

Aquaspeed Water-based UV Curing Screen Inks (Patent Pending)

ULTRA DISPLAY XR – ULTRA FLASH LZ – ULTRA PLASTIC KU – FLUTE FZ – DISPLAY VQ

Aquaspeed comprises four ranges of inks, utilising Sericol's pioneering water-based technology, for the highest possible print quality.

1. Ultra Display XR

A trichromatic set for flat-bed and cylinder production of the highest quality halftones for PoP and Display work on board, heavy grade paper and some plastics.

Rub resistant finish, suitable for double-sided work. See also Display VQ below.

2. Ultra Flash LZ

A flash-cure trichromatic set for multicolour machine production of the highest quality PoP and Display work on board and heavy grade paper. Fast cure to a scuff resistant finish. Suitable for double-sided work.

NB: As last colour down, Ultra Flash Black LZ004 is designed for continuous cure only.

3. Ultra Plastic KU

Trichromatic set for the highest quality halftone printing of PoP and Display work on self-adhesive vinyl and rigid PVC.

4. Flute FZ

Line colours comprising the Seritone Matching System plus a four-colour set for low-build printing of line and tone work onto corrugated board. Designed to be flash cured.

5. Display VQ

A low water content trichromatic set for PoP and display work on paper, board and PVC. Display VQ gives improved colour/viscosity stability compared to Ultra Display XR although XR gives lower ink build.

Curing Information

The curing information quoted 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.

IMPORTANT

Stir well before every use. Full intercoat adhesion may not develop until 24 hours after printing and compatibility of combined systems must be evaluated under actual production.

Due to the nature of flash-cure technology only the last colour is conventionally cured. Therefore, cure and adhesion of all colours must be assessed prior to a run.

Outdoor Use - Ultra Plastic KU

Accelerated tests have been carried out in a Marr Weatherometer set on the BS 3900 cycle.

Under these conditions, approximately 12 months' outdoor exposure in a temperate climate such as the UK can be expected.

It is recommended that Ultra Plastic KU is overvarnished with Uvibond UV383 for optimum outdoor performance.

Main Characteristics

Finish

Ultra Display XR:	Satin
Ultra Flash LZ:	Satin
Ultra Plastic KU:	Satin
Flute FZ:	Gloss
Display VQ:	Satin

Curing

Continuous: 30-40 m/min through No. 150.34 PW mesh and dryer with one 80 watt/cm lamp. NB: Ultra Flash LZ and Flute FZ require 2 x 80 watt/cm lamps to achieve final cure and same speed and full through cure of all colours when printing using flash cure equipment.

Thinning

Ultra Display XR, Ultra Flash LZ, Flute FZ: Up to 10% water or ZE807. ZE807 will reduce viscosity more efficiently than water and minimise stock distortion. **Ultra Flash LZ Black should not be thinned with water.**

Ultra Plastic KU: Up to 10% water or ZE813.

Display VQ: Up to 5% ZE818 or water.

Wash-up

Xtend Screen Cleaner (See Xtend Screen Cleaner Product Information Sheet).

Mesh

No. 150.34 PW (plain weave)
If coarser meshes are used, cure speed may decrease.

Stencil Type

Water/solvent resistant.

Recommended:

Contact exposure, 15 micron capillary film,
Dirasol 916 Diazo-Photopolymer Emulsion.
Direct projection x10 magnification use Dirasol SW10,
x5 use Dirasol SuperPro

If using emulsions, a 4 microns build on the underside of the mesh will give best results.

Coverage

through No 150.34 PW mesh	
Ultra Display XR	90-100m ² /ltr
Ultra Flash LZ	75-85m ² /ltr
Ultra Plastic KU	80-90m ² /ltr
Flute FZ	75-85m ² /ltr
Display VQ	90-100m ² /ltr

Co-use with Other Inks

Ultra Display XR and Ultra Flash LZ must not be printed over any other ink or varnish. They may be overprinted by Flute FZ, Coolstar OT, Uvispeed Gloss UX and Satin UH.

Ultra Plastic KU must not be printed over any other ink or varnish. It may be overprinted by Uvispeed Gloss UX.

Flute FZ must not be overprinted with any other ink or varnish. May be overvarnished with Uvibond UV454.

For all other Aquaspeed products, Uvibond UV383 or UV400 Varnishes are recommended (see Information Sheet 'Uvibond UV Ultra-violet Curing Overprint Varnishes').

Aquaspeed Water-based UV Curing Screen Inks (Patent Pending)

Seritone Matching System - Flute FZ

The system consists of nine colours, each of which has been selected for its cleanliness of tone and suitability for intermixing.

FZ001 Black and FZ021 White are suitable for both colour matching and as printing colours.

Using the Seritone base colours plus black, white and extender base almost any colour can be produced.

Universal Tinters must not be used with these inks.

Aquaspeed Products

Ultra Display XR

XR052	Trichromatic Yellow
XR135	Trichromatic Magenta
XR215	Trichromatic Cyan
XR004	Trichromatic Black
XR396	Trichromatic Extender Base

Available in 5 kg containers.

Ultra Flash LZ

to DIN 16538/9 (BS 4160/4666)

LZ052	Trichromatic Yellow
LZ135	Trichromatic Magenta
LZ215	Trichromatic Cyan
LZ004	Trichromatic Black
LZ396	Trichromatic Extender Base
LZ001	Keyline Black

Available in 10 kg containers.

Ultra Plastic KU

to DIN 16538/9 (BS 4160/4666)

KU052	Trichromatic Yellow
KU135	Trichromatic Magenta
KU215	Trichromatic Cyan
KU004	Trichromatic Black
KU396	Trichromatic Extender Base

Available in 5 ltr containers.

Flute FZ

Trichromatics are to DIN 16538/9 (BS 4160/4666):

FZ001	Black
FZ021	White
FZ064	(s) Seritone Yellow (Green Shade)
FZ066	(s) Seritone Yellow (Red Shade)
FZ114	(s) Seritone Orange
FZ121	(s) Seritone Red (Yellow Shade)
FZ164	(s) Seritone Red (Blue Shade)
FZ165	(s) Seritone Magenta
FZ127	(s) Seritone Violet
FZ230	(s) Seritone Blue
FZ325	(s) Seritone Green
FZ381	Extender Base
FZ052	Trichromatic Yellow
FZ135	Trichromatic Magenta
FZ215	Trichromatic Cyan
FZ004	Trichromatic Black
FZ396	Trichromatic Extender Base

(s) = Seritone Base Colours

Available in 10 kg containers.

Display VQ

VQ 052	Trichromatic Yellow
VQ 135	Trichromatic Magenta
VQ 215	Trichromatic Cyan
VQ 004	Trichromatic Black
VQ 396	Trichromatic Extender Base

Available in 10kg containers.

Reducers

ZE807	Thinner for XR, LZ, FZ
ZE813	Thinner for KU only

Available in 5 and 1 ltr containers.

Storage

Containers should be tightly closed immediately after use. At the end of long print runs, surplus ink from the screen should be disposed of. Aquaspeed inks are exempt from the Highly Flammable Liquid and Liquefied Petroleum Gases Regulations 1972.

Aquaspeed should not be stored in direct sunlight or near sources of heat, and should be kept away from peroxides.

In the interest of maximum shelf life, storage temperatures should not exceed 30°C.

When stored in a cool environment, the inks are expected to have a shelf-life of approximately 12 months from the date of manufacture.

Special Matches - Flute FZ

Colours can be supplied against prints, wet ink samples or to PANTONE®, British Standard, 'HKS' or 'Munsell' references and 'Seritone' numbers. A sample of the substrate, with 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 it is necessary that full details are supplied of the process to be followed. Sericol's Technical Service Department will be pleased to advise on non-standard colours.

Minimum quantity 5 kg.

Safety and Handling

Aquaspeed inks:

- are formulated to be free from any carcinogenic, mutagenic or reprotoxic chemicals.
- do not have a flash point and is therefore exempt from the Highly Flammable Liquid Regulations.
- are formulated free from lead and other heavy metals and therefore should comply to the EN71-3: 1988 Toy Safety Standard.

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

Environmental Information

Aquaspeed 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 is therefore beneficial to the environment when compared to solvent-based products.

*PANTONE® is the property of Pantone, Inc.

Aquaspeed Water-based UV Curing Screen Inks (Patent Pending)

Problems and their solutions

Problem	Solution
1. Poor screen stability	Screen exposed to excessive ultra violet light - check equipment for light leaks and/or protect screen from direct sunlight.
2. Poor flow/streaky print at high print speed.	a. Viscosity of ink too high. Reduce (see recommended thinner). b. Adjust squeegee angle to be more upright.
3. Poor definition	a. Stencil too thin or worn - Prepare fresh stencil. b. Mesh used too coarse - use finer mesh.
4. Slow drying speed	Undercuring a. Ink film too thick - use finer mesh and/or sharper (or harder) squeegee b. Curing unit efficiency low. Check cleanliness of lamps/reflectors and age of lamp.
5. Poor scuff resistance	Undercuring (See 4)
6. Poor adhesion to substrate	Undercuring (See 4)
7. Poor intercoat adhesion between colours.	Overcuring. Increase belt speeds and/or reduce lamp power.
8. Excessive ink usage	a. Mesh used is too coarse - User finer mesh b. Squeegee is too soft or rounded. Use harder and/or sharper one.
9. Excessive paper curl/cockle	a. Ensure film weight is minimised by correct choice of mesh. b. Excessive water thinning. Print un-thinned or thin XR, LZ or FZ with ZE807. c. Reduce film weight by using harder and/or sharper squeegee.
10. Premature stencil breakdown	a. Ensure that water/solvent resistant emulsion or film has been used. b. Ensure stencil is fully exposed to achieve full water resistance. Do not under expose to improve resolution. c. Use sensitised emulsion to spot out. Ensure emulsion is dried and fully post exposed.

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
More than ink...Solutions.



Sericol Limited Pysons Road Broadstairs Kent CT10 2LE England
Telephone: (01843) 866668 Fax: (01843) 872074

UK Sales - Tel: (020) 8391 8010 Fax: (020) 8391 8008
Email: UKsales@Sericol.com

Customer Service Centres - Tel: 0845 084 89 89
*Birmingham, Bristol, Broadstairs, Gateshead, Glasgow,
Leeds, London-North, London-South, Warrington.*

Technical Helpline - Tel: 0845 770 80 70

Export Sales

Pysons Road Broadstairs Kent CT10 2LE England
Tel: +44 (0)1843 866668 Fax: +44 (0)1843 872122
Email: Exportsales@Sericol.com

www.sericol.com