

UVHDGLASS

Fast-drying UV ink for glass (raw and lacquered) – High glossiness – Good resistance to washing in a dishwasher

Standard and opaque Colour range

Non CMR inks

APPLICATIONS

UVHDGLASS 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 (AM9192 or 45160)
 - UV PRIMER GOLD XP47074 (brown tint for gold film)
 - UV PRIMER SILVER XP47281 (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% of one of the available hardener or Adhesion modifier, stir well the mixture and wait 10 to 15 minutes before printing in order to obtain a homogeneous mixture.

Hardener / Adhesion modifier	% into the ink	Lifetime (in hours)	Alcohol resistance	Boiling water resistance	G1 simulator resistance
AM 9192	4%	6 - 8 h	++++	++++	++++
45160	4%	8 - 10 h	+++	++++	+++
XP 46576	4%	10 - 12 h	+++	++++	+++

- 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
- Dish washer resistance
 - Domestic dish washer (AEG brand), at least 300 cycles (detailed testing method on request)
- 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 ST155
- Before use, add 4% Hardener AM9192
- 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 (Uvitro®, Arcotec®, Pyrosil®, varnish spray...).

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

THINNING

Standard Thinner ST178 (1 to 5%)

PRINTING EQUIPMENT

Semi-automatic or automatic machines

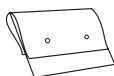
PACKING

1 kg



SCREEN MESH

120 to 155 threads/cm – 305 to 381 threads/inch



SQUEEGEES

Single, double or triple durometer polyurethane blades with hardness between 85 and 75 shore.



CLEANING

Solvents ECO N, 93801



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

UVHDGLASS 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 44213

If necessary, reactivity can be optimized by incorporating the additive «UV Accelerator 44213» 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 40873 for colors
- PI White 43389 for white



STORAGE

The UVHDGLASS ink series are guaranteed to be stable in their original, unopened packaging; they have a shelf life of 24 months. Storage should be at a temperature between 15 and 25 °C (59-77 °F)

COLOUR MATCHING

Our color matching department works with an Xrite software and a spectrophotometer. It allows us to carry out any of your colour matching from 1kg. It is then necessary to give us as much information as possible about the type of substrate and its color, the screen mesh used, as well as a wet sample of the desired final shade.

If you have an Xrite software, we can also send you the IFSX files of the formulation guide. These formulation guides are also available in Excel files.

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. Encres DUBUIT 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 Encre DUBUIT contain no substances of very high concern. 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 SHADES	CODE 1 KG - 1 L	CODE 5 KG - 5 L
UVHDGLASS Yellow 1010	BUVHDGL1010K	
UVHDGLASS Golden Yellow 1020	BUVHDGL1020K	
UVHDGLASS Orange 1030	BUVHDGL1030K	
UVHDGLASS Vermilion 1040	BUVHDGL1040K	
UVHDGLASS Red 1050	BUVHDGL1050K	
UVHDGLASS Pink 1060	BUVHDGL1060K	
UVHDGLASS Violet 1070	BUVHDGL1070K	
UVHDGLASS Blue 1080	BUVHDGL1080K	
UVHDGLASS Green 1090	BUVHDGL1090K	
BLACK, WHITE, VARNISH & BASE		
UVHDGLASS Black 1001	BUVHDGL1001K	
UVHDGLASS Mixing White 1002	BUVHDGL1002K	
UVHDGLASS White 1006	BUVHDGL1006K	
UVHDGLASS Varnish 10090	BUVHDGL10090K	
UVHDGLASS Base 1095	BUVHDGL1095K	
OPAQUE SHADES		
UVHDGLASS Opaque White 2006	BUVHDGL2006K	
UVHDGLASS Opaque Black 2003	BUVHDGL2003K	
UVHDGLASS Opaque Yellow 2010	BUVHDGL2010K	
UVHDGLASS Opaque Orange Yellow 2020	BUVHDGL2020K	
UVHDGLASS Opaque Orange 2030	BUVHDGL2030K	
UVHDGLASS Opaque Red 2040	BUVHDGL2040K	
UVHDGLASS Opaque Blue 2080	BUVHDGL2080K	
UVHDGLASS Opaque Deep Blue 2085	BUVHDGL2085K	
UVHDGLASS Opaque Green 2090	BUVHDGL2090K	
ADDITIVES		
Standard Thinner ST178	D178L	D178Q
Hardener AM9192	E9192	
Adhesion modifier 45160	E45160K	
Adhesion modifier XP 46576		
UV Accelerator 44213	B44213K	
PI Color 40873	B40873K	
PI White 43389	B43389K	
Levelling Agent ST155	BDIV155K	

Encre DUBUIT 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.