

UV-PRO GLASS

Fast-drying UV ink for glass (raw and lacquered).
High glossiness.
Good resistance to washing in a dishwasher.
Standard and opaque Colour range.
NO CMR inks.

APPLICATIONS

UV-PRO GLASS series is a UV high gloss two component ink for printing on glass and ceramics. Suitable for a variety of applications: bottles (frosted glass and raw glass), some pre-treated or not pre-treated cosmetic containers, drinking glasses, glass for interior use, furniture, mirrors, slot machines, automobile, glassware (vases, candle holders, ashtrays...).

SUBSTRATES

- Glass and ceramics.
- Bottles (frosted glass and raw glass).
- Some pre-treated or not pre-treated cosmetic containers.
- Drinking glasses, glass for interior use.
- Furniture, mirrors, slot machines, automobile, glassware vases, candle holders, ashtrays.

HOT STAMPING

For ideal hot stamping, use our two specially designed CMR-free tinted primers:
The process is as follows

- Non CMR UV Primers + 4% hardener (HX29)
 - UV-HS PRIMER GOLD (brown tint for gold film)
 - UV-HS PRIMER SILVER (dark grey tint for silver film)
- 120 or 140 mesh screen
- Mercury lamp or LED curing
- 30 min 150 °C post-cure for optimum resistance

BENEFITS

- Suitable for high printing speeds
- Excellent resistance to alcohol and alcoholic products (beer, brandy, perfume...)
Before use, add 4 % HARDENER H29, stir well the mixture and wait 10 to 15 minutes before printing in order to obtain a homogeneous mixture.
- Lifetime of the mixture after incorporation of the hardener: between 6 hrs to 8 hours depending on workshop conditions
- Good adhesion and resistance to abrasion and scratch on chemically treated frosted glass and raw glass with almost no treatment (hot and cold) and/or flamed. Resistance to water, ice and freezer is obtained after 24 hours
- Resistance to boiling water (20 min)
- Resistance to G1 simulator
- The adhesion of the ink may vary depending on the surface condition or the manufacturing process of the media. A pre-printing test for any production is imperative
- To obtain optimal adhesion and resistance, always dry at 150 °C during 30 minutes
- Hot stamping compatible

ADDITIVES

- In case of levelling issues, add 0.5 to 1% of LEVELLING AGENT 25
- Before use, add 4% HARDENER HX29
- Wait between 10 to 15 minutes in order to obtain a homogeneous mixture

INK ADHESION

For good adhesion, a uniform surface energy > 44 mN/m is generally necessary. The glass surface must be free of graphite, silicone, dust or grease or other residues (such as fingerprints).

On glasses that have undergone «cold end» treatment (anti-scratch PE varnish coating), a flame treatment should be performed. Although they are not necessarily required, the adhesion of the ink is of course reinforced by silicate glass pre-treatments.

The printing technical requirements depend on the areas of use. It is thus necessary to check the adjustment of the inks to these specifications.

ASPECT

Very high gloss

SCREEN MESH

120 to 155 threads/cm

SQUEEGEES

Hardness between 85 and 75 Shore.

CLEANING

SOLVENT ECO, SOLVENT S10.

THINNING

THINNER T87 (1 to 5%)

PRINTING EQUIPMENT

Semi-automatic or automatic machines

PACKING

1 kg

DRYING/CURING

Mercury lamps

A steam UV medium pressure mercury lamp (120- 200 W/cm) prints approximately 4500 pieces/ hour.

White, opaque, and metallic colours cure more slowly (about 3000 pieces/hour).

- Recommended dose: 175-250 mJ/cm² irradiance of 600 mW/cm²

UV drying speed depends on the quality of the UV drying unit (power and lamp age, state of the reflector, focus...), the ink deposit, the colour of the glass and the number of UV drying units.

UV LED drying

UV-PRO GLASS can be cured under UV LED under the following conditions:

- UV LED oven with a minimum power of 12W / cm²
- Wavelength 395nm

Make sure that the distance between the LEDs and the substrate corresponds to the indications given by the manufacturer of your equipment.

UV ACCELERATOR 31

If necessary, reactivity can be optimized by incorporating the additive UV ACCELERATOR 31 in the ink in a proportion between 5 and 10%. It performs as well for UV LED curing as for conventional UV curing (mercury lamp).

Be careful, however, when using this additive. It can cause the ink film to harden.

In this case, you can use a simple photoinitiator up to 1 to 3%:

- PI COLOR 37 for colors
- PI COLOR 98 for white

STORAGE

The guaranteed shelf life of our inks, undiluted, in the original, unopened container is applicable to inks stored in a dry, well-aired environment at a temperature between 15 to 25 °C.

- Standard UV inks: 1 year
- Standard solvent based inks: 1 year
- Special shades in solvent or UV: 1 year
- Fluorescent colours: 3 months
- Gold and silver: 3 months
- Transparent shades: 6 months
- Special products, hardeners: 1 year

COLOUR MATCHING

Keller offers a full in-house colour matching service from 1 kg. We prepare colours according to Pantone, RAL, NCS palette.

FLUORESCENT SHADES

They have to be used on white background. The pot life of these inks is about three months from the date shown on the packaging. The light resistance is limited in time, especially in outdoor exposure.

ADDITIVES AND SPECIAL PRODUCTS

Do not forget that additives must not be incorporated systematically in the inks, but must be used with caution as their dosage and their field of use can often present risks. The special products we deliver are of consistent quality. KELLER cannot guarantee the work using these products. Indeed, they cannot influence neither the working methods nor the operating parameters.

HEALTH AND SAFETY

The vast majority of printing inks and related products formulated by KELLER contain no substances of very high concern (SVHC) candidates for authorization (as of June 25, 2020) in concentrations greater than 0.1% by mass. Our products comply with the requirements of Directives 2011/65 / EU (RoHS 2), 2015/863 / EU (RoHS 3) and 94/62 / EC (heavy metal concentration levels present in packaging). For more information about our regulatory compliance, please consult our Eco System document, available on request.

STANDARD COLOURS:

YELLOW	05
GOLDEN YELLOW	06
ORANGE	07
CARMINE RED	08
RED	09
PINK	10
VIOLET	11
BLUE	12
GREEN	13
BLACK, WHITE, VARNISH & BASE	
BLACK	01
WHITE MIXING	02
WHITE	03
TRANSPARENT LACQUER	04
BASE	14

PRIMER

UV-HS PRIMER GOLD	
UV-HS PRIMER SILVER	

OPAQUE COLOURS:

WHITE OPAQUE	012
BLACK OPAQUE	011
YELLOW OPAQUE	015
ORANGE YELLOW OPAQUE	016
ORANGE OPAQUE	017
RED OPAQUE	019
BLUE OPAQUE	0112
DEEP BLUE OPAQUE	0212
GREEN OPAQUE	0113

ADDITIVES:

THINNER	T87
HARDENER	HX29
UV ACCELERATOR	31
PI COLOR	37
PI WHITE	98
LEVELLING AGENT	25

KELLER guarantees the quality of our products. However, we cannot guarantee the final result, because we exercise no control over individual operating procedures. Our responsibility is limited solely to the exchange of ink or varnish. The quality of a substrate to be printed can vary, as well as an overprinted ink; therefore, the above information is given in good faith based on the state of our art and prior experience. This statement also applies to our technical assistance. When using our inks and varnishes on a new substrate or when changing operating procedures, we strongly recommend testing first a full-scale production to ensure compatibility. Please refer to our General Conditions of Sales.

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