Frimpeks UV Curable LED Flexo Inks

Ink series for flexible packaging, and pressure sensitive labels where the inks are cured with LED lamps.

Product Range:

Process inks, base colors, PANTONE® inks are available. Special hues are available on request.

Technical Details:

- only suitable for presses fitted with UV LED (ultra-violet light-emitting-diode) lamps
- good adhesion on a wide range of synthetic materials such as paper and carton-board, for synthetic materials surface tension of 38-42 dyne/cm is required to obtain optimum adhesion
- low odor
- solvent free
- fast curing (high reactivity)
- very good runnability
- suitable for varnishing and hot foil stamping with appropriate products (preliminary test needed)
- suitable for printing on thermal-papers
- lower energy costs, low maintenance and lamp replacement, no ozone and no mercury waste, low heat process enables capability to run heat sensitive films

Remark:
Before beginning to print we recommend pretests, in order to test the desired characteristics of the finished product.
Preliminary test and/or referral to the material suppliers is needed for varnishing and additional applications.

Printing Details:

Printing Speed: 150m/min (500 feet/min)
Reactivity with LED: 385 / 395 nanometers

Anilox Volume:

Process Colors	3-4 cm^3/m^2
Solid Colors	5-10 cm^3/m^2

Packaging:

Standard Packaging: 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

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).

Frimpeks Kimya ve Etiket Sanayi Ticaret A.S.
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Frimpeks

Technical Information

		Lightfastness	Alkali	Solvent
Type	**Product 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 Ultra	Pr. Yellow	4/5	5	4/5
Process Color Ultra	Pr. Magenta	4/5	2	3
Process Color Ultra	Pr. Cyan	7	5	5
Process Color Ultra	Pr. Black	7	5	5
Process Color Extra	Pr. Yellow	4/5	5	4/5
Process Color Extra	Pr. Magenta	4/5	2	3
Process Color Extra	Pr. Cyan	7	5	5
Process Color Extra	Pr. Black	7	5	5
Base Color	Yellow	4/5	5	4/5
Base Color	Yellow LF	6	5	4
Base Color	Orange	5	5	4
Base Color	Warm red	3	2	3
Base Color	Mid red (032)	5	5	3/4
Base Color	Rubine Red XT	4/5	2	3
Base Color	Rubine Red LF	6/7	5	5
Base Color	Rhodamine red	3/4	2	2
Base Color	Rhodamine red LF	7	5	5
Base Color	Purple	4	2	2
Base Color	Violet	4	2	2
Base Color	Violet LF	7	5	5
Base Color	Reflex blue LF	7	5	5
Base Color	Blue XT	7	5	5
Base Color	Green	7	5	5
Base Color	072 Blue	7	5	5
Base Color	Warm Red LF	7	5	5
Base Color	Orange LF	7	5	5
Base Color	Mixing Black	8	5	5
	Transparent White			
	Opaque White	8	5	5

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Benefits of LED Inks

Frimpeks Flexo 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 (MSDS) 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 compo- nents 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.

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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