and technical literature are available upon request.

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