

Technische Information

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LETTERPRESS
UV printing ink and lacquer

UVALUX® U7

Laminatable UV sheet fed ink series

Characteristics

The new laminatable UVALUX® XL U7 series is particularly developed for the UV sheet feed offset print on non absorbent substrates. The U7 series is also applicable for the label and packaging printing and for web offset. Due to the very good laminating properties, the new UVALUX® XL U7 series is also suitable for the printing on credit and phone cards.

Our product range includes:

Process inks, Pantone® basic inks and special inks.

Technical data

Properties:

- **Laminatable**
- **excellent adhesion**
- very fast curing
- good gloss
- very good runability
- suitable for varnishing and hot foil stamping (pre-tests are necessary)
- colorimetric supported

Packaging

Standard packaging: 1 kg and 2,5 kg

Substrates

Non absorbent substrates and films:

The U7 series was especially developed for printing on non absorbent substrates.

Paper:

UVALUX® U7 can be used also for printing on all usual market coated and uncoated paper qualities.

Printings with excellent color strength and good gloss are achieved.

Important!!

Before beginning of printing we recommend a test print, in order to test the desired characteristics of the finished product. Gladly we accomplish printing tests on your material for you.

Technical Service Center

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

Kindly contact our technical service center for printing inks:

Ink-Service@Zeller-Gmelin.de

Tel: +49 7161 802 279

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Additives and wash up

Additives:

UVALUX® UV reducer U0015, addition max. 5%
reduces the viscosity

UVALUX® UV slip additive U0021, addition max. 3%
improves scratch and tape resistance, lacquering
should be tested previously.

**Attention: please do not use in case of proceeding
with laminating.**

UVALUX® UV print paste U0088, addition max. 10%
reduces tack, hardly the viscosity

UVALUX® UV accelerator U0063, U0064
addition max. 5%
Improves the curing

UV wash up W936
Suitable for cleaning inking systems, sleeves, printing
plates, blankets etc.

Hints

Any addition of any additive might change the overall
characteristic of the cured ink.

Service

Complete PANTONE® mixing recommendations on
basis of our U7-Z..high pigmented, monopigmented
basic inks series, U7-P...Pantone basic inks..

Ink formula system, mixing system and dispensing
systems in different levels are also available.

Storage

Storage conditions:

The inks must be stored in dark conditions. The
inks must not be exposed to direct light for
prolonged periods. The most favorable
temperature is about 20°C. As a general rule, the
shelf life increases proportionally to the lowering
of storage temperatures.

Hints:

protect from frost

Guarantee:

If inks are stored correctly, we guarantee a shelf
life of 6 months from date of delivery, as our
supplier of raw materials guarantee this period to
us. However, we can say from practical
experience, when stored and used properly, the
inks will in many cases perform perfectly for 1-2
years or often much longer.

Marking

Marking according to EWG-guide lines:

Our inks are classified according to EG guide
lines EG-Richtlinien/GefStoffV.
Kindly ask for safety data sheet.

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Hints of Migration and Conformity

Regulation (EC) No. 1935/2004 requires that the one responsible for the “placing on the market” of a packaging article has to have an appropriate documentation available to demonstrate the compliance with the rules relating to food processing and distribution.

For the printing of materials for primary food packaging, we recommend the special **low migration** printing inks of our series **UVALUX U71[®]**.

Numerous analytical results show that the limit of 10 ppb can be kept provided that our UVALUX[®] U71 series is used according to the information given in the technical data sheet and processed correctly.

The grade of migration depends very much on the following parameters:

- correct processing, especially the complete through-cure of the ink film,
- type of substrate and material thickness
- prevention of a permanent direct contact of the printing ink with the food.

In any case, it is recommended to let the products manufactured in your facilities check by a recognized analytical institute. This ensures that you can demonstrate that your production complies with legal requirements if necessary.

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Resistance properties of Process Inks						
Color shade	Item number	Light fastness	Sprit	Solvent-mixture	Alkali	Color shade
Euro process inks						
Yellow	U7-S1100	5	+	+	+	
Magenta	U7-S1200	5	+	+	-	
Cyan	U7-S1300	8	+	+	+	
Black	U7-S1400	8	+	+	+	
Dense Black	U7-S2400	8	+	+	+	
High light fastness						
Yellow	U7-S1100S	6-7	+	+	-	
Magenta	U7-S1200S	6-7	+	+	+	

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Resistance properties of Pantone® Inks						
Color shade	Item number	Light fastness	Sprit	Solvent-mixture	Alkali	Color shade
Pantone®						
Yellow	U7-P100	5	+	+	+	
Yellow 012	U7-P101	5	+	+	+	
Orange 021	U7-P150	6-7	+	+	+	
Warm Red	U7-P200	3	+	+	-	
Red 032	U7-P201	6-7	+	+	+	
Rubine Red	U7-P202	5	+	+	-	
Rhodamine Red	U7-P203	4	-	-	-	
Purple	U7-P250	4	-	-	-	
Violet	U7-P251	4	-	-	-	
Reflex Blue	U7-P300	4	-	-	-	
Process Blue	U7-P301	8	+	+	+	
Blue 072	U7-P302	4	-	-	-	
Green	U7-P350	8	+	+	+	
Black	U7-P400	8	+	+	+	
High light fastness						
Yellow 012	U7-P101S	7	+	+	-	
Warm Red	U7-P200S	6	+	+	+	
Rubine Red	U7-P202S	6-7	+	+	+	
Rhodamine Red	U7-P203S	6	+	+	+	
Purple	U7-P250S	6-7	+	+	+	
Violet	U7-P251S	6-7	+	+	+	
Reflex Blue	U7-P300S	6-7	+	+	+	
Blue 072	U7-P302S	6-7	+	+	+	

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Fastness Properties UVALUX® Z-Serie

Color shade	Item -number	Light fastness	Spritz	solvent-mixture	Alkali	Color shade
Yellow	U7-Z2100	7	+	+	+	
Yellow	U7-Z2101	5	+	+	+	
Yellow	U7-Z2102	7	+	+	-	
Orange	U7-Z2150	6-7	+	+	+	
Red	U7-Z2200	3	+	+	-	
Red	U7-Z2201	6-7	+	+	+	
Red	U7-Z2202	6-7	+	+	+	
Red	U7-Z2203	5	+	+	-	
Red	U7-Z2204	6-7	+	+	+	
Red	U7-Z2205	6-7	+	+	+	
Red	U7-Z2206	4	-	-	-	
Violett	U7-Z2250	4	-	-	-	
Violett	U7-Z2251	6-7	+	+	+	
Violett	U7-Z2252	5	-	-	-	
Blue	U7-Z2300	4	-	-	-	
Blue	U7-Z2301	8	+	+	+	
Blue	U7-Z2302	8	+	+	+	
Green	U7-Z2350	8	+	+	+	
Black	U7-Z2400	8	+	+	+	
Transparent White	U7-Z2600					
Opaque White	U7-Z2500	8	+	+	+	

The colors shown are only for illustration. The colors are not a binding color sample!

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Product declaration

UVALUX® – printing inks, including additives

UVALUX® inks are UV reactive letter press, web and sheet fed printing inks for printing of several substrates of paper and films. The curing process under UV light is a radical reaction of polymerisation.

We only use a careful selection of raw materials under the terms of the CEPE "Rohstoff-Ausschlußliste für Druckfarben" which provide the best possible characteristics alongside security at the workplace according to the latest available technology. This excludes the application of the following materials in our printing inks: cancer producing materials, genetic changing materials, reproducing endangering materials and toxic materials. The mentioned materials listed in the regulation 67/548 EWG (changed by the regulation 2006/121/EG) and in 76/769/EWG are **not part of our UV printing inks!**

Our UV printing inks adhere to all regulations and limits as described by CONEG, i.e. CONEG limit of 100 ppm as sum value for total content of four heavy metals lead, cadmium, mercury, chromium VI, is not only met but also shortened as several spot-tests prove. Also the boundary values of the DIN EN71-3 regulations regarding the "security of toys" are also fulfilled.

In addition we herewith confirm that our printing inks comply with the following EC directives: 2002/72/EG, 2002/16/EG, 2002/95/EG.

Zeller+Gmelin GmbH & Co. KG

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Declaration of Composition

As there are no specific Regulations concerning Printing Inks and Varnishes Zeller+Gmelin as other ink suppliers are obliged to follow Regulations in the EU not directly related to Printing Inks.

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 came up with the Exclusion List for specific substances many years ago voluntarily.

Zeller+Gmelin is an active member in the EuPIA and subgroups. The raw materials used by Zeller+Gmelin for the formulation of our printing inks meet the guidelines of the CEPE / EuPIA Exclusion list. This means that CMR-substances (cancerogenic, mutagenic und reprotoxic plus T (toxic) and T⁺ (very toxic) are not used in our printing inks.

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 four heavy metals (specifically, mercury, lead, cadmium, and hexavalent chromium) in packaging and packaging components sold or distributed in their member states. For Zeller+Gmelin printing inks 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 childrens toys. For Zeller+Gmelin printing inks the limits for heavy metals as listed in the EN 71.3 are met.
Heavy metals are no part of our formulations.

Hazardous substances

Substances mentioned in the **Directive 95/2002** (RoHS) 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) und endocrine disruptors (artificial hormones).

ISO 9001

The production site of Zeller+Gmelin / Germany is certified according to DIN EN ISO 9001:2000 and DIN EN ISO 14001:2005 (corresponds to EN ISO 14001 edition Nov. 2004).

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Please note:

The manufacturer of the finished article and the filler have the legal responsibility to ensure that it is fit for its intended purpose.

There are many types of final package and the printing ink is only one constituent. Since the parameters in the printing, packing and storage processes are not under the control of the printing ink manufacturer, the printing ink suppliers are not able to issue certificates or declarations of compliance which cover the legal responsibility of the entire packaging chain Text fom EuPIA-PIFOOD May 2007)

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