

UVEPLAST UVSC01

Multi-purpose, UV drying screen printing ink

APPLICATIONS

UVSCO01 series is versatile UV curable screen in formulated for printing on paper, cardboard, vinyl, hard PVC, polystyrene, polycarbonate and many other kinds of plastic. Printing on treated polypropylene and PET when combined with Hardener UV0001. Printing on PMMA (see Remarks).

LABEL PRINTING

The UVEPLAST inks are ideally suited for flat screen printing of labels on treated or coated polyethylene and polypropylene, coated paper and metallized polyester. The inks perform well in combination with letterpress, flexo, hot stamping and thermal transfer printing.

Attention: Because of the enormous variety of substrates it is highly recommended to undertake proofing trials before commencing production, to insure the ink meets production and end user requirements.

RECOMMENDED MESH

Use a mesh between P 140 T and P 180 T. We recommend to print Phosphorescent ink with mesh P 79 T or more coarse-fibred.

DILUTION

These inks are supplied at press ready viscosity.

If necessary, they can be diluted using about 10% reducer UV0018.

In cases where dilution could result in a reduced drying speed, we recommend to add UV0012 for coloured inks and UV0013 for white inks.

DRYING

All inks have been tested at 30-40 m/min under a 120 Watt/cm lamp.

The adhesion properties of UVSC01 inks are very much influenced by the in depth polymerization of the ink film and this by the opacity and thickness of the ink layer.

These factors are in turn determined by the mesh, the print image, the hardness and the angle of the squeegee.

The UVEPLAST inks have been developed for screens P 150 S and finer.

If a thicker ink layer is required a mesh P 120 T could be used but this might, depending on the printing speed, require the addition of \pm 3% photoinitiator UV0012 or UV0013.

Photoinitiator UV0013 is recommended for white and pastel colours, photoinitiator UV0012 for all other colours.

CLEANING THE MESH

The mesh should be cleaned with the all-round WASHING AGENT UV0009.

GENERAL PROPERTIES

UVEPLAST UVSC01 inks give a beautiful glossy finish with a high opacity. Once they are fully cured UVSC01-series has excellent solvent resistance.

UVSC01 inks have almost unlimited mesh stability and extremely fine resolution, making it possible to print extremely fine details.

It's virtually impossible to over cure these inks, giving perfect intercoat adhesion even between multiple ink layers.

Stencils should ideally be made with a high quality, solvent resistant emulsion.

One litre of ink covers between 60 and 100 square metres, depending on the surface and mesh used and the image being printed.

The inks will last for twelve months if kept in a cool, dark place. Good lightfastness and weather resistance.

COLOURS

Process Ink:

UVSC011000B – Process Yellow UVSC012000B – Process Magenta UVSC013000B – Process Cyan UVSC014000B – Process Black

Basic Ink:

UVSC010000B – Mixing White UVSC010001B – Opaque White UVSC010100B – Yellow UVSC010200B – Orange UVSC010300B – Red UVSC010400B – Magenta UVSC010500B – Rhodamine UVSC010600B – Violet UVSC010700B – Cyan UVSC010800B – Green UVSC010900B – Black

Special Colours:

Gloss Silver and Gold: Are supplied as a two-component system and have a limited pot-life after mixing

Board Black: For printing PVC and Polystyrene. Accepts writing on with a piece of chalk.

Phosphorescent: A yellow-green ink absorbing light during the day and glowing for about 15 to 20 minutes at night. This glowing effect depends highly on the thickness of the ink layer. Mesh P43 – P77.

AUXULIARY PRODUCTS

Opaque white, mixing white and transparent white: used to make the inks more or less transparent and less intensely coloured. However, if you mix in too much, this can reduce the ink's light fastness.

HARDENER UV0001: add 4% of this to the UVP inks to greatly improve their adhesion to specific surfaces such as treated polypropylene (min. 38 dynes) and PET. The reaction between the hardener and the ink occurs during the first ten to twelve hours after printing. However Hardener UV0001 does not affect drying and prints can be stacked immediately at the end of the drying tunnel.

The ink can be used for about eight hours after mixing.

PHOTOINITIATOR: can improve the drying speed and the film hardness of the ink in certain cases. 3-5% is a normal quantity. Too much photoinitiator can have an opposite effect.

Photoinitiator UV0013 is recommended for white and pastel colours, while photoinitiator UV0012 should be used for bright colours.

Anti-scratch paste UV0015: increases resistance and surface slip. Adding between 5 and 10%.

SAFETY

UVSC01 inks are NVP-free but are skin irritants. We therefore recommend that you always wear gloves, eye protection and suitable clothing when using them.

If ink does come into contact with skin, wash it off with soap immediately. If any of the products come into contact with your eyes, rinse them thoroughly in water and consult a doctor.

REMARKS

- 1. Achieving the "perfect" result when using UV-drying inks not only depends on the type of ink that you use, but also to a large extent on factors such as type of mesh, the surface being printed on, the squeegee speed, the drying rate and the time between printing and drying. The use of UV systems is much more critical than that of solvent based systems.
- 2. If these inks are even very slightly contaminated by a non-reactive product such as thinner, they might not dry correctly.
- 3. Aluminum and gold inks can be used only for a limited time after mixing, so we can recommend that you only mix what you need.
- The UVPLAST UVSC01 ink, performs very well on most types of PMMS and most types of clear styrene if it is cured at 350 mJ/cm². However preliminary tests are always recommended before starting the real printing job.
- 5. UVEPLAST UVSC01 inks are limitedly recommended for printing on soft PVC.

This information is only meant for your guidance, we urge you to test our inks and products for your application before starting the actual job.