Special Plastisol Inks and Additives

This product information outlines the range of specialised plastisol inks and additives available from Sericol to complement the line printing colours in the Texopaque Classic OP and Easiprint EZ ranges.

Flash Cure Whites

Sericol offers a comprehensive range of Flash Cure Whites to enable printers to choose a product which perfectly suits their requirements.

Selection of Flash Cure Whites is dependent on several factors including:

- Opacity/Whiteness
- Flash Cure Response (speed)
- After Tack
- Handle

To help selection, the comparison chart below rates the Sericol Flash Cure Whites for each of these properties.

Product Code/Name	Opacity	Flash Speed	After Tack	Handle
FE021 Flexiex White	6	9	6	10
LB021 Multipurpose White	7	8	6	7
FW 755 Quasar White	8	8	8	8
FW 753 Supernova White	9	8	8	7

Key: 10 = excellent 0 = poor

Available in 5 ltr units.

Flash Cure Printing

Tips

1. Before commencing a Flash Cure print job, let the printing machine index for a few minutes with the Flash Cure Unit on. This will heat the platens to production temperature, and allow the flash time to be set at a constant level, rather than requiring adjustment as the platens warm up during the run.
2. Always use a platen adhesive that is suitable for Flash Curing.
3. Where possible leave an empty printing head after the Flash Unit. This is known as a cooling station and allows the flashed colour to lose retained heat prior to the next overprint.
4. Use the finest mesh possible for the ground coat to reduce handle and flash time. Should a white groundcoat be used, and white also appear in the design, a second white known as a highlight white can be added later.
5. Many designs benefit from a black keyline to tidy up registration. To allow the keyline to overlap other colours, simply Flash Cure the whole design prior to printing the black.
6. Additions of 'Flow Thinner' to an ink will slow down the flash speed and increase the hot-tack.
7. To reduce the after flash tack of an overprinted ink, add up to 15% Easiprint EZ455 Tack Reducer.

Troubleshooting

1. Flash cured base sticks to next screen.
   a. Ink not fully gelled. Increase Flash time.
   b. Ink too hot. Reduce flash time, or leave cooling station.
   c. Ink tack too high. Change ink.
2. Ink remains wet after flashing.
   a. Flash cure unit set too low.
   b. Print area larger than flashed area.
   c. Platens cold. Heat up before restart.
   d. Ink not suitable for Flash Curing. Change to Flash Cure product.
3. Poor coverage, or building up of overprint colours.
   a. Not enough lift-off. Increase 'snap' distance.
   b. Squeegee pressure too high. Reduce.
   c. Overprint deposit too high. Use finer mesh.
4. Overprints lift garment from platten.
   a. Adhesive needs renewing.
   b. Adhesive not suitable for Flash Cure.
5. Colour 'bleed' on Flashing.
   a. Synthetic fabric not suitable for Flash Cure.
6. Poor definition of overprints.
   a. Ink deposit too high. Use finer mesh.
   b. Squeegee pressure too high.

Trichromatic Inks - (Four Colour Process)

Sericol offers three sets of plastisol trichromatic inks - each with specific characteristics.

EZ Trichromatics*

A 'Press Ready' ink ideal for use through 90 or 110 mesh, matched to DIN 16538/9 colour standard.

EZ058	Trichromatic Yellow
EZ135	Trichromatic Magenta
EZ215	Trichromatic Cyan
EZ004	Trichromatic Black

Available in 1 and 5 ltr units.

OP High Strength Trichromatics*

Approximately twice the pigment content of EZ Trichromatics for use with very fine mesh (>110) counts and/or to enable users to modify with Extender Base for specific needs. Matched to DIN16538/9 Colour Standard.

OP058	Trichromatic Yellow
OP135	Trichromatic Magenta
OP215	Trichromatic Cyan
OP004	Trichromatic Black

Available in 5 ltr units.

**OP396 Trichromatic Extender Base - can be added into Texopaque Classic OP or Easiprint EZ inks to modify colour strength. It can also be used to modify the rheology of the ink to improve dot definition.*

Special Plastisol Inks and Additives

XE Trichromatics**
'Press Ready' range matched to the American SWOP Colour Standard. Produces prints with Ultra Soft Handle. Mesh recommendations 90 - 110.

XE058	Trichromatic Yellow
XE135	Trichromatic Magenta
XE215	Trichromatic Cyan
XE004	Trichromatic Black

Available in 5 ltr units.

***XE381 Extender Base - similar in purpose to OP396 but compatible with XE Trichromatics.*

The full cure temperature for the OP/EZ/XE Trichromatic ranges is 140°C.

Tips for Trichromatic Printing on Textiles

Print set-up requirements will vary according to the needs of the design, but general guidelines are as follows:

Screen Ruling
This dictates the size of the halftone dot. As textiles are uneven surfaces, very small dots are not recommended, with rulings of 55-65 dots per inch being the norm.
This measurement is often referred to as '55 line' (l.p.i.) or '65 line' and avoids confusion with the scan resolution which is also quoted in dots per inch (dpi) but is a much higher value.

Mesh
Monofilament meshes in the range 90 - 120 can be used dependent on requirements. Plastisol inks can be printed through the whole range of mesh counts, but will give lower colour strength/washfastness with very fine meshes.

Moiré
This is an interference pattern caused by alignment of dots overlapping one another. To avoid moiré, the positives should be produced with the dots running at 30°, intervals as follows:

Yellow	90°
Magenta	45°
Cyan	15°
Black	75°

This is just a guideline and many other scanning angles can be used.

Colour Order
In practice any change in colour order can be offset by adjustments to individual colour strengths. There is thus no rule for colour order, but in general one of the following tends to be preferred:

1.	Cyan	Yellow	Magenta	Black
2.	Yellow	Cyan	Magenta	Black

Simply choose the one that works better for you, bearing in mind the later colours tend to print stronger than the early ones.

Colour Strength
Though many ink systems are supplied press ready, to obtain the preferred result one or many of the inks may need to be adjusted for strength. For this reason it is always recommended to have some of the appropriate Extender Base available during proofing.

Summary
Due to the variability in both the scanning and print set-up for any given design, it is always recommended that the print be thoroughly proofed before production, and that all the proof settings are recorded.
Trichromatic printing onto textiles is not difficult, but does require plenty of testing and a good understanding with your scanner/separator to gain the best results.

Special Plastisol Inks and Additives

Special Plastisol Inks

Product Code & Name	Properties	Recommended Mesh Counts Cure Temperature	Intermixing with other Sericol Plastisols	Information/Other Issues
LB021 Multi Purpose White	Low Bleed White Reduces dye bleed and migration from synthetic fabrics.	43 or coarser. 140°C	Yes	Can be used as a Flash Cure and mixed into colour matches to reduce dye bleed/migration.
EZ456 Sparkle Base	Contains pearlescent flakes which produce shimmering effects.	34 or coarser. 140°C	See other uses.	Blend up to 5% Plastisol ink colour to product for tinted sparkling effects. Add metallic inks to increase brilliance.
EZ475/EZ476 Metallic Gold/Silver	Highly opaque metallic inks which maintain their brilliance after washing.	34 or coarser. 140°C	Yes	
OP327 Phosphorescent Green	Glow in the dark ink with long lasting and strong effect.	34 or coarser. 150°C	Not recommended - reduces glow.	Intensity and length of glow is directly related to the deposit of ink.
OP395 Flocking Base	Adhesive for electrostatic direct flock printing.	43 or coarser. 140°C	Yes - see other uses.	Adhesive can be tinted to substrate colour to improve cosmetic appearance - add up to 10% plastisol ink. Additions of OP395 to a plastisol ink will give a corresponding increase in stretch resistance.
OP517 Expanding White	Ready mixed expanding white ink.	62 or coarser. 140°C	Yes	Do not over cure or film will collapse. Add to Flash Cure White to reduce after tack.
OP417 Expanding Base	Base for mixing with Plastisol inks to produce expanding prints.	62 or coarser 140°C	Yes	Recommended mixing ratio 3 parts OP417 to 1 part ink. Do not over cure or film will collapse. Add to Flash Cure White to reduce after tack.
FE021 Athletic White	Highly elastic white for stretch fabrics.	43 or coarser 130°C	Yes	Can be used as a back up white for litho transfers.

Fastness:

All of the products listed above should produce prints with wash fastness up to 60°C. Test and confirm suitability prior to production.
Plastisol products will not resist dry cleaning and will melt in direct contact with a hot iron.

Plastisol Inks Tool Kit

ZE591 Flow Thinner	Available in 1 and 5 ltr units
EZ444 Nylon Catalyst	Available in 1 and 5 ltr units
EZ445 Tack Reducer	Available in 5ltr units
EZ439 Soft Hand Base	Available in 5ltr units
EZ384 Matting Base	Available in 5ltr units

These products can be added to most Sericol plastisols to modify their characteristics as detailed below.

Product Code & Name	Recommended Use
ZE591 Flow thinner	Add up to 5% to any Sericol plastisol to increase flow. Caution: Can cause inks printed over flash cured whites to become glossy.
EZ444 Nylon Catalyst	Add 5% to any Sericol plastisol to improve adhesion on many nylon and synthetic fabrics. Helps reduce fibrillation on cotton fabrics. Mixed inks have a pot life of 8 hours. For maximum adhesion to synthetic fabrics use Nylobag NB or Nylotex NX inks.
EZ445 Tack Reducer	Add up to 20% to reduce tack of overprinted colours when multiple flash cure units are in use.
EZ439 Softhand Base	Add up to 80% to any Sericol plastisol to soften 'hand' of print. Expect a corresponding loss of opacity.
EZ384 Matting Base	Controls the finish of any Sericol plastisol - especially useful in reducing gloss effect of colours printed over Flash Cured Whites. Recommended addition - 5%
ZS640 Tursub ZT639 Seriwash ARG13 Actisol Superjet	These products can be used to clean screens and equipment.

SERICOL
More than ink...Solutions.
FUJIFILM

FUJIFILM Sericol Australia Pty Ltd, 4 Coronation Ave, Kings Park, NSW 2148
Tel: (02) 8825 2700 Fax: (02) 9621 8100

Technical Helpline: 1300 135 357
Orders Hotline: 1300 650 504