



## Technical Information

# Frimpeks UV Curable LED Offset Inks

A newly developed ink series ink for sheet-fed offset, rotary and narrow web offset printing on absorbent and non-absorbent substrates, where the inks are cured with LED lamps.

### Product Range:

Process inks (extra series). Base colors, PANTONE® inks and special hues are available on request.

### Technical Details:

- only suitable for presses fitted with UV LED (ultra-violet light-emitting-diode) lamps - good adhesion
- solvent free
- fast curing (high reactivity)
- very good runnability
- do not contain benzophenone derivatives
- suitable for inline and/or offline coating, foil stamping, and lamination
- tested with 16W/cm<sup>2</sup> lamp 385nm

### Remark:

Before beginning to print we recommend pretests in order to test the desired characteristics of the finished product.

### Printing Details:

Dosage must be adjusted according to the desired printing speeds if web offset printing is considered. Good adhesion on filmic substrates is achieved on the substrate having appropriate (40dynes/cm) corona treatment.

### Applications

- luxury packaging such as liquor, cosmetic boxes
- paper self-adhesive labels
- no direct food contact packaging where low-migration properties are needed
- outer wrap packaging for food being protected by a barrier primary packaging

### Packaging:

Standard Packaging: 2.5 KG buckets

### Technical Service:

Kindly note that we are ready at any time for competent technical application support on your site.

Please contact our technical staff for printing inks:

[uv@frimpeks.com](mailto:uv@frimpeks.com)

### Storage:

#### Optimal Storage Conditions

The optimal storage temperature is between 5°C and 35°C.

Higher storage temperatures reduce the shelf-life.

### Remark:

- protect from frost
- store in a cool and dark place
- stir well before use
- the lid must be closed immediately after usage

### Warranty:

If the inks are stored correctly, we guarantee a shelf life of 12 months from date of production.

However, we know from practical experience that the inks can remain usable for longer periods if they are properly handled and stored.

### Cleaning:

We recommend using typical wash-up solutions.

The inking roller, anilox roller and printing plate have to be resistant against UV based inks and detergents (see manufacturer's instructions).

### Disclaimer:

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		Lightfastness	Alkali	Solvent
Type	Product Code & Denomination	According to ISO 105 B01 specification	According to ISO 2838 specification	According to ISO 2837 specification
		1 to 8 blue scale 8-Excellent/1-Poor	1 to 5 5-Excellent/1-Poor	1 to 5 5-Excellent/1-Poor
Process Color	102875 LED UV OFFSET EXTRA YELLOW 26000	4/5	5	4/5
Process Color	102876 LED UV OFFSET EXTRA MAGENTA 26000	4/5	2	3
Process Color	102878 LED UV OFFSET EXTRA CYAN 26000	7	5	5
Process Color	102879 LED UV OFFSET EXTRA BLACK 26000	7	5	5
Base Color	103062 LED UV OFFSET BASE YELLOW 26000	4/5	5	4/5
Base Color	103043 LED UV OFFSET ORANGE 26000	5	5	4
Base Color	103046 LED UV OFFSET RED 032 26000	5	5	3/4
Base Color	103047 LED UV OFFSET WARM RED 26000	2	2	4
Base Color	103057 LED UV OFFSET WARM RED LF 26000	7	5	5
Base Color	103048 LED UV OFFSET RHODAMINE RED 26000	3/4	2	2
Base Color	103049 LED UV OFFSET RHODAMINE RED LF 26000	7	5	5
Base Color	103055 LED UV OFFSET RUBINE RED 26000	4/5	2	3
Base Color	103072 LED UV OFFSET RUBINE RED LF 26000	6/7	5	5
Base Color	103056 LED UV OFFSET PROCESS BLUE 26000	7	5	5
Base Color	103071 LED UV OFFSET VIOLET LF 26000	7	5	5
Base Color	103073 LED UV OFFSET REFLEX BLUE LF 26000	7	5	5
Base Color	103074 LED UV OFFSET 072 BLUE LF 26000	7	5	5
Base Color	103058 LED UV OFFSET PURPLE LF 26000	7	5	5
Base Color	103050 LED UV OFFSET GREEN 26000	7	5	5
Base Color	103066 LED UV OFFSET MIXING BLACK 26000	8	5	5
	103061 LED UV OFFSET TRANSPARENT WHITE 26000			
Opaque White	103036 LED-UV OFFSET EXTRA WHITE 26000	8	5	5
High Viscosity	103303 LED UV OFFSET EXTRA BLACK 26500-HV	4/5	5	4/5
High Viscosity	103279 LED UV OFFSET EXTRA CYAN 26500-HV	4/5	2	3
High Viscosity	103278 LED UV OFFSET EXTRA MAGENTA 26500-HV	7	5	5
High Viscosity	103277 LED UV OFFSET EXTRA BASE YELLOW 26500-HV	7	5	5
High Viscosity	103293 LED-UV OFFSET EXTRA WHITE 26500-HV	8	5	5

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**Frimpeks Kimya ve Etiket Sanayi Ticaret A.S.**

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### Benefits of LED Inks

Frimpeks Offset LED inks are developed using specially selected raw materials that match the narrow and targeted wavelength area, which is typical for UV LED lamp output. We would summarize the economical and ecological advantages to be the key factors.

**Economical benefits:** Energy consumption would be significantly reduced with increased manufacturing space. UV LED lamps are nearly maintenance free. There would be no mercury bulb replacement and disposal costs. Expanded capability to run heat sensitive materials with less heat management would be beneficial for cost savings.

**Ecological benefits:** Energy savings as well as UV LED lamps being ozone and mercury free resulting in improved worker and environmental safety.

### Marking:

#### Marking according to EU legislations:

Our inks are fully adhering to regulations such as Reach, 2020/878 CLP, 453/2010 EU, ROHS III Directive 2015/863, and/or 528/2012 EU regulations. All material safety data sheets (SDS) are available on request.

### Declaration of Composition and Product Declaration:

#### CEPE / EuPIA – Exclusion List

CEPE is the European Council of producers and importers of paints, printing inks and artists colours whereas EuPIA is the European Printing Ink Group of CEPE. The printing ink industry voluntarily came up with the Exclusion List for specific substances many years ago. The raw materials used by Frimpeks for the formulation of our printing inks/varnishes meet the guidelines of the CEPE / EuPIA Exclusion.

### Heavy Metals

CONEG stands for Coalition of North-Eastern Governors in the USA. One of their legislations, adopted by 18 states as of 1998, requires reductions in the amount of the four heavy metals mercury, lead, cadmium, and hexavalent chromium in packaging and packaging components sold or distributed in their member states. For Frimpeks printing inks/varnishes the limits for heavy metals as listed in the CONEG-Regulation (USA) are met. The Euro Norm 71.3 refers to the max level of heavy metals in children's toys. For Frimpeks printing inks/varnishes, the limits for heavy metals as listed in the DIN EN 71-3:2019 are met. Heavy metals are no part of our formulations.

### Hazardous Substances

Substances mentioned in the Directive 2015/863 known as RoHS III are not intentionally used in our formulations printing inks/lacquers

### SVHC-substances (substances of very high concern):

In our products no substances are used which meet the criteria of SVHC-substances (substances of very high concern). SVHC-substances are substances which are classified as CMR 1 & 2, PBT (PBT pollutants are chemicals that are toxic, persist in the environment and bioaccumulate in food chains), vPvB (Substances that are potentially very persistent and very bioaccumulative) and endocrine disruptors (artificial hormones). The substances listed in the guide line 67/548/EEC (amended by the directive 2006/121/EC) and in the guide line 76/769/EEC are not part of the formulation of our printing inks/lacquers. Furthermore, we confirm that our printing inks/lacquers are in accordance with the EC regulation 1895/2005 (repeals the guide line 2002/16/EC). Enhanced Statement of composition (ESoC) is available on request to support with migration testing and compliance with Plastics Regulation (EU) No 10/2011, the Swiss Ordinance 817.023.21 Annex 1 or 6 or listed on the 'Provisional List of Additives used in Plastics' or listed as a food additive in Regulation (EC) No 1333/2008 and Regulation (EC) 1334/2008.

### Food Contact

This serie is intended for use on secondary food packaging in indirect contact scenarios. The Packaging made with this inks and coating series is definitely not suitable for direct food contact. The general food packaging safety 'framework' Regulation (EC) No 1935/2004 of the European Parliament (Materials and articles intended to come into contact with food). This regulation refers specifically to food contact materials and articles rather than to inks and associated coatings. A more detailed secondary food contact declaration is available on request.

### Quality Assurance:

#### ISO 9001

The production site of Frimpeks is certified according to DIN EN ISO 9001:2015

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