

TIGITAL® UV Decor Paper Ink

Series 145/2.1

Properties

Density	25 °C	1.05 – 1.15 g/cm ³
Viscosity	50 °C	8.6 – 10.6 mPas
Surface tension	25 °C	25 – 29 dyn/cm
UV dose for hardening with an Hg lamp (type H)		250 – 500 mJ/cm ²
Temperature of thermal cross-linking	> 140°C	
Temperature resistance of hardened ink	> 200°C	
Light fastness acc. to wool scale	7+	
Radiation resistance QUVB/DIN EN ISO 4892	> 600h in laminated condition	

Colors

- Series 145/21201 yellow
- Series 145/21301 magenta
- Series 145/21401 cyan
- Series 145/21801 black

Shelf life

9 months when stored between 15 and 35 °C

Package sizes

- 5 l cubitainer
- 20 l cubitainer
- Other package sizes are available on request

Recommended cleaning and flushing fluid

TIGER Flush 151/00001

Applications

TIGITAL® Decor inks are acrylate-based UV curing systems that can be impregnated after printing on porous substrates such as paper or melamine formaldehyde resin or other thermoset formaldehyde resin formulations. These inks were developed for use in DOD piezo printing heads.

Based on their polar composition and open network structure in a hardened state, the inks allow impregnation with melamine-based, aqueous resin solutions with subsequent thermal curing*. Standard decor paper can also be used, i.e. it is not necessary to use a special paper in all cases. These inks can also be used to print on pre-impregnated papers (films), which are then injected with overlay.

The light fastness rating for all of the pigments used is 7 or better on the blue wool scale, making the pigments suitable for use on outdoor surfaces for 1 – 2 years. The inks provide excellent inter-coat adhesion between paper – ink – melamine – resin, without any tendency to bleed thanks to UV curing.

Cleaner and ink meet the IKEA standards listed in IOS-MAT-0010 and IOS-MAT-0066.

The basic colors of the digital printer can be set (pinned) with a UV-LED (395 nm) and then fully cured by exposure to mercury lamps so that the pre-product can be wound up.

* It is also possible to inject melamine overlays.

Printing conditions

The inks can be processed at temperatures up to 50 °C. The UV dose required depends on the thickness of the printed layer, with the previously specified 200 – 500 mJ/cm² corresponding to the typical radiation dose of a non-doped mercury vapor lamp of type H with a layer thickness of 10 – 15 µm. Better hardening results can be achieved in special cases with doped UV sources (iron or gallium) since the UV radiation emitted covers a larger wavelength range.

Compatibility of materials

Compatible materials:

- PP
- PE (HD + LD)
- Stainless steel
- PTFE
- EPDM rubber

Incompatible materials:

- PVC
- Butyl rubber
- Brass
- Viton®
- Nitrile plastics
- Polyurethane rubber
- Neoprene

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EN ISO 9001 / 14001



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