

UvXtra VB Part of the Uviplast Series Line & pro-file Trichromatic Screen Inks

PRODUCT INFORMATION

UvXtra VB is a 100% UV screen ink designed for printing display POP items onto paper, board, PVC, treated polypropylene & some polystyrene. UvXtra VB inks are formulated to be free of n-vinyl caprolactam (NVC).

Product Properties

- Adhesion to paper, board, PVC, treated 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

pro-file Trichromatics

UvXtra VB Pro-file trichromatics are designed to enable easier matching of prints to the ISO 12647-2 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/cm²).

General Information

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

Please Note: UvXtra VB is not recommended for the following applications:

1. Thin gauge SAV for bus side application (UvXtra VB is not accredited on the CBS rate card). The recommended product for this application is Multiflash UZ.

Main characteristics

Finish

Satin/High Satin

Curing

UvXtra VB, VBP and VBF are not recommended for flash curing equipment. Cure through a dryer with 2 x 80W/cm lamps @ 25-30 metres per minute with a 150.34 PW mesh.

Thinning

Up to 5% ZE637

Wash-up

Screen Wash Universal. Do not wash-up with any UV thinners. Serisolve AM, SW, AQ+ or AQ Ultimate are recommended for automatic screen cleaning machines.

Mesh

No. 140.34 to 180.31 PW.

No. 150.34 PW is recommended for most print applications.

Stencil Recommendation

Contact Exposure: Dirasol Zenith, Dirasol 916, Dirasol 917, Dirasol Super Coat, Indirect or Capillary Films

Direct Projection: Dirasol SuperPro, Dirasol S5, Dirasol S10

Direct Light Exposure: Dirasol CTS

Coverage & Mesh

Trichromatic Inks: Up to 95m²/kg (104m²/ltr) through 150.34 PW mesh.

Line Colours: 85m²/kg (93m²/ltr) through 150.34 PW mesh.

IMPORTANT: Stir well before every use. Always test application fully before beginning production run as there is often considerable variance in substrates from different manufacturers and even between different batches.

2. Fluted polypropylene which is to be handled under wet conditions (e.g. estate agent boards).
3. Electrostatic self-cling materials (for window stickers) are extremely variable in their performance, where different batches and even the same batches printed on different days can have marked differences in performance. For this reason Multiflash UZ is recommended as it is a more robust ink system. In all cases, the ink and substrate must be tested fully prior to production.

pro-file Trichromatic Colour Ranges

VBP04 Black
VBP15 Cyan
VBP35 Magenta
VBP52 Yellow
VBP96 Extender Base

Available in 5kg and 200kg units.

VPF04 Black
VPF15 Cyan
VPF35 Magenta
VPF52 Yellow

Available in 5kg and 200kg units.

VPF96 Extender Base

Available in 5kg units.

Standard Line Colour Range

VB001 Black
VB021 White
VB064 Seritone Yellow (GS)
VB066 Seritone Yellow (RS)
VB114 Seritone Orange
VB121 Seritone Red (YS)
VB127 Seritone Violet
VB164 Seritone Red (BS)
VB165 Seritone Magenta
VB230 Seritone Blue
VB325 Seritone Green
VB381 Extender Base

(BS)	Blue Shade	(GS)	Green Shade
(RS)	Red Shade	(YS)	Yellow Shade

Available in 5kg and 100kg units.

VB009 Dense Black
VB025 Opaque White
VB382 Metallic Ink Medium
VB383 Gloss Varnish

Available in 5kg units.

Additives

ZE637 Standard Thinner

Available in 5ltr units.

ZE832 UvXtra Adhesion Promoter

Available in 1ltr units.

Pre-Production Tests

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 VB 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.

UvXtra VB is not recommended for printing on Polypropylene for outdoor applications where water resistance is required. To improve water resistance of VB inks the addition of ZE832 UvXtra Adhesion Promoter is recommended.

ZE832 UvXtra Adhesion Promoter

Once added gives much improved adhesion and water resistance to cured UV inks with increased pot life.

Once ZE832 is added, the ink will stay catalysed for up to 4 days, after which time the properties gained from the addition of ZE832 will diminish. After this time, any remaining ink can still be used but will only retain the original performance of the uncatalysed ink.

ZE832 UvXtra Adhesion Promoter is isocyanate-free. Should only be added up to 3% to previous uncatalysed UvXtra VB.

Please Note - Ink with catalyst could show a slightly higher gloss level than ink without catalyst.

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 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.

Outdoor Use

UvXtra VB inks have been tested for resistance to weathering in an Atlas xenon bulb weatherometer. When printed full strength on an exterior grade self-adhesive vinyl and exposed in Zone 1, as defined in the 'Printers Guide to Weathering' information sheet, UvXtra VB inks will have a two year outdoor life.

Storage

Containers should be tightly closed after use and thinners/reducers should not be stored near sources of heat and should be kept away from peroxides. 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.

When stored at optimum storage conditions UvXtra VB inks are expected to have a shelf life of approximately 12 months from date of manufacture.

Fujifilm Speciality Ink Systems Limited:

- Has certification to the International Environmental Standard, ISO 14001.
- Has certification to the Quality Management Standard, ISO 9001.
- Has certification to the Occupational Health and Safety Standard, OHSAS 18001.
- 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 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 a continual improvement process.
- Is committed to reducing waste through better use of raw materials, energy, water, re-use and recycling.

Safety and Handling

UvXtra VB Inks:

- Have a flashpoint greater than 55°C and are therefore not classified as "dangerous substance" under the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR).
- Is formulated free of n-vinyl caprolactam (NVC) in accordance with the European Printing Ink Association (EuPIA) voluntary 'Exclusion List for Printing Inks and Related Products.'

Comprehensive information on the safety and handling of UvXtra VB inks, solvents and associated products is given in the appropriate Safety Data Sheets.

Environmental Information

UvXtra VB Inks:

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

The information and recommendations contained in this Product Information sheet, as well as technical advice otherwise given by representatives of Fujifilm Speciality Ink Systems Limited and its associated companies, 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.

FUJIFILM SPECIALITY INK SYSTEMS LIMITED

Pysons Road, Broadstairs
Kent CT10 2LE
United Kingdom
T: +44 (0)1843 866668
F: +44 (0)1843 872184
www.fujifilm.eu