

Displaymaster XX Line & pro-FILE Trichromatic screen inks

Displaymaster XX is part of the Uviplast Series of 100% UV Screen Inks.

Displaymaster XX is a 100% UV screen ink developed for printing POP Display material; it is suitable for all types of printing equipment including flatbed, cylinder and multicolour machines.

Product Properties

- Excellent adhesion and flexibility
- Satin finish
- Pro-File trichromatics – Matched to FOGRA 27/39 / ISO 12647-2
- Developed for use on Paper, Boards, PVC*, Polystyrene and Polypropylene
- Suitable for flatbed, cylinder-press or multicolour machines with scanning UV
- Block free for double sided work
- 2-year outdoor life (See Weathering)
- Excellent finishing properties – cutting, drilling and routing
- No squeegee attack, no drying in the screen

pro-FILE Trichromatics

Displaymaster XX Pro-File trichromatics are designed to enable easier matching of prints to Fogra 27/39 / ISO 12647-2 profiles.

However, the variables of the screen printing process mean that achieving the specific L*a*b* values of a defined standard will not always be possible, and a printer should fully test and fingerprint the entire production process in order to gain the best result possible.

Banner Grade PVC

Displaymaster inks give excellent adhesion to PVC Substrates. However, highly flexible PVC, (referred to as banner grades), can release plasticisers as a result of printing or simple aging. This can cause a very tacky surface to appear - days or even weeks after printing.

In some cases, inks with high chemical adhesion properties, such as Displaymaster XX, can actually cause more plasticiser migration so care in printing banner grades is advised.

Multiflash UZ has been identified as offering our safest balance of adhesion and minimising plasticiser migration, but it is not fool-proof and care is still strongly advised.

Polypropylene

Displaymaster XX has been developed for use on commonly used Sheet and fluted polypropylene materials. Polypropylene is corona discharge treated during manufacture and the efficiency of this treatment decreases with age. It is recommended to always use fresh stock. Any contamination of the surface (e.g. finger marks) will impair adhesion and water resistance of the finished print. Displaymaster XX will give adequate water resistance on polypropylene materials for most short term outdoor applications, but this should be tested by the printer on a job by job basis. For more durable outdoor life requirements Multidyne LY is recommended.

General Information

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

Main Characteristics

Finish

Satin

Mesh

No.140.34 – 180.31 PW

No. 150.34 PW is recommended for most print applications.

Thinning

Up to 5% ZE844

Up to 3% ZE 833 Flash Cure Additive

Stencil Recommendations:

Contact Exposure

Dirasol Zenith, Dirasol 916, Dirasol 917, Dirasol Supercoat, Indirect or Capillary films.

Direct Projection

Dirasol SuperPro, Dirasol S5, Dirasol S10

Direct Light Exposure

Dirasol DLE

Coverage

No. 150.34 PW mesh

Line inks up to 80m² kg (90m² ltr)

Trichromatic inks up to 95m² kg (104m² ltr)

Wash Up

Xtend Screenwash ZT 639.

See Xtend Screen Cleaners product information sheet.

Weathering

Displaymaster XX inks have been tested for resistance to weathering in an Atlas xenon bulb weatherometer.

Displaymaster XX 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.co.uk

Curing

Cured through a dryer with 2 x 80 W/cm lamps @ 25-30 metres per minute with 150.34 PW mesh.

Displaymaster is not recommended for use with flash curing equipment.

pro-FILE Trichromatic Colour Range

XXP04 Pro-File Trichromatic Black

XXP52 Pro-File Trichromatic Yellow

XXP35 Pro-File Trichromatic Magenta

XXP15 Pro-File Trichromatic Cyan

XXP96 Pro-File Trichromatic Extender Base

Available in 5kg containers

Standard Line Colour Range

XX001	Black
XX021	White
XX064	Yellow GS
XX066	Yellow RS
XX114	Orange
XX121	Red YS
XX127	Violet
XX164	Red BS
XX165	Magenta
XX230	Blue
XX325	Green
XX381	Extender Base

Available in 5kg containers

Additives

ZE844 Thinner

Available in 5ltr units

ZE833 Flash Cure Additive

Available in 1ltr units

Curing Information

Actual curing rates depend on a number of factors including ink film thickness, opacity, the number and types of lamps used (including lamps emission spectrum, power and efficiency) and the stock being printed. Care should be taken to ensure that each colour is cured correctly to achieve optimum adhesion to substrates and subsequent overprint adhesion. White or colour matches containing white will be slower than standard colours.

Post Curing

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.

Flash Curing

Displaymaster XX is not recommended for low energy curing systems such as flash cure. However under certain circumstances acceptable flash curing results may be gained with the addition of ZE833 Flash Cure Additive. For further information please take advice from Sericol Technical Service.

Pre-production Tests

Plastics:

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 to guard against this.

Weathering

Displaymaster XX inks have been tested for resistance to weathering in an Atlas xenon bulb weatherometer. Displaymaster XX 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 on the Sericol 'Weathering' Product Information Sheet available at www.fujifilmsericol.com

Storage

Containers should be tightly closed after use and thinners/reducers should not be stored near heat sources or peroxides. For maximum shelf life, store between 10°C and 25°C. When stored in such conditions Displaymaster inks have a shelf-life of approximately 24 months – from date of manufacture.

Fujifilm Sericol UK Ltd

- 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 through to production and supply.
- Research & 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 a continual improvement process.
- Is committed to reducing waste through better use of raw materials, energy, water, re-use and recycling.

Safety & Handling

Displaymaster XX inks

- 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.

Comprehensive information on the safety and handling of Displaymaster XX Screen Inks and reducers is given in the appropriate Sericol Safety Data Sheets, available on request.

Environmental Information

Displaymaster XX 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.

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