

Graphic Screen UV Inks

**Outdoor Signage
POP/Displays**

GRAPICAL GL

Outdoor UV Screen Inks for Wide Range of Plastics

FEATURES

- UV Curing Inks
- Good Outdoor Durability
- High Gloss
- Very Fast Cure Speeds
- Wide Adhesion range
- Superior Flexibility & Intercoat Adhesion
- Excellent High Speed Printability
- Good Die Cutting
- V-Pyrol Free

Substrate:

Wide range of plastics such as: Self Adhesive and Rigid PVC, Flex Banners, PC, Acrylics & Coated Polyester, Paper & Board, HIPS

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

SERICOL
More than ink...Solutions.
FUJIFILM

Applications:

Graphical GL inks are widely used for outdoor signage/POP display/Decal, Banner * Printing, * Flex banners prewiped with methylated spirits to remove plasticiser for better adhesion.

Outdoor Use:

Graphical GL inks have been successfully tested for weathering in a QUV Weatherometer as per ASTM G53 test specification using UVB-313 lamps. Graphical colours withstood 1500 hrs of testing before significant deterioration of the colour was evident. (Except GL-164 and GL-114) accelerated weathering tests cannot be precisely related to actual outdoor performance. But it is considered that 1500 Hrs of exposure approximately equals to 3 yrs outdoor exposure in temperate climate. To achieve maximum outdoor durability, Graphical GL colours must be overprinted with GL-433 EL Overprint Varnish. For Optimum light fastness in colourmatch shades, the following recommendations must be followed. The combined weight and proportions of by weight of GL-023 Special Opaque white, GL-030. Tinting white and GL-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

Colour Range:

The Graphical GL ink systems includes Seritone matching system colours, line colours, set of Trichromatic (half tone) colours and UV curable Overprint Clear medium. The Graphical GL-381 Mixing clear is used for the following purposes:

- As a constituent of Seritone matching system.
- For Mixing with Standard GL colours to promote transparency.
- For improving inter-coate adhesion between colours.

Colour Matches:

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

Seritone Colour Matching System:

This consists of 11 Seritone colours that are suitable for intermixing to produce clean shades.

Line Colours:

GL-010	Tinting Black
GL-030	Tinting White
GL-064	SMS Yellow GS
GL-066	SMS Yellow RS
GL-114	SMS Orange*
GL-121	SMS Red YS
GL-164	SMS Red BS*
GL-165	SMS Magenta
GL-127	SMS Violet
GL-230	SMS Blue
GL-325	SMS Green
GL-381	SMS Mixing Clear

* -To Achieve outdoor durability, it is recommended to use GL-864 and GL-802 in place of GL-164 & GL-114 respectively.

Special Colours:

GL-025	Opaque White
GL-023	Special Opaque White
GL-001	Black
GL-802	EL Orange
GL-864	EL Red BS

Trichromatic (Halftone) colours:

GL-004	Trichromatic Black
GL-052	Trichromatic Yellow
GL-135	Trichromatic Magenta
GL-215	Trichromatic Cyan
GL-396	Trichromatic Extender Base
GL-433	EL Overprint varnish

Note: GL-433 It has to be studied for the suitability to achieve good intercoat adhesion for each colour before production run and generally opaque colour matches as well as opaque white GL-025 does not give good adhesion; hence recommended to test at customer end for suitability

Pre-production Test:

Always test for Adhesion, outdoor durability 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.

Thinning:

Graphical GL inks are supplied press ready and thinning is normally not required. But if required; then it can be thinned by ZEI813 up to 3 to 5%. It will also help to improve curing.

Thixotropic Additive: Graphical GL inks are supplied press ready and addition of thixotropic additive is normally not required. However for printing on faster speed machines to control flow of ink it is recommended to add 3 to 5% Thixotropic additive ZEI 826 which improves Gel structure of the ink.

Mesh :

Print the graphical GL inks 150.34/cm to 165.34/cm, monofilament polyester fabric, depending on the application. For fine details & half tone printing, use amber or yellow coloured fabric.

Coverage:

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

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.

Curing:

15-20 meters per minute through 150.34 mesh. with two 80 watt/cm lamp for curing. Cure speeds are dependant on colours, film thickness, opacity and condition of the curing unit. Required curing has to be studied for the Job to Job and minimum 175 mJ for CMYK colours and for White & Line colours 200 mJ. 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. Note: Undercure can give low gloss and wet film with tacky nature. Overcure can give ink film brittleness, poor intercoat adhesion. Graphical GL inks are supplied press ready and addition of cure additive is normally not required ; however for faster curing 3 to 5% Maximum of GLFC to be used.

Storage:

- Keep inks in cool place, away from direct sunlight, or extreme temperatures.
- Keep lids tightly closed when not in use.
- Don't put the remaining material left on screen in the GL inks tin. Keep remaining material separately in other can.
- Open the can and stir for 5 minutes under moderate (Very slow) speed and leave 10 -20 minutes for Degassing.
- Shelf life is 18 months from date of manufacture under storage of 20°C to 30°C.

Safety and Handling:

The GRAPHICAL GL 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 GRAPHICAL GL screen inks is given in the MSDS which is available on request.

Environmental Information:

GRAPHICAL GL 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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