

Uvispeed UV Curing Inks for Paper, Board & Plastics

GLOSS UX – SATIN UH – MATT UM – POSTER AZ – CITYLITE VZ – MULTIFLASH UZ

The Uvispeed series of inks has been developed for Display and PoP printers to provide maximum reliability and optimum colour consistency over long print runs. The Uvispeed series includes ink ranges with a variety of finishes on paper, boards and plastics and can be used on all print machines including multi-colour lines. Uvispeed inks offer unlimited screen stability, freedom from re-wetting and blocking problems plus atmospheric and workplace environment advantages.

Uvispeed Product Ranges

Gloss UX

Versatile ink for paper, board (including corrugated). Line colours including fluorescents and a 4-colour process set. Finish of the trichromatic and fluorescents is lower than the line colours. All, except the fluorescents, have excellent chemical and solvent resistance. PANTONE® Matching Formulae available.

Satin UH

Satin finish line ink for heavyweight papers, display boards and matt PVC for internal display work. With the addition of 5% ZE818, it may also be used on gloss PVC. Colours comprise the Seritone Matching System. PANTONE® Matching Formulae available. Suitable for use with an automatic ink dispenser system.

Matt UM

Matt finish line ink for paper, board, PVC and polycarbonate substrates. Fully intermixable with Gloss UX and Satin UH to obtain intermediate finishes. Colours, comprising the Seritone Matching System.

Poster AZ – Flash Cure (Patent Pending)

A matt finish 4-colour halftone set for the production of multisheet posters. Excellent pasting properties with posters developing 'Positive Edge Tension' during soaking/pasting – ensuring they stay in place on billboard sites. Excellent flexibility and intercoat adhesion, suitable for most poster papers. Washes up with water.

A base/concentrate line colour system is also available.

Citylite VZ – Flash Cure

A satin finish 4 colour halftone set for the production of back illuminated 'city' posters typically used in bus/train stops or for indoor displays. Citylite VZ colours utilise special high strength pigments to produce rich colours under backlit conditions.

Multiflash UZ – Flash Cure

Satin finish, line ink for printing heavy weight papers, board and PVC's on multicolour in-line machines. Has good print definition and can be flash cured. The colour range comprises the Seritone Matching System and a trichromatic set. PANTONE® Matching Formulae available. Adhesion to gloss PVC can be improved by the addition of up to 10% ZE818.

Co-use with Other Inks

Gloss UX, Satin UH and Matt UM may be mixed together. In this way a wide range of intermediate finish levels may be achieved. Gloss UX may overprint fully cured prints of Matt UM and Matt UM overprint fully cured prints of Gloss UX. Can also overprint fully cured prints of Colorstar CS, Coolstar OT, MattPlast MG, Matt Vinyl MV and Plastijet XG and be overprinted by these.

Satin UH may be mixed with Gloss UX and Matt UM in any proportion. May be printed over fully cured prints of Gloss UX, Matt UM, Seristar SX, Plastijet XG and the Aquaspeed range and be overprinted by these inks.

Main Characteristics

Curing

When printed through No.150.34 PW mesh and cured through dryer with 2 x 80 watt/cm lamps.

Gloss UX = 30-40 metres/min. **Satin UH** = 30-40 metres/min. **Matt UM** = 35-45 metres/min. **Poster AZ** = 30-40 metres/min. **Multiflash UZ** = 30 metres/min. **Citylite VZ** = 30-40 metres/min.

Poster AZ, Citylite VZ and Multiflash UZ are designed to be flash cured between colours followed by full cure. For further details, see section 'Curing Information'.

Thinning

Gloss UX, up to 10% ZE807 (5% for fluorescents).

To increase cure speed, add up to 5% ZE813. On rigid PVC add up to 10% ZE817 to increase cure speed or adhesion. To improve fine definition add up to 10% ZE808.

Satin UH, Press-ready but may be thinned with up to 10% ZE637 or 5% ZE813 which will increase cure-speed. Adhesion may be improved by adding up to 10% ZE818.

Matt UM, up to 10% ZE637. To increase cure speed on rigid PVC, add up to 10% ZE807. Adhesion may be improved by adding 10% ZE818. Increasing cure speed may raise finish.

Multiflash UZ, Poster AZ and Citylite VZ, up to 10% ZE637. Up to 5% ZE813 to increase cure speed.

Wash-up

Seriwash Universal Screen Wash. Serisolve AM or SW are recommended for automatic screen cleaning machines. Water can be used for Poster AZ only.

Mesh

No. 150.34 PW is recommended for general use. 120-140 for Gloss UX fluorescents. 140-150.34 PW for Satin UH. If coarser meshes are used, excessive material curl could occur and cure-speed may decrease.

Stencil Type

Solvent resistant.

Recommended:

Contact exposure, Dirasol 916, Dirasol Super Coat.
15 micron capillary film,

Direct projection, Dirasol SW10 or Dirasol SuperPro.

Coverage m²/kg 150.34 PW mesh

Gloss UX, 80-100. **Gloss UX fluorescents**, 55-65.

Satin UH, 75-85.

Matt UM, 60.

Poster AZ, 75-85.

Multiflash UZ, 75-85.

Citylite VZ, 75-85.

IMPORTANT

Stir well before every use. Compatibility of substrates and combined systems must be evaluated under actual production conditions before commencing a print run (See product specific information, particularly 'Co-use with Other Inks').

Uvispeed UV Curing Inks for Paper, Board & Plastics

Poster AZ must not be overprinted with solvent based inks. Other UV inks may be used, but billboard paste acceptance will be compromised.

Multiflash UZ must not be mixed with other inks. May be printed over fully dried prints of Gloss UX and the Aquaspeed range. Multiflash UZ may be overprinted with Uvispeed Gloss UX.

Uvibond UV Curing Varnishes are recommended when over varnishing these inks, UV383 for PVC or UV391 for Paper and Board.

Curing Information

The curing information quoted for each product is typical for modern UV dryers. Actual curing rates depend on a number of factors including ink film thickness, opacity, the number and type of lamps used (including lamp 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 substrate and subsequent overprint adhesion. **White or colour matches containing White will be slower than Seritone base colours. UX009 Dense Black is slower than other Gloss UX colours.**

Poster AZ, Citylite VZ and Multiflash UZ can be conventionally or flash cured. **Multiflash UZ001 Black is not a flash cure ink. Colours containing more than 30% UZ001 will not flash cure and therefore require continuous UV curing equipment.**

Solvent-based ink prints must be fully dried prior to overprinting with UV curing inks. In some cases this may take up to 24 hours.

Post Curing:

The chemical reaction initiated by a UV dryer will continue for up to 24 hours after the prints have emerged. This reaction can adversely affect intercoat adhesion and 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.

Pre-Production Tests

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.

Flexibility

Uvispeed Satin UH and Multiflash UZ inks will meet the rigorous demands of the display market for flexibility. On suitable materials, several layers can be guillotined without cracking or flaking.

Ink Coverage

The coverage figure shown for each product is for a single colour print. Higher pigmented colours such as white and colour matches containing a high proportion of white will not yield the same coverage.

Gloss Level Control

Uvispeed Gloss UX

Gloss level may be reduced by addition of ZE816 UV Matting Base. Where high levels of addition are required, it is recommended that Gloss UX is mixed with Matt UM to maintain colour strength. Gloss UX may be mixed in any proportion with Matt UM without any loss of printing properties.

Multiflash UZ / Satin UH

UZ384 matting base can be added to the colours from the UZ/UH ranges to control finish.

Outdoor Use

Ink ranges in the Uviplast Series have been tested for resistance to weathering in an Atlas Xenon bulb weatherometer. Under this method the outdoor life of each range in a temperate climate such as the UK has been estimated as follows:

Gloss UX	Up to 12 months.
Satin UH	Not recommended for extended outdoor use.
Matt UM	Up to 12 months. <i>Exceptions: UM021, UM164</i>
Poster AZ	Up to 3 months.
Citylite VZ	Up to 3 months.
Multiflash UZ	Not recommended for extended outdoor use.

Colours listed as exceptions have reduced lightfastness and should not be used for prolonged outdoor exposure or in colour matches requiring outdoor resistance.

For more comprehensive details on weathering please contact Sericol Technical Services.

The Seritone Matching System

The Seritone Matching System enables readily matched special colours. The system comprises base colours plus Black, White and Extender Base.

PANTONE® Matching System

Sericol provide formulae for the coated ('C' suffixed) section in Gloss UX, Satin UH and Multiflash XZ ranges.

The Sericol package includes:

- PANTONE® Color Formula Guide**
- Sericol Formula Guide**
Formulations given in percentages by weight.
- Color Manager Software**
For use with IBM compatible computers. This package enables use of the 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.
- PANTONE Formula Scales**
Pre-programmed with PANTONE shades to ensure maximum accuracy, speed and cost savings.

Also available, for Satin UH, is a fully automatic gravimetric batch dispensing system capable of dispensing up to a maximum of 20 kg. Pre-programmed with the Sericol formulations of PANTONE references to ensure accuracy, speed and productivity.

Metallic Colours

Metallics can be made by mixing Gloss UX Metallic Ink Medium with Gold and Silver powders as follows:

MP461 Rich Pale Gold Powder Superfine	20 parts by weight
UX382 Metallic Ink Medium	80 parts by weight
MP483 Silver Powder Superfine	15 parts by weight
UX382 Metallic Ink Medium	85 parts by weight

These mixtures should be used within 8 hours.

Gloss UX metallics may be tinted, if required, by 5-10% additions of Gloss UX Seritone base colours.

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Standard Colours

	Gloss UX	Satin UH	Matt UM	Poster AZ	Citylite VZ	Multiflash UZ
Black UX001	–	UH001	UM001	–	–	UZ001
Dense Black	UX009	–	–	–	–	–
White UX021	–	UH021	UM021	–	–	UZ021
Seritone Yellow (Green Shade)	UX064	UH064	UM064	–	–	UZ064
Seritone Yellow (Red Shade)	UX066	UH066	UM066	–	–	UZ066
Seritone Orange	UX114	UH114	UM114	–	–	UZ114
Vermilion/Seritone Red (Yellow Shade)	UX121	–	UM121	–	–	–
Seritone Red (Yellow Shade)	–	UH121	–	–	–	UZ121
Scarlet UX122	–	–	–	–	–	–
Seritone Red (Blue Shade)	UX164	UH164	UM164	–	–	UZ164
Seritone Magenta	UX165	UH165	UM165	–	–	UZ165
Deep Violet/Seritone Violet	UX127	–	UM127	–	–	–
Seritone Violet	–	UH127	–	–	–	UZ127
Seritone Blue	UX230	UH230	UM230	–	–	UZ230
Seritone Green	UX325	UH325	UM325	–	–	UZ325
Extender Base	UX381	UH381	UM381	–	–	UZ381
Metallic Ink Medium	UX382	–	–	–	–	–
Trichromatic Yellow	UX052	–	–	AZ052†	VZ052	UZ052
Trichromatic Magenta	UX135	–	–	AZ135†	VZ135	UZ135
Trichromatic Cyan	UX215	–	–	AZ215†	VZ215	UZ215
Trichromatic Black	UX004	–	–	AZ004†	VZ004	UZ004
Trichromatic Extender Base	UX396	–	–	AZ396	VZ396	UZ396
Fluorescent Yellow L	UX053	–	–	–	–	–
Fluorescent Orange M	UX105	–	–	–	–	–
Fluorescent Red M	UX137	–	–	–	–	–
Fluorescent Magenta M	UX139	–	–	–	–	–
Available pack sizes	1 & 5 ltr*	5 kg	5 kg	10 & 200 kg	10kg	5, 20 & 200 kg

Extender Base is available for each ink type, it can be mixed into any standard colour where greater transparency or faster drying speed is desired.

†Trichromatic Colours to DIN 16538/9 (BS4160/4666)

* Fluorescents supplied in 5 kg containers only

Reducers and Additives

ZE637	Thinner for UM, UH, AZ, UZ, VZ, UX fluorescents
ZE807	Thinner for UX, UM
ZE813	Fast Thinner for UX, UM, UH, UZ, VZ
ZE817	Adhesion Promoter for UX
ZE808	Gel Additive for UX,
ZE816	Matting Base for UX
ZE818	Thinner for UH/UZ

Available in 5 and 1 ltr containers.

Post Print Mesh Cleaning

Ink stains can be removed after decoating by using SeriGel Clear (OAA03) and Antistain (AND50) as follows:

Apply SeriGel Clear to both sides of the mesh followed by Antistain. Allow to stand for 30 minutes then wash off using a high pressure water gun.

This blend of chemicals is suitable for manual application and dwell time can be extended without any detrimental effect to mesh life.

Storage

Containers should be tightly closed immediately after use. At the end of long printing runs surplus ink from the screen should be disposed of. Uvispeed inks and reducers should not be stored in direct sunlight or near warm pipes and should be kept away from peroxides. For maximum shelf-life, storage should be between 10°C and 25°C.

Stored in a cool environment the inks have a shelf-life of approximately 12 months from the date of manufacture. Gloss UX fluorescents have a shelf-life of approximately 9 months from the date of manufacture.

Special Matches

Colours can be supplied against prints, wet ink samples or to 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.

Our Technical Service Department will be pleased to advise on non-standard colours.

Minimum quantity 5 kgs.

Safety and Handling

Uvispeed Inks:

- are formulated to be free from any carcinogenic, mutagenic or reprotoxic chemicals.
- do not have a flashpoint and are therefore exempt from the Highly Flammable Liquid Regulations.
- should be stored away from heat.

Gloss UX, Matt UM and Poster AZ:

- are formulated to comply with the EN71-3: 1995 Toy Safety Standard

Comprehensive information on the safety and handling of Uvispeed screen inks and reducers is given in the appropriate Sericol Safety Data Sheets, available on request.

Environmental Information

Uvispeed Inks:

- do not contain ozone depleting chemicals as described in the Montreal Convention.
- are formulated free from aromatic hydrocarbons which are known to have an adverse effect on the environment.
- are free of any volatile solvent and are therefore beneficial to the environment when compared to solvent-based products.
- are formulated not to contain heavy metals and therefore should comply with the requirements of the Packaging (Essential Requirements) Regulations 1998: SI 1165 (Article 11 of EC Directive 94/62/EC).

Poster AZ Inks:

- readily wash-up with water to reduce solvent usage.

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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