



Flash Cure Whites Phthalate Compliant⁽¹⁾ Plastisol Inks

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

FWA53 Special Flash Cure White

- Good all-round Flash White, with good flash response.
- Prints are bright and opaque.

FWA58 Flash Cure White

- Maximum opacity Flash White with low tack.
- Higher structured Flash White.
- Prints are bright and opaque, with good elasticity.

FWA79 Special Athletic Flash White

- Good all-round Flash White, with fast flash response and low tack and good opacity.
- Prints have low handle and are highly elastic.

FW755 Quasar White

- Easy to use Flash White, creamy in colour and structure.
- Prints are opaque, with a yellow-shade white.

ONLBW Low Bleed White

- Designed to minimise dye bleed when printing onto polyester and polyester/cotton blends where dye migration is a concern.

Main Characteristics

Flash Curing

Under optimal conditions, dwell times of less than 3 seconds can be readily achieved. Many factors affect the dwell time required for flash curing. These include the type and wavelength of the equipment used, and the distance between the curing unit and the print. Additional factors such as fabric, film weight and coverage are also crucial.

Curing

The ink film must reach 160°C to ensure full wash fastness is achieved. Care should be taken to avoid using high curing temperatures as this can cause excessive dye bleed on some fabrics.

It is essential that the entire thickness of the ink film has time to reach the cure temperature or resistance properties will not be achieved. Evaluate your cure schedule by testing the print at the wash schedule it will ultimately be expected to pass.

Thinning

To increase flow, use up to 5% ON591 Advantage ON Thinner.

Wash-up

Wash up with ZT639 Screen Wash Universal or Actisol Superjet Screen Spray

Mesh

Monofilament 34-90

Stencil Type

Most direct stencil materials are suitable.

Recommended: Dirasol 916, Dirasol SuperTex or Dirasol 125.

Coverage & Mesh No.

12-16m₂/ltr. No. 43 monofilament.

Applications

Most knitted and woven fabrics typically used for T-shirts, sweatshirts, sports and fashion wear, badges, hats and caps, travel bags.

Fabrics

Suitable on most common, natural and synthetic, fibres, i.e. cotton, cotton/polyester blends and many grades of synthetic fabrics. ONLBW Low Bleed White is recommended for 100% polyester and cotton/polyester blends, where dye migration is likely to be a concern.

Fastness

Flash Cure Whites have good wash fastness to ISO Test Nos. 1 (40°C), 2 (50°C) and 3 (60°C). Prints may be ironed from the back of the fabrics at a cool setting, with a cloth over the printed area.

Prints will not resist dry-cleaning and garments should be marked to this effect.

Intermixing and Compatibility With Other Inks

Flash Cure Whites can be mixed with other Sericol plastisol products. Where a phthalate compliant print is required, ensure that only a phthalate compliant plastisol is mixed to the Flash Cure White.

Properties

Formulated on Phthalate Compliant (1) plasticisers. Lead-free. Unlimited screen stability. Excellent wash resistance.

IMPORTANT: Stir well before every use. Users should satisfy themselves that a Flash Cure White is compatible with specific textiles and resistance properties are acceptable before commencing production runs.

Properties

Selection of Flash Cure Whites is dependent on several factors including opacity, flash response (speed), after tack, handle and elasticity. To help selection, the comparison chart below rates the various Flash Cure Whites for each of the key properties.

Product	Ease of Printability	Flash Response	After Tack	Opacity	Whiteness/Brightness	Handle	Elasticity	Dye Bleed Resistance
FWA53	4/5	4/5	4	5	5	4/5	3	1
FWA58	4	4	3/4	5	5	4/5	4	1
FWA79	4/5	5	5	4	4/5	5	5	1
FW755	5	4/5	3/4	5	3/4	4	2/3	1
ONLBW	4/5	4/5	4	3/4	4	4/5	3	5

Key: 5 = excellent, 3 = good, 1 = poor

Available in 5 ltr containers.

Flash Cure Printing - Tips

Warm Up

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.

Platen Adhesive

Always use a platen adhesive that is suitable for flash curing.

Cooling Station

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.

Mesh

Use the finest mesh possible for the ground coat to reduce handle and flash time.

Highlight White

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 and the Flash Cure Whites can also be used for this purpose.

Black Keyline

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.

Flow Thinner

Additions of Flow Thinner to an ink will slow down the flash speed and increase the hot-tack.

After Tack

To reduce the after tack of a Flash Cure White, up to 5% ON417 Expanding Base may be added.

Flash Cure Printing – 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.
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.
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.

Ancillary Products

During printing, fabrics have to be held to the table by means of a pressure sensitive adhesive to ensure good definition is obtained. FlashFix and T-Fix Extra Spray Adhesives are suitable for this purpose (see relevant Product Information Sheets).

Fujifilm Speciality Ink Systems Ltd

- Has certification to the International Environmental Standard ISO 14001.
- 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 & 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

Flash Cure Whites:

- Are not formulated to contain any chemicals toxic to health according to current EU classification criteria.
- Are formulated free from lead and other heavy metals and are tested to comply to the EN71-3: 1995 Toy Safety Standard.
- Have a flashpoint greater than 55°C and are therefore not classified as "dangerous substance" under the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR).
- 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.
- Comprehensive information on the safety and handling of Flash Cure Whites is given in the appropriate Safety Data Sheets.

Environmental Information

Flash Cure Whites:

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

IMPORTANT: The Flash Cure Whites have been developed not to contain phthalates restricted for use by Council Directive 76/769/EEC (as amended). However the possibility for low level contamination during the manufacturing process exists.

In addition users must be aware of potential sources of contamination such as squeegees, flood coaters, screens and curing equipment which may all contribute trace amounts of restricted phthalate materials from previous use with other plastisols. Flash Cure Whites should only be used in conjunction with the ON591 Thinner.

Öko-Tex Standard 100

Contact your Fujifilm distributor for the latest information concerning the compliance of Sericol inks.

⁽¹⁾ Phthalate Compliant means that the products listed in this Product Information Sheet are formulated not to contain the Phthalates restricted for use by Council Directive 76/769/EEC (as amended).



Special Plastisol Inks and Additives

This product information outlines the range of Sericol specialised plastisol inks and additives available from Fujifilm to complement the line printing colours in the Texopaque Classic OP, Advantage ON and Pioneer Ultra YC ranges.

Trichromatic Inks – (Four Colour Process)

Fujifilm offers two sets of plastisol trichromatic inks:

ON Trichromatics - Phthalate Compliant⁽¹⁾

A 'Press Ready' ink ideal for use through 90-120 mesh, matched to DIN 16538/9 colour standard.

ON058	Trichromatic Yellow
ON135	Trichromatic Magenta
ON215	Trichromatic Cyan
ON004	Trichromatic Black

Available in 5 ltr units.

OP High Strength Trichromatics

Approximately twice the pigment content of ON Trichromatics for use with very fine mesh (>120) 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
OP396	Trichromatic Extender Base

Available in 5 ltr units.

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

The addition of OP396 to Advantage ON inks is not recommended.

The full cure temperature for the OP/ON Trichromatic ranges is 160°C.

Special Plastisol Inks Phthalate Compliant⁽¹⁾

Metallic Inks

Highly opaque metallic inks that maintain their brilliance after washing. Mesh 34 or coarser recommended. Cure temperature 160°C required.

Intermixable with other Sericol Plastisols.⁽²⁾

ON475	Metallic Gold
ON476	Metallic Silver

Available in 5 ltr containers

Dry Glitter Base

Transparent base especially designed for mixing with glitter powders. Produces prints with 'dry' glitter effect, with brilliant sparkle and good wash fastness.

Mesh 34 or coarser recommended, depending on size of flake used. Refer to the Glitter Powders Product Information sheet.

Cure temperature 160°C required.
Intermixable with other Sericol Plastisols.⁽²⁾

ON370 Dry Glitter Base

Available in 5 ltr containers.

Multipurpose Base

A highly transparent elastic base, suitable for many applications. A clear base for sprinkling and dipping glitter powders, beads and sequins – add 5% EZ444 for good wash resistance for these applications. A gloss over-print varnish, particularly effective when printed through a mesh 43 or coarser and dried at an elevated temperature. A stretch additive when added at over 20% into a Plastisol ink.

Cure temperature 160°C required.
Intermixable with other Sericol Plastisols.⁽²⁾

GB397 Multipurpose Base

Available in 5 ltr containers.

Advantage Transparent Glitter Base

A transparent base, particularly for sprinkling and dipping glitter powders, beads and sequins.

Cure temperature 160°C required.
Intermixable with other Sericol Plastisols.⁽²⁾

ON397 Multipurpose Base

Available in 5 ltr containers.

Phosphorescent Green

Glow in the dark ink.

Mesh 34-43 recommended. A cure temperature of 160°C is required.

Mixing with additional ON colour should be minimised due to the loss of the "glow in the dark" nature of the product.⁽²⁾

ON327 Phosphorescent Green

Available in 5 ltr containers.

Metatran Adhesive

Adhesive for accepting foil transfers with good wash resistance. Can be used as an opaque stretch additive at over 20% in the print. Can also be used as a flocking base, with 3% YC444, where a Phthalate Compliant⁽¹⁾ flocking base is required. Mesh 34-62 recommended, 43 or coarser where used as a flocking base. Cure temperature 160°C required.

ON421 Metatran Adhesive

Available in 5 ltr containers.

Special Plastisol Inks

Flocking Base

Adhesive for electrostatic direct flock printing. Mesh 43 or coarser recommended. Cure temperature 160°C required.

Can be tinted to substrate colour to improve cosmetic appearance – add up to 10% plastisol ink.⁽²⁾

OP395 Transparent Flocking Base

Available in 5 ltr containers.

Fastness

All of the products listed above should produce prints with wash fastness up to 60°C. Test and confirm suitability prior to production.

Prints may be ironed from the back of the fabrics at a cool setting with a cloth over the printed area. Prints will not resist dry cleaning and garments should be marked to this effect.

Plastisol Inks Tool Kit

These products can be added to Sericol plastisols to modify their characteristics as detailed below.⁽²⁾

ZE591 Flow Thinner

ON591 Advantage ON Flow Thinner

YC591 Pioneer YC Flow Thinner

Available in 5 ltr containers. Add up to 5% to the appropriate Sericol plastisol to increase flow.

Caution: Can cause inks printed over flash cured whites to become glossy.

Use ON591 where Phthalate Compliant⁽¹⁾ prints are required. Use YC591 where PVC-Free and Phthalate Compliant⁽¹⁾ prints are required.

EZ444 Nylon Catalyst - Phthalate Containing

Available in 1 ltr containers. 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.

Use YC444 where Phthalate Compliant⁽¹⁾ prints are required.

YC444 Pioneer YC Catalyst

Available in 1 ltr containers. Add 3% to Pioneer Ultra YC441 High Density Clear to produce a PVC/Phthalate free adhesive for glitter, beads, sequins and flock transfer. Can also be used to maximize adhesion of Pioneer Ultra YC onto denim fabrics. Can also be added to Texiscreen AJ inks where improved adhesion on certain garments is required.

Mixed inks have a pot life of 8 hours. Phthalate Compliant.⁽¹⁾

OP417 Expanding Base

Base for mixing with plastisol inks to produce expanding prints. Available in 1 & 5 ltr containers. Recommended mixing ratio 3 parts OP417 to 1 part ink⁽²⁾. Mesh 62 or coarser recommended. Do not over cure or ink film will collapse. Add to Flash Cure White to reduce after tack. Up to 5% can be added to plastisols to reduce gloss levels.

ON417 Expanding Base

High-strength base for mixing with plastisol inks to produce expanding prints. Available in 5 ltr containers. Recommended mixing ratio 1 part ON417 to 3 parts ink⁽²⁾. Mesh 62 or coarser recommended. Do not over cure or ink film will collapse. Add to Flash Cure White to reduce after tack. Up to 5% can be added to plastisols to reduce gloss levels. Phthalate Compliant.⁽¹⁾

YC417 Expanding Base

Base for mixing with plastisol inks to produce expanding prints. Available in 5 ltr containers. Recommended mixing ratio 3 parts YC417 to 1 part ink⁽²⁾. Mesh 62 or coarser recommended. Do not over cure or ink film will collapse. Add to Flash Cure White to reduce after tack. Up to 5% can be added to plastisols to reduce gloss levels. Phthalate Compliant.⁽¹⁾

ON445 Tack Reducer

Available in 5 ltr containers. Add up to 20% to reduce tack of overprinted colours when multiple flash cure units are in use. Phthalate Compliant.⁽¹⁾

ON439 Soft Hand Base

Available in 5 ltr containers. Add up to 80% to any Sericol plastisol to soften 'hand' of print. Expect a corresponding loss of opacity. Phthalate Compliant.⁽¹⁾

EZ384 Matting Base

Available in 5 ltr containers. Controls the finish of any Sericol plastisol - especially useful in reducing gloss effect of colours printed over Flash Cured Whites. 5% addition recommended.

Fujifilm Speciality Ink Systems Ltd

- Has certification to the International Environmental Standard ISO 14001.
- 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 & 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

The Special Plastisol Inks and Additives range:

- Is formulated to be free from any chemicals toxic to health, carcinogenic, mutagenic or reprotoxic according to Directive 67/548/EC - with the exception of OP395, EZ444 and EZ384.
- Is not routinely tested, but is formulated to comply with the EN71-3 1995 Toy Safety Standard.
- 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.

In addition to the above, Advantage ON:

- Is formulated free from phthalate plasticisers.

Comprehensive information on the safety and handling of the Special Plastisol screen inks and solvents is given in the appropriate Safety Data Sheets.

Environmental Information

The Special Plastisol Inks and Additives range:

- Does not contain ozone depleting chemicals as described in the Montreal Convention.
- Is formulated free from aromatic hydrocarbons with the exception of ON475.
- Is free of any volatile solvent and can therefore be considered to have less impact on the environment, when compared with solvent-based products.

In addition to the above, Pioneer YC:

- Is formulated free from PVC containing resins.

IMPORTANT: The Advantage ON and Pioneer YC ranges have been developed not to contain phthalates restricted for use by Council Directive 76/769/EEC (as amended) and the Pioneer YC range has been developed using non PVC resins. However, the possibility for low level contamination during the manufacturing process exists.

In addition, users must be aware of potential sources of contamination such as squeegees, flood coaters, screens and curing equipment which may all contribute trace amounts of restricted phthalate materials from previous use with other plastisols.

Öko-Tex Standard 100

Contact your Fujifilm supplier for the latest information concerning the compliance of Sericol inks.

(1) Phthalate Compliant means that the products listed in this Product Information Sheet are formulated not to contain the Phthalates restricted for use by Council Directive 76/769/EEC (as amended).

(2) Please ensure the correct plastisol is used when intermixing with other Sericol plastisols. Do not intermix PVC-Free / Phthalate Compliant inks with PVC / Phthalate containing inks. The OP special plastisol inks should NOT be used with the ON or YC ink ranges. The ON special plastisol inks should NOT be used with the YC ink range.

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

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.com

Local Distributor:

TSEKMERES

ΣΥΣΤΗΜΑΤΑ ΓΡΑΦΙΚΩΝ

FUJIFILM