ZELLER+GMELIN

TECHNICAL INFORMATION

UVALUX® U37 Ink Series

General-Line Ink Series for UV Offset Printing on Metals

CHARACTERISTICS

The UVALUX® U37 Ink Series is a UV curing printing ink series with intentionally reduced resistances which is **not suitable for retort processing**. It **includes inks with light resistance of less than 6 (DIN 16525)** and was specifically developed for General-Line applications such as decorating of technical packaging which is not retort processed.
It is flexible and very low yellowing. The series is suitable for printing on coated metal subtrates in sheet-fed offset.

TECHNICAL PROPERTIES

Drying/Curing	UV-Hg (Mercury Vapour)
Substrate	Metal Coated
Printing Process	Offset Sheet-Fed
Surface Properties	Flexible Ink Film, Glossy
Further Processing	Overvarnishing, Forming, Deep Drawing, Beading
Application	3 Piece Cans, Screw Caps, Crown Corks, Long Caps
End Application	Non-Food, Chemicals, Automotive
Market	Metal Decoration
Available Systems	4 Colour Process

STORAGE STABILITY

Optimal storage conditions:
The optimal storage temperature is 20°C. Higher storage temperatures reduce the shelf-life.

- protect from frost
- store in a cool and dark place
- stir or shake well before use
- can should be closed immediately after usage

Warranty:
If the products are stored properly, we warranty the product performance for a shelf life of 12 months from the date of delivery. For metallic inks, we generally warranty only 3 months ink performance.

APPLICATION REMARKS

Printing Materials
We recommend using ester and ketone resistant rollers (EPDM-material). The inking roller, rubber blanket and printing plate have to be resistant against UV-inks and UV-detergents (see manufacturer's instructions).

Fountain Solution
Approved fountain solution parameters:
a) ph-value: 4,8 - 5,2
b) Water hardness: 9 - 12° dH
We recommend the use of temperature controlled ink ducts and fountain solution.

Information about Light Fastness
All light fastness values are indicated according to the blue wool scale (BWS) and are based on the product specifications of our pigment suppliers. Light fastness can change when mixing inks and when printing halftone. Depending on the mixing ratio and on the fineness of the screen the light fastness can be lower than the pure solid colour.

Sterilisation of Metallic Inks
Depending on the sterilisation process, a change in gloss or greying of metallic pigments cannot be ruled out. Due to the numerous different sterilisation methods and their parameters, we are unable to make a statement on the sterilisability of metallic inks. We therefore recommend that you check the sterilisability with pre-tests under your production conditions. This applies to ready-to-print gold and silver inks and to mixes with metallic pastes.

Preliminary Tests Recommended
Before beginning to print we recommend practice oriented pretests on your substrate, in order to test the desired characteristics of the finished product. Especially when the base- or topcoats are changed we recommend pretests.

PRINTING AIDS

UVALUX® U0015 UV Reducer
Addition max. 5%
Reduces the viscosity and the tack.

UVALUX® U0060 UV Accelerator
Addition max. 5%
Improves curing of the ink, viscosity changes only marginally.

UVALUX® U0088 UV Printing Paste
Addition max.10%
Reduces the tack without reducing the viscosity significantly.

U37-ZWT01 Transparent White
Addition unlimited
Highly transparent, for reducing colour strength, tack and viscosity remain at a comparable level.

UVALUX® U0030 UV Matt Paste
Addition max. 20%
Mix with transparent white to obtain a duct matt lacquer. High quantities of matt paste reduce scratch resistance and reactivity of the system. Subsequent thermal treatment of the print can improve scratch resistance. The stability of mixtures of the paste with radiation-curing inks is very limited. Early polymerisation may occur. Therefore please mix only the required quantity immediately before beginning to print.

W963 UV Wash Up with Lemon Smell
W936 UV Wash Up without Lemon Smell
Suitable for cleaning inking systems, sleeves, plates, blankets, etc.
Not approved for automatic washing units.
Before starting printing, the washing agent must be completely dried off, otherwise the printing behaviour may be impaired.

UV Roller Cleaning Paste UV866
Only for rubbing into ink rollers, not suitable as ink additive
For cleaning of the ink rollers in offset and letterpress printing units from UV inks. Distribute paste with spatula on the oscillating rollers, let machine run withot printing for several minutes, scrape off and wash again.

Remark:
The addition of any additive might change the overall characteristics of the printing ink.

RESISTANCE PROPERTIES

Euroscale

Colour Name	Item Number	Light Fastness	Spirit Resistance	Solvent Resistance	Alkali Resistance
Yellow	U37-S1101	4 BWS	+	+	+
Magenta	U37-S1201	5 BWS	+	+	-
Cyan	U37-S1301	8 BWS	+	+	+
Black	U37-S1401	8 BWS	+	+	+

Z Basic colors

Colour Name	Item Number	Light Fastness	Spirit Resistance	Solvent Resistance	Alkali Resistance
Base Yellow	U37-ZYN01R	4 BWS	+	+	+
Base Yellow Red Shade	U37-ZYR01S	7 BWS	+	+	-
Base Yellow Green Shade	U37-ZYG01SR	6 - 7 BWS	+	+	+
Base Orange	U37-ZON01R	5 BWS	+	+	+
Base Red Yellow Shade	U37-ZRY01	3 BWS	+	+	-
Base Red Blue Shade	U37-ZRB01	5 BWS	+	+	-
Base Red Blue Shade	U37-ZRB02SR	6 - 7 BWS	+	+	+
Base Red Pink Shade	U37-ZRP02SR	6 - 7 BWS	+	+	+
Base Violet	U37-ZVN02SR	6 - 7 BWS	+	+	+
Base Blue Green Shade	U37-ZBG01SR	8 BWS	+	+	+
Base Green	U37-ZGN01SR	8 BWS	+	+	+
Base Black	U37-ZKN01SR	8 BWS	+	+	+
Base White Transparent	U37-ZWT01		+	+	+

SPECIAL PRODUCTS

+ METALLICS +

PANTONE® Metallic print ready one-component base inks:
U37-P871 PANTONE® Gold (corresponds approximately to richgold)
U37-P872 PANTONE® Gold (corresponds approximately to richpalegold)
U37-P873 PANTONE® Gold (corresponds approximately to richpalegold)
U37-P874 PANTONE® Gold (corresponds approximately to palegold)
U37-P875 PANTONE® Gold (corresponds approximately to palegold)
U37-P876 PANTONE® Gold
U37-P877 PANTONE® Silver

PRODUCT DESIGNATIONS

Process Inks CMYK:
U37-S... Standard Process Inks

LABELING

Marking according to EC legislation:
Our inks are classified and marked according to EC legislation and the German “Gefahrstoffverordnung” (German dangerous substances regulation).
The material safety data sheet (MSDS) is available on request.

REMARKS ON COMPOSITION AND REGULATION

The UVALUX® U37 Ink Series has no special FCM formulation. Therefore we recommend for food packaging FCM ink series and lacquers which are availlable for many applications.

General Requirements

The UVALUX® U37 Ink Series meets the following general requirements:

- EuPIA Charter on Raw Material Selection and Exclusion for Printing Inks and Related Products (former EuPIA Exclusion Policy)
- Heavy metal limits laid down in the European packaging and packaging waste regulation (EU) 2025/40 (replacing directive 94/62/EC) and TPCH (former CONEG).
- Directive 2002/95/EC (RoHS), Directive 2011/65/EU and Directive 2015/863/EU (RoHS 2).
- Formulated without the photoinitiators ITX, 369, TPO, 379 or Benzophenone.
- No raw materials are used which are classified as CMR 1A & 1B, 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) or endocrine disruptors (hormonally active agents).
- We avoid the use of SVHC substances. Unfortunately the reclassification of a substance may result in the presence of SHVC substances in our formulations at concentrations >0.1wt%. Such rare cases are clearly highlighted in our material safety data sheets.

DIN EN ISO certification
The production site of Zeller+Gmelin / Germany is certified according to DIN EN ISO 9001:2015 and DIN EN ISO 14001:2015.

The information contained in this document (the "product specification") is based on our current knowledge. It does not exempt the processor or user from carrying out their own tests. Properties of the product that go beyond the above information and/or suitability for a specific purpose cannot be derived from the product specification and are not owed. Any existing statutory provisions and regulations concerning the handling and use of the products must be observed by the processor or user of our products. We expressly point out that the owed quality of our product is measured exclusively on the basis of the properties warranted in this document; the fulfillment of additional statutory objective quality requirements is not owed. By ordering our product without objection and with knowledge of this product specification, you hereby declare your agreement.

EXPERTLY DONE.

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