

Graphic Screen UV **Inks**

Outdoor Signage POP/Displays

UVXtra VBP

For printing on display POP items onto paper, board, PVC, polypropylene & polystyrene.

FEATURES

- UV curing ink
- Adhesion to paper, board, PVC, polypropylene and some polystyrene
- Satin/high satin finish
- Suitable for flatbed, cylinder and multicolour machines with fixed or scanning UV
- Excellent print definition
- Press ready formulation for large format printers
- Good finishing properties cutting, creasing, folding
- 2 year outdoor life

Substrate:

Paper, Board, PVC, Polypropylene & Polystyrene.

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

SERICOL
More than ink...Solutions.
FUJIFILM

Applications:

UVXtra VBP Profile trichromatics are designed to enable easier matching of prints to the ISO 12647 colour standard. 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 process in order to gain the best result possible.

UVXtra VB Trichromatics are available with different cure schedules:

- **UVXtra VBP** standard product suitable for conventional, continuous UV curing equipment.
- **UVXtra VBF** improved cure response and a higher gel structure, intended primarily for use with low output continuous UV (<100mJ/cm)

Outdoor Use: UVXtra VBP inks have been successfully tested for weathering in a QUV Weatherometer as per ASTM G53 test specification using UVB-313 lamps. UVXtra VBP colours withstood 2000 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 equal to 2 year outdoor exposure in temperate climate

Pre Production Test :

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.

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

UVXtra VBP is specifically designed for use on polypropylene that is corona discharge treated during manufacturing. The deficiency 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 or the finished print. This can usually be overcome by wiping the surface with white spirit before printing.

Plastics

Certain plastics may be impregnated with lubricants which, like plasticiser migration, may impair adhesion even a considerable period after printing. This can usually be overcome by wiping the surface with white spirit before printing. Surface adhesive left from protective papers on rigid PVC sheets should be thoroughly removed in line with suppliers' instructions. Some plastics can become brittle when printed, possibly to the point of shattering, often after several weeks. It is essential to check compatibility between ink and plastic to guard against this.

Polypropylene

UVXtra VBP has been developed for use on commonly used sheet and fluted polypropylene materials. Polypropylene is corona discharge treated during manufacturing and the efficiency of this treatment decreases with age. It is recommended to always keep fresh stock. Any contamination of the surface (e.g. fingermarks) will impair adhesion.

Colour Range:

The UVXtra VBPink system includes Standard colours, trichromatic (halftone) colours and an extender base that is used to reduce intensity of colours.

Trichromatic colours

VBP.15 Cyan
VBP.35 Magenta
VBP.52 Yellow
VBP.04 Black
VBP.96 Extender Base

Available in 5kg containers

VBF.15 Cyan
VBF.35 Magenta
VBF.52 Yellow
VBF.04 Black
VBF.96 Extender Base

Available in 5kg containers

Standard Line Colour Range

VBP001 Black
VBP021 White
VBP064 Seritone Yellow GS
VBP066 Seritone Yellow RS
VBP114 Seritone Orange
VBP121 Seritone Red YS

VBP127 Seritone Violet
VBP164 Seritone Red BS
VBP165 Seritone Magenta
VBP230 Seritone Blue
VBP325 Seritone Green
VBP381 Extender Base
Available in 5kg and 100kg containers

VBP025 Opaque White
VBP009 Dense Black
VBP382 Metallic Ink Medium
VBP383 Gloss Varnish
Available in 5kg containers
GS = Green Shade YS = Yellow Shade,
RS = Red Shade BS = Blue Shade

Additives

ZE637 Standard Thinner
Available in 5lt containers

Mesh :

Print UVXtra VBP inks through 140.34/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 screens with SS 639 Universal Screen Wash. This will ensure long life of stencils made with Dirasol emulsions.

Coverage:

UVXtra VBP inks should give a coverage of 80-100 sq.m/Kg, when printed through a 150.34/cm mesh. :

Curing

Curing rate of inks, printed through 150.34 mesh, with two 80 Watt/cm lamps, is 15-20 meters per minute. Cure speeds are dependent on colours, print film thickness, opacity, printing image and condition of the curing unit(including lamp emission spectrum, power & efficiency) and the substrate being printed.

Post Curing

The chemical reactions involved in curing UV inks are not totally completed in the curing unit itself. While upto 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 postcuring, can cause shrinkage of the ink film, that 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.

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.

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 10 to 25 degree C.
- Stir well before every use.

Safety & Handling

UVXtra VBP 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 UVXtra VBP screen inks is given in the MSDS which is available on request.

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.

Environmental Information:

UVXtra VBP ink system does not contain ozone depleting chemicals as described in the Montreal Convention.

Fujilm 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.

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