



CureInk UV – UB/UE 4015

low-odour

The UB/UE 4015 series of UV inks has been developed for sheet-fed offset, rotary label (letter-press) and continuous forms printing and has very good organoleptic characteristics.

CureInk UV – UB/UE 4015		Fastness properties per DIN 16 524/25				
Euroscale		Light BWS	Alcohol	Solvent mixture	Alkali	UV varnish
Yellow	41 UB/UE 4015	5	+	+	+	+
Magenta	42 UB/UE 4015	5	+	+	-	+
Cyan	43 UB/UE 4015	8	+	+	+	+
Black	49 UB/UE 4015	8	+	+	+	+

BWS = blue wool scale

Special properties

- Minimal odour after UV curing.
- High colour intensity.
- Rapid adjustment of a stable ink/water balance.
- Fast curing.
- Suitable for laser printers (pre-production test is necessary).

Range of applications

The UB/UE 4015 series is suitable for:

- coated and uncoated paper grades and card stocks
(highly absorbent stocks can greatly reduce the curing speed)
- thermal papers
(a number of thermal papers react to UV vehicles; for this reason, always carry out a test prior to beginning the print run)
- conditionally for pretreated PE, PP (corona or gas flame) or preprimed material*
- top-coated grades of board*

We recommend application of a UV varnish in order to provide effective protection of the print image. See [TI 32.09 E](#) entitled "CureLac UV for UV-curing".

Organoleptic characteristics, influencing factors

In the majority of cases, UV curing (drying) leads to the emission of odour-creating substances that have an extremely negative affect on the organoleptic characteristics of the inks and there

* Non-absorbent substrates must have a surface tension of at least 38 mN/m in order to ensure optimum ink adhesion. In view of the large number of substrate suppliers and different substrates and substrate grades available, we recommend you carry out an adhesion test prior to beginning the print run.

fore of the print. These substances are decomposition products of photoinitiators and vehicles, and residual monomers also, that have not fully cured (absorption of monomers in extremely absorbent substrates).

Furthermore, many substrates exhibit a distinct increase in odour after passing through the UV curing unit. This increase in odour on the part of the substrates can very frequently be even greater than the odour emissions of the UV inks and varnishes.

For this reason, the substrates used must always be tested for their suitability for UV printing prior to beginning production.

The organoleptic characteristics, however, also depend on the drying properties of the inks and varnishes.

The degree to which the products cure depends on a variety of influencing factors:

- the type and energy output of the UV emitters
- the press speed
- the time intervals between printing and drying
- the substrate (its absorbency)
- the composition of the ink.

Subsequent laser printing of UV-printed products

When using these inks in a laser printer, overprinting problems can arise, especially in image areas with very high ink coverage. We recommend that ink coverage of 50% is not exceeded in such areas.

When the fusing temperatures of toners are high, there is a possibility of deposits building up on the fusing roller or fusing assembly of the hot-laser printer – even more so when the amount of ink and varnish being applied is high – due to thermoplastic properties of the cured ink or varnish films.

PANTONE® Rhodamine Red, Purple, Blue 072, Reflex Blue and HKS® 27, 33 and 43 also cause problems due to the poor temperature resistance of their pigments as the toner is fused. They must be substituted by inks of a similar hue but with temperature-resistant pigments.

Food and confectionery packaging

More information on the subject of food and confectionery (semi-luxury foods and tobacco) packaging can be found in the information sheet entitled “Printing inks for food packaging” published by the German Printing Ink Manufacturers’ Association and in the [TI 32.08 E](#) entitled “UV inks and varnishes for food packaging”.

Printing auxiliaries

The inks are always supplied ready to use. The following auxiliaries are available to help you adjust the process inks in exceptional cases:

- **UV Paste Reducer, low-odour 40 U 1004**
- **Activator Paste, low-odour 40 U 1006**

Classification

Safety Data Sheet available on request.

Shelf life

At least 12 months when stored under the correct conditions (20°C, protected against heat and light).

How supplied

2.5-kg cans

Contact addresses for advice and further information: www.hubergroup.de

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