TIGITAL® UV Heavy Duty Ink Series 140/1.0 | 140/1.1

Properties

Viscosity	25 °C 50 °C	24 – 28 mPas 7,5 – 11 mPas
Surface tension	25 °C	22 – 28 dyn/cm
UV dose for hardening with an Hg lamp (type H)		250 – 500 mJ/cm²

Colors

- Series 140/11000 varnish
- Series 140/11100 white
- Series 140/11200 yellow
- Series 140/11300 magenta
- Series 140/11400 cyan
- Series 140/11500 light cyan
- Series 140/11600 light magenta
- Series 140/11800 black

- Series 140/11101 white
- Series 140/11201 yellow
- Series 140/11301 magenta
- Series 140/11401 cyan
- Series 140/11801 black

Shelf life

12 months when stored between 15 and 30 °C

Package sizes

- 1 l PE bottles (black)
- 5 l PE cubitainer (black)
- Other package sizes are available on request.

Recommended cleaning and flushing fluid

TIGER Flush 151/00001

Recommended bonding agent

TIGER Adhesion Promotor 518/00005

Applications

TIGITAL® UV-Heavy Duty Inks are UV curing systems based on acrylates that can be used to coat flat and hollow glass. These inks were developed for use in DOD piezo printing heads. Series 140/1.1 inks contain a degassing additive.

Once a 2-stage pre-treatment is completed, these inks are characterized by outstanding wet and dry adhesion on pre-treated glass. Before the application of the inks and the pre-treatment of the glass surface, the glass surface must be cleaned carefully to ensure that the surface is free of dust and grease. In addition, a highly reactive SiOx layer is applied as part of the pyrolysis process. In a second pre-treatment step, the TIGER Adhesion Promotor is applied. It can be sprayed on or printed on using appropriate DOD printing heads. After imprinting the pre-treated glass surface, the finished glass can be used immediately; a follow-up heat treatment is not necessary.

These inks were developed for use in damp rooms such as bathrooms, kitchens or saunas. In addition, the printed surfaces comply with the 1,000h condensed water test required by EN 1096. Furthermore, printed layers are dishwasher-safe and can be pasteurized.

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 250 – 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

Product data sheet

Disclaimer

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certified according to
EN ISO 9001 / 14001
IATF 16949

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