

Speciality Screen UV **Inks**

Thermoformable

UVIFORM UTF

UV Screen Printing Ink for thermoforming
HIPS substrates

FEATURES

- UV curing ink
- Excellent thermoforming
- Good outdoor durability
- Gloss finish
- Excellent screen printability
- Wide adhesion range
- Unlimited colour matching capability

Substrate:

PVC, PET, Polystyrene, Polycarbonate and HIPS.

**TEST INKS ON SUBSTRATES
BEFORE PRODUCTION RUN.**

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Applications:

UVIFORM UTF ink has been developed for versatility & high performance on wide range of substrates such as High Impact Poly Styrene(HIPS), PVC, PET, Polystyrene and Polycarbonate. The range includes speciality products for processes like Vacuum forming, Thermoforming, Bending, Cutting, Drilling and Creasing.

Important: End-user must determine suitability of this product for the intended use prior to production.

Outdoor Use:

UVIFORM UTF inks have been successfully tested for weathering in a QUV Weatherometer as per ASTM G53 test specification using UVB-313 lamps. UVIFORM colours withstood 1000 hrs of testing before significant deterioration of the colour was evident. Accelerated weathering tests cannot be precisely related to actual outdoor performance. But it is equals to 2 yrs outdoor exposure in temperate climate. To achieve maximum outdoor durability, UVIFORM UTF colours must be overprinted with overprint varnish for optimum light fastness in colour match shades, the following recommendations must be followed. The combined weight and proportions of by weight of UTF-30 Tinting white and UTF-381 Mixing Clear does not exceed 80% of the total colour match mix. The individual proportion of any one colour except Black is not below 5% of the total mix.

Pre-Treatment of Substrate:

The substrate (mainly HIPS) must be flame/corona pre-treated to a level of 48 to 54 dyne/sq.cm. prior to screen printing.

Caution: To ensure proper adhesion of UVIFORM UTF inks;

- The treatment level must be uniform over the entire area of the substrate.
- The substrate must be free of any oily substance, dirt and moisture before treatment is given.

- The treated substrate (surface) must not be handled with bare hands or with materials that will attract 'charge'.

Colour Availability & Colour Matches:

The UVIFORM UTF ink systems includes Seritone matching system line colours, set of Trichromatic (halftone) colours and UV curable Overprint Clear medium. The UVIFORM UTF-381 Mixing clear is used for mixing with standard UTF colours to promote transparency. For improving inter-coate adhesion between colours.

Colour matches can be supplied against prints or Wet ink samples.

Seritone Colour Matching System:

This consists of 12 Seritone colours that are suitable for intermixing to produce clean shades.

A) Line Colours:

UTF 001	Black
UTF 010	Tinting Black
UTF 030	Tinting White
UTF 021	Extra Opaque White
UTF 064	SMS Yellow (G/S)
UTF 066	SMS Yellow (R/S)
UTF 121	SMS Red (Y/S)
UTF 127	SMS Violet
UTF 165	SMS Magenta
UTF 230	SMS Blue
UTF 325	SMS Green
UTF 381	SMS Mixing Clear

B) Trichromatic Colours:

UTF 004	Trichromatic Black
UTF 052	Trichromatic Yellow
UTF 135	Trichromatic Magenta
UTF 215	Trichromatic Cyan
UTF 396	Trichromatic Extender Base

Mesh :

Print UVIFORM UTF inks through 150.34/cm to 165.34/cm, monofilament polyester fabric, depending on the application. For fine details and half tone printing, use yellow or amber coloured fabric.

Stencils :

Stencils can best prepared with Sericol's stencil making products :

Xtend Prep 101: for abrasion of screen mesh

Xtend Prep 102: for degreasing of screen mesh

Emulsions: Dirasol 132(single pack) or Dirasol 915(two pack).

Wash Up:

Wash up screens with SS 639 Universal Screen Wash. This will ensure long life of stencils made with Dirasol emulsions.

Coverage:

UVIFORM UTF inks should give a coverage of 70-90 sq.m/Kg, when printed through a 150.34/cm mesh.

Curing :

15-20 meters per minute through 150.34 mesh, with two 80 Watt/cm lamp for curing. Cure speeds are dependant on colours, print film thickness, opacity, printing image and condition of the curing unit.

Required curing has to be studied for the job to job and minimum 175 mJ/cm for CMYK colours and for White & Line colours 200 mJ/cm.

This is only guideline information but this can vary on ink film thickness, substrate and colour.

The final curing of each colour has to be set at proofing Job and after intended test requirement(adhesion, gloss...etc) before going for mass production.

Important Note:

Under cure can give low gloss and wet film with tacky nature, while **Over cure** can give ink film brittleness and poor inter coat adhesion.

Resistance properties (e.g. adhesion) of the inks should be checked only after 24 hrs of post cure printing operation. Same printing conditions must be followed for proofing and bulk production.

Pre-production Test:

Do not stir vigorously and temp should not increase 40 degree C.

Always test for Adhesion and other properties before each production run because there can often be significant differences between substrates from different manufacturers and even between different batches. Other plastics can become brittle or cause to curl after printing.

Important: End user must determine suitability of this product for the intended use prior to production.

Storage:

- Keep inks in cool place, away from direct sunlight.
- Keep lids tightly closed when not in use.
- Any unused ink should not be returned to can, must be stored separately.
- Shelf life is 18 months from the date of manufacturing under storage of 20 to 30 degree C.
- Stir well before every use.

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Safety and Handling:

The UVIFORM UTF system is formulated to be free from any known or suspected toxic, carcinogenic, mutagenic or reprotoxic chemicals.

This system is formulated free from lead and other heavy metals. Comprehensive Information on Safety and Handling of UVIFORM UTF screen inks is given in the MSDS which is available on request.

Environmental Information:

UVIFORM UTF ink system does not contain ozone depleting chemicals as described in the Montreal Convention.

Fujifilm Sericol India Pvt Ltd

- Has certification to the international Environmental Standard, ISO 14001.
- Is committed to minimizing the risk to users of our products, and also to minimizing the impact of our activities on the environment, from formulation through to production and supply.
- Regularly review and monitor our impacts and activities, setting objectives and targets as part of a continual improvement process.
- Is committed to reduce waste through better use of raw materials, energy, water, re-use and recycling.

Important Note:

The information and recommendations contained in this product information sheet as well as technical advice otherwise given by representative of our company, whether verbally or in writing, are based on our present knowledge and experience. Such information/ technical advice is given in good faith, but without warranty, in view of the many factors that may affect processes or applications as we cannot cover or anticipate every possible application of our products and because manufacturing methods, printing stocks and other materials vary.

For the same reason our products are sold without warranty and on condition that users shall make their own tests to satisfy themselves that the products will meet fully the particular requirements of the labels/ brands/ agencies of their clients and also that no proprietary rights and existing laws and legislation are violated.

Our advice does not relieve processors from the responsibility of carrying out their own tests and experiments, nor does it imply any legally binding assurance in respect of properties or suitability for a specific purpose or of the legal status of the listed products.

Our policy of continuous product improvement might make some of the information contained in this product information sheet out of date and users are requested to ensure that they follow current recommendations.

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