

Gloss UX

PART OF THE UVISPEED SERIES OF 100% UV SCREEN INKS

Gloss UX Line colours have been developed for high speed printing for packaging and POP/display items on paper, board and PVC. It is suitable for most types of printing equipment including flatbed and cylinder-press.

Product Properties

- Gloss finish Line system
- Developed for use on Self adhesive PVC and Semi Rigid PVC
- Excellent adhesion and flexibility
- Excellent finishing properties – cutting, drilling and routing
- Suitable for flatbed, cylinder-press
- Block free for double sided work
- 2-year outdoor life (See 'Outdoor Use')
- No squeegee attack, no drying in the screen
- Excellent chemical and solvent resistance

General Information

Gloss UX inks should be stirred thoroughly before each use. Always test application fully before beginning a production run, as there is often considerable variance in plastics from different manufacturers. See also section on 'Post Cure'.

Curing Information

Actual curing rates depend on a number of factors including ink film thickness, opacity, the number and types of lamps used (including lamp emission spectrum, power and efficiency) and the stock being printed. The cure speed of UX Dense Black is slower than the other colours. Cure speed of white or colour matches containing white may be slower than Seritone base colours. Care should be taken to ensure that each colour is cured correctly to achieve optimum adhesion to substrate and overprint adhesion of subsequent colours.

Post Cure

The chemical reactions involved in curing UV Inks are not totally completed in the curing unit itself. While up to 90% of the chemical bonds needed to give adhesion etc, are completed, there is a post cure period when chemical bonds continue to be made.

Until recently it was believed that post cure was completed within 24 hours. Study has shown that although much of the post cure activity does take place within 24 hours it is now thought the total post cure period can last for a few weeks.

This is important to recognise as the UV cure process, and post curing, can cause shrinkage of the ink film, which puts stress on the material. In the case of self-adhesive PVC the stress manifests itself as cracking or shattering (embrittlement) of the substrate.

It is therefore important to be cautious if your results immediately after curing are borderline for embrittlement as the additional post cure stress may cause more serious problems later on. **Care should be taken that prints are not over-cured and that adhesion of subsequent colours, as well as the first colour, is assessed at regular intervals.**

Main Characteristics

Finish

Gloss

Mesh

No. 140.34 – 180.31 Plain Weave
No. 150.34 PW is recommended for most print applications.
No. 120-150.34PW is recommended for fluorescents
No. 140-150.34PW is recommended for metallics

Thinning

Up to 10% ZE637 Standard thinner
Up to 10% ZE807 (up to 5% for UX fluorescents)
Up to 10% ZE813 to increase cure speed
Up to 10% ZE817 to increase cure speed and adhesion to heavy weight rigid PVC
Up to 10% ZE808 Gel additive to improve fine definition.

Stencil Recommendation:

Contact exposure: Dirasol Zenith, Dirasol 916, Dirasol 917, Dirasol 902, Dirasol Supercoat, Indirect or Capillary films.

Coverage

Standard Colours
No: 150.34 PW mesh. 80-100m²/kg
Fluorescents
No: 150.34 PW mesh. 55-65 m²/kg

Wash Up (On press)

ZT639 Screenwash Universal

Screen Cleaning (After printing)

See Xtend Screen Cleaners product information sheet

Curing

Cured through dryer with 2x80W/cm lamps @ 35-45 metres per minute with 150.34 Plain weave mesh.

Gloss UX

Pre-production Tests

Certain plastics may be impregnated with lubricants, which, like plasticiser migration, may impair adhesion even after a considerable time period after printing. This can usually be overcome by wiping the surface with a white spirit soaked cloth and drying off the solvent before printing.

Surface adhesive left from protective papers on rigid PVC sheets should be thoroughly removed in line with supplier's instructions. Other plastics can become brittle when printed, possibly to the point of shattering, often after several weeks. It is therefore essential to check compatibility between ink and plastic.

Control of Gloss Level

The finish of Gloss UX may be reduced by additions of ZE816 UV Matting Base. Where high levels of additions are required, it is recommended that Gloss UX be mixed in any proportion with Matt UM screen inks, without any loss in colour strength or printing properties.

Co-use with Other Inks

Gloss UX may be printed over fully cured prints of Matt UM, 2000UP or be overprinted by them. **Full intercoat adhesion may not fully develop until 24 hours after printing and compatibility of combined systems must be evaluated under production conditions before commencing a production run.**

Gloss UX may be printed over fully dried prints of Seristar SX, Colorstar CS and Matt Vinyl MV. **Solvent should be allowed to fully evaporate from any solvent-based prints prior to overprinting with UV curing systems. In some cases this may take up to 24 hours.**

Seristar SX, Plastijet XG, Matt Vinyl MV, Mattplast MG and Colorstar CS may overprint Gloss UX.

Outdoor-Use

Gloss UX inks have been tested for resistance to weathering in an Atlas xenon bulb weatherometer. Gloss UX inks have a 2 year outdoor life when printed full strength on an exterior grade self-adhesive vinyl and exposed in zone 1 as defined in the Sericol 'Weathering' Product Information Sheet available at www.fujifilmsericol.com

Gloss UX - up to 24 months. **(Exceptions: UX021, UX114 and UX164)**

The colours listed as exceptions have reduced light fastness and should not be used for prolonged outdoor exposure or in colour matches requiring outdoor resistance.

Gloss UX fluorescent colours are not recommended for outdoor use. Like all true fluorescent colours, the pigments begin to fade quickly when exposed to strong light.

The Seritone Matching System

The Gloss UX range includes nine Seritone base colours plus black, white and extender base which enables printers to readily match special colours in-house.

The use of Universal Tinters is not recommended with Gloss UX.

PANTONE® Matching System

Sericol provide formulae for the coated ('C' suffixed) section in the Gloss UX to produce accurate simulations for PANTONE colours.

The Sericol package includes:

1. PANTONE® Colour Formula Guide
2. Sericol Formula Guide
Formulations given in percentages by weight.
3. Colour Manager Software
For use with IBM compatible computers, this package enables use of PANTONE formulations plus:
 - Storage facility for user's own formulations
 - Automatic batch sizing and costing
 - Ink coverage estimator
 - Stock control system to calculate the amount of stock and a reminder when stocks fall below a given (Programmable) level
4. PANTONE Formula Scales
Pre-programmed with PANTONE shades to ensure maximum accuracy, speed and cost savings.

Line Colours

UX001	Black
UX009	Dense Black
UX021	White
UX026	Brilliant White
UX064 (s)	Seritone Yellow GS
UX066 (s)	Seritone Yellow RS
UX114 (s)	Seritone Orange
UX121 (s)	Seritone Red YS
UX122	Scarlet
UX164 (s)	Seritone Red BS
UX165 (s)	Seritone Magenta
UX127 (s)	Seritone Violet
UX230 (s)	Seritone Blue
UX325 (s)	Seritone Green
UX381	Extender Base
UX382	Metallic Ink Medium

(s) = Seritone Base Colours

(GS) = Green Shade (YS) = Yellow Shade

(RS) = Red Shade (BS) = Blue Shade

Available in 5kg containers

Gloss UX Fluorescents

UX053	Fluorescent Yellow L
UX105	Fluorescent Orange M
UX137	Fluorescent Red M
UX139	Fluorescent Magenta M

Available in 5kg containers

Reducers and Additives

ZE637	Standard Thinner
ZE807	Thinner
ZE813	Fast Thinner
ZE817	Adhesion Promoter
ZE808	Gel Additive
ZE816	Matting Base

Available in 1 ltr and 5 ltr containers

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Metallic Shades

Metallic shades can be obtained by mixing UX382 Metallic Ink Medium with Gold Powder or Silver Paste. Recommended mixing ratios are as follows.

Gold

MP-461 Rich Pale Gold Powder Superfine	20 parts by weight
UX-382 Metallic Ink Medium,	80 Parts by weight

Silver

MP-483 Silver Paste	15 parts by weight
UX-382 Metallic Ink Medium	85 Parts by weight

Gloss UX may be tinted, if required, by 5-10% additions of UX Seritone base colours. Mixtures containing metallic powders should be used within 24 hours. **Do not thin Metallic Shades with any of the following: ZE807, ZE816, ZE820. These thinners will significantly reduce pot life.**

It is recommended that 140.34 PW meshes be used when printing metallic inks to achieve the best results. For further information see Product Information sheet 'Universal Tinters, Overprint Varnishes, Metallic Powder & Ink Media'.

Special Matches

Colours can be supplied against prints; wet ink samples as well as PANTONE®, British Standard, 'HKS' or 'Munsell' references. A sample of the substrate and the number and type of mesh to be used should be attached to orders. Other properties required of special matches may be very important and full details should be supplied of the process to be followed. Your local representative will be pleased to advise on non-standard colours.

Storage

Containers should be tightly closed immediately after use. Gloss UX inks and reducers should not be stored in direct sunlight or near sources of heat and should be kept away from peroxides. For maximum shelf life, storage should be between 10°C and 25°C. When stored in a cool environment Gloss UX have a shelf life of approximately 12 months – from the date of manufacture.

Fujifilm Sericol UK Limited

- Has certification to the International Environmental Standard, ISO 14001.
- Is committed to minimising the risk to users of our products, and also to minimising the impact of our activities on the environment, from formulation to production and supply.
- Research and development team, work to an in house, Health, Safety and Environmental policy, termed 'Design for Health, Safety and Environment', with the aim of proactively developing products with the least impact on health, safety and the environment.
- Regularly review and monitor our impacts and activities, setting objectives and targets as part of the continual improvement process.
- Is committed to reducing waste through better use of raw materials, energy, water, re-use and recycling.

Safety and Handling

Gloss UX Line Inks:

- Are formulated to be free from any chemicals toxic to health, carcinogenic, mutagenic or reprotoxic according to Directive 67/548/EC.
- Have a flashpoint greater than 55°C and is therefore not classified as a "dangerous substance" under the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR).
- For optimum shelf life, all products should be stored at moderate temperatures, between 5°C and 30°C. Storage outside of these temperatures may lead to deterioration in the performance of the product.

Environmental Information

Gloss UX Line Inks:

- Do not contain ozone depleting chemicals as described in the Montreal Convention.
- Are formulated free from aromatic hydrocarbons.
- Are free of any volatile solvent and can therefore be considered to have less impact on the environment, when compared with solvent-based products.

The information and recommendations contained in this Product Information Sheet, as well as technical advice otherwise given by representatives of our Company, whether verbally or in writing, are based on our present knowledge and believed to be accurate. However, no guarantee regarding their accuracy is given 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 they will meet fully their particular requirements. 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.

SERICOL
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SYMBOL

Subotica
Tel: +381(0) 24 643100
symbol@symbol.rs

Beograd
Tel: +381(0) 11 3478262
www.symbol.rs

GRAPHIC CENTER

Zagreb
Tel: +385(0) 1 2987044

office@graphiccenter.hr
www.graphiccenter.hr