





### **Chemical & Emulsion Booklet**



FUJIFILM

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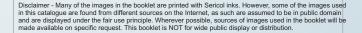
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#### Dear Printer,

"Infinite Solutions" - we mean it!

Dedicated for decades to innovation and achievement of the highest standards, Fujifilm Sericol has been constantly evolving and contributing an ever-widening range of products and services that have more than matched screen printers ever- growing needs.

With dedicated R&D in the UK, the USA and India, global know-how becomes the prerogative of every Sericol customer. Today, Fujifilm Sericol products cover all aspects of screen printing so that you can repeatedly provide the best possible solution to your customers.

Fujifilm Sericol's success hinges on a deep understanding of your printing practices and the application of relevant technology.

No other comparable supplier of screen inks has pledged so many resources - human and technological - to the service of the screen printing industry.

We hope that this booklet will give you a quick insight into the *infinite* solutions that are at your service for myriad screen printing applications.

You deserve the best and that is what we are committed to providing you with - both product and service, thus living up to our group's philosophy -"*More than Ink*... Solutions".

Sincerely yours,

MPRRaw

### M. P. Raghav Rao

Managing Director September 2015

# **Product Application**

Application	Application		Page no.
Dirasol	Emulsion Ap	plications	
Graphic / Container		Dirasol 22	3
Graphic / Industrial		Dirasol 132	4
Graphics / Industrial		Dirasol 916	5
Graphics / Industrial		Dirasol 948	6
Graphics / Ceramics		Dirasol 902	7
Graphics / Textile		Dirasol 915	8
Textile		Dirasol 25	9
Textile		Dirasol Supertex	10
Xtend	Chemical App	lications	
Mesh Adhesive	SFL-93, SFE-05		12
Mesh Preparation	SM	L-34, SML-51, SMD-92, FIQ-41	13
Screen Cleaner	SVL	-38, HFH-63, OAC-44, OAD-54	15
Stencil Decoating		SSJ-41, SUH-64	
Mesh Stain Removal	AN	D-50, SJL-53, SHH-65, SCK-081	17
	User Guid	le	
Mesh Adhesive			21
Mesh Preparation	Mesh Preparation		22
Emulsions			23
Things that can go wrong			27
Reclaim			29
Stain Removal			31



A wide range of direct emulsions designed for Screen printing applications in Graphics, Industrial, Packaging & Textile segments.







Diazo (2 pack) - good performance with economy

- Wide exposure latitude.
- Excellent resolution.

Application	Ink <b>*</b> Resistance	Stencil type	Definition
Graphic / Container	SB, CUV	Two pack diazo direct emulsion	Good
Resolution	Screen Decoating	Sensitised Viscosity at 25°C (mPas)	Solid Content (Sensitised)
Good	Good	5500	27%
Dry Coating weight	Stencil Build in microns	Approximate Life Coated Screen (22°C)	Approximate Shelf Life Sensitised (22°C)
24 gm/sqm on No.120 mesh, 2+2 coats	6	3 months	3 months
		★ SB = Solvent-Bas	sed: WB = Water-Based_P =

3

SB = Solvent-Based; WB = Water-Based, P = Plastisol, CUV = Conventional UV, WUV = Water Based UV



### Photopolymer - speed and convenience

- Outstanding resolution and definition
- High quality for fine line or halftone
- No mixing, no de-gassing

Application	Ink ★ Resistance	Stencil type	Definition
Graphic / Industrial	SB, CUV, WUV	Single pack, Pre- sensitised Photostencil Emulsion	Excellent
Resolution	Screen Decoating	Sensitised Viscosity at 25°C (mPas)	Solid Content
Excellent	Excellent	6000	38%
Dry Coating weight	Stencil Build in microns	Approximate Life Coated Screen (22°C)	Approximate Shelf life (22°C)
38 g/sq.m, 150-34 mesh, 1+2 coats	4	3 months	12 months

4

★ SB = Solvent-Based; WB = Water-Based, P = Plastisol, CUV = Conventional UV, WUV = Water Based UV



Is a universal graphic emulsion. It offers superb definition for use with all graphic ink systems. Highly resistant to water-based UV graphic ink systems.

Application	Ink ★ Resistance	Stencil type	Definition
Graphic / Industrial	SB, WB, CUV, WUV	Two pack diazo, photopolymer emulsion	Excellent
Resolution	Screen Decoating	Sensitised Viscosity at 25°C (mPas)	Solid Content (Sensitised)
Excellent	Good	4500	40%
Dry Coating weight	Stencil Build in microns	Approximate Life Coated Screen (22°C)	Approximate Shelf Life Sensitised (22°C)
21 g/sq.m, 150-34 PW mesh, 1+2 coats	6	1 month	1 month
		+ CR - Colvert Ree	

5

SB = Solvent-Based; WB = Water-Based, P = Plastisol, CUV = Conventional UV, WUV = Water Based UV



Has a high solids content, enabling easy production of high-build stencils for applications requiring printing of heavy deposits.

Application	Ink <b>*</b> Resistance	Stencil type	Definition
Graphic / Industrial	SB, CUV	Two pack diazo, photopolymer emulsion	Excellent
Resolution	Screen Decoating	Sensitised Viscosity at 25°C (mPas)	Solid Content (Sensitised)
Good	Good	11000	48%
Dry Coating weight	Stencil Build in microns	Approximate Life Coated Screen (25°C)	Approximate Shelf Life Sensitised (22°C)
77 g/sq.m, No.62 mesh, 2+2 coats	30	1 month	2 months
			ed; WB = Water-Based, P =

Plastisol, CUV = Conventional UV, WUV = Water Based UV



Produces stencils with exceptional definition for graphic and industrial printing. Wide exposure latitude and easy decoating of screen.

Application	Ink <b>*</b> Resistance	Stencil type	Definition
Graphic / Ceramics Textile	SB, CUV, P	Two pack Diazo Photopolymer Emulsion	Excellent
Resolution	Screen Decoating	Sensitised Viscosity at 25°C (mPas)	Solid Content (Sensitised)
Excellent	Excellent	8500	40%
Dry Coating weight	Stencil Build in microns	Approximate Life Coated Screen (22°C)	Approximate Shelf Life Sensitised (22°C)
18 g/sq.m,150- 34 PW mesh, 1+2 coats	6	3 months	3 months
		★ SB = Solvent-Bas	ed: WB = Water-Based P =

7

SB = Solvent-Based; WB = Water-Based, P Plastisol, CUV = Conventional UV, WUV = Water Based UV



Is resistant to all graphic, speciality and textile inks. Formulated to overcome static problems in high humidity, caused by extreme climatic conditions or poorly ventilated work areas.

,	Application	Ink ★ Resistance	Stencil type	Definition
	Graphic / Textile Industrial	SB, WB, P, CUV WUV	Two pack diazo photopolymer emulsion	Excellent
R	lesolution	Screen Decoating	Sensitised Viscosity at 25°C (mPas)	Solid Content (Sensitised)
	Excellent	Excellent	4500	38%
D	ry Coating weight	Stencil Build in microns	Approximate Life Coated Screen (22°C)	Approximate Shelf Life Sensitised (22°C)
1	17 g/sq.m, 50-34 PW sh, 1+2 coats	5	1 month	1 month
			★ SB = Solvent-Bas	ed; WB = Water-Based, P =

8

★ SB = Solvent-Based; WB = Water-Based, P Plastisol, CUV = Conventional UV, WUV = Water Based UV



A reclaimable emulsion for fabric printing using plastisols or water-based inks, adhesives and pastes. Not resistant to water / solvent mix.

- Excellent mesh bridging.
- · Good see-through for easy registration /setting up.
- Can be post hardened with Dirasol Super Hardener or water proofed with Sericure.

Application	Ink <b>*</b> Resistance	Stencil type	Definition
Textile	P, WB	Two pack diazo direct emulsion	Good
Resolution	Screen Decoating	Sensitised Viscosity at 25°C (mPas)	Solid Content (Sensitised)
Good	Fair	5500	38%
Dry Coating weight	Stencil Build in microns	Approximate Life Coated Screen (22°C)	Approximate Shelf Life Sensitised (22°C)
67 gm / sqm on No.62 mesh, 2+2 coats	21	3 months	3 months
			ed; WB = Water-Based, P =

9

SB = Solvent-Based; WB = Water-Based, P Plastisol, CUV = Conventional UV, WUV = Water Based UV



# **Dirasol Supertex**

Has been specifically developed for production of high quality, durable stencils for garment printers.

Application	Ink 🗙 Resistance	Stencil type	Definition
Textile	P, WB	Two pack diazo, photopolymer emulsion	Excellent
Resolution	Screen Decoating	Sensitised Viscosity at 25° (mPas)	Solid Content (Sensitised)
Excellent	Excellent	6000	41%
Dry Coating weight	Stencil Build in microns	Approximate Life Coated Screen (22°C)	Approximate Shelf Life Sensitised (22°C)
76 g/sq.m, No.43 mesh, 2+2 coats	20	1 month	1 month
			ed; WB = Water-Based, P =

10 Plastisol, CUV = Conventional UV, WUV = Water Based UV



Xtend Screen Recovery System is an integrated range of screen reclaiming products chemically engineered to increase the life of screens



# **Mesh Adhesives**



### Serifix/2-Extra:

is a catalysed mesh mounting adhesive which provides a strong, permanent bond. Suitable for wood, steel, aluminium or painted frames and nylon, polyester and stainless steel fabrics.

- Extremely easy to use
- Good pot life and a fast cut-out time
- When cured, it is resistant to most solvents generally used in screen printing

Product Code	Description	Application
SFL-93	Serifix Base	One part of catalyst is added to ten parts of base and thoroughly mixed.
SFE-05	Serifix Catalyst	This mixture is then applied through the mesh onto the frame

# **Mesh Preparation**



### Mesh Preps:

Xtend mesh preps are formulated to optimise adhesion of emulsion and extend stencil life and to prepare and de-grease mesh prior to stencil production.

### Prep 101 mesh preparation paste

- For use on new mesh with all types of stencils, particularly indirect stencils.
- Considerably enhances the life of the stencil
- Helps prevent pinholes and fish-eyes caused by dust and grease contamination.
- Suitable for all mesh fabrics.
- Contains no caustic or other hazardous chemicals.

### Prep 102 degreasing and emulsifying concentrate

- For use before each application of direct emulsions and direct / indirect stencils.
- Thoroughly degreases and evenly wets all mesh fabrics.
- Helps prevent pinholes by removing dust particles and imparting anti-static properties to the mesh.
- Greatly assists the flow characteristics of direct emulsions.
- Contains a low foaming detergent mix and an active wetting agent.
- Contains no silicones or comparable additives.

# **Mesh Preparation**



### Mesh Preps:

Are formulated to optimise adhesion and extend stencil life and to prepare and degrease mesh prior to stencil production.

### AquaPrep:

Is a degreasing concentrate that conditions the mesh to hold a continuous film of water, thereby ensuring optimum adhesion of capillary films.

Product Code	Description	Application
SML-34	Prep-101	is a mesh preparation paste, used on new mesh
SML-51	Prep-102	is a degreasing and emulsifying concentrate, used on new and reclaimed mesh
SMD-92	Aqua Prep	degreasing concentrate that conditions mesh to hold continuous flow of water, ensuring adhesion of capillary films
FIQ-41	Green Filler	To mask open mesh area between Stencil and Frame and minor defects on the stencil.

# Screen Cleaners



Each Xtend Screen Cleaner is an expertly balanced blend of solvents and detergents which are used at the end of a print run for the removal of the ink residues. This blend enables the Screen Cleaner and the ink to be easily emulsified with water and prepares the stencil surface for the rapid action of decoating chemicals. Xtend Screen Cleaners can be used manually or in automatic screen cleaning machines.

Product Code	Description	Application
SVL-38	Screen Cleaner SV	For manual removal of ink residues at the end of a print run. Moderately bio-degradable.
HFH-63	Screen Cleaner HF	For manual removal of ink residues at the end of a print run. Readily bio-degradable. Low odour.
OAC-44	Screen Cleaner Low Odour	A high performance manual cleaning solvent for use with all ink systems. Has a very low odour, low evaporation rate & no Workplace Exposure Limit.
OAD-54	Screen Cleaner Manual & Machine	Removes solvent-based, UV, water- based, and water-based UV ink residues. Has a high flashpoint / low evaporation rate. Used for machine & manual cleaning.

# **Stencil Decoating**



## **Stencil Strippers**

Xtend Strip will rapidly remove direct, direct / indirect, capillary and indirect stencils, which are non gelatine based.

### Strip Powder:

- Can be used on all types of mesh.
- Has no reaction with hard water, thus avoids inactive sediments.
- Highly economical supplied as an easy soluble powder.

### Strip Liquid:

- Supplied as a dilutable liquid concentrate, highly economical.
- Ideal for use in automatic screen cleaning machines will not block or corrode nozzles.
- Can be used on all types of mesh.
- Has no reaction with hard water, thus avoids inactive sediments.

Product Code	Description	Application
SSJ-41	Strip Powder	Rapidly removes direct, direct / indirect capillary & indirect stencils, which are non – gelatine based.
SUH-64	Strip Liquid	Rapidly removes direct, direct / indirect capillary & indirect stencils, which are non – gelatine based.



### Antistain Gel XI

A solvent-based, alkaline gel which removes all types of stains from synthetic and stainless steel mesh.

- One-pack system (ready to use).
- Fast acting and excellent cleaning power. •
- Gel structure enables coating by trough or brush.
- Removes 'ghost image' stains caused by residual ink, direct emulsion or capillary film.

### Antistain Paste

An alkaline cleaning paste which removes ink and stencil residues and prepares screens for all types of stencils.

Rapid removal of ink and diazo stains when used in conjunction with Xtend screen cleaners.

### Antistain / Antistain Ultra, Antistain Cream, Screen Cleaner UV and Screen Gel Clear

These products have been developed to be used together for the effective removal of all ink and diazo stains from mesh.

### Antistain/Antistain Ultra

- Removes ink and diazo stains when used in conjunction with • Antistain Cream or Screen Cleaner UV.
- Antistain Ultra gel structure for non drip application and enhanced performance.



Antistain / Antistain Ultra are non-aggressive formulations and will ۰ have no detrimental effect on synthetic mesh, no matter how long they are left on the screen.

#### Antistain Cream

- Patented non-caustic chemistry.
- Designed to remove ink stains from all meshes in conjunction with • Antistain / Antistain Ultra.

### Screen Cleaner UV

- Designed to remove ink stains in conjunction with • Antistain / Antistain Ultra.
- Effective screen cleaner during reclaiming process. ٠

### Screen Gel Clear

- Developed as a post-print cleaner.
- Reduces staining prior to screen reclaiming process.

Product Code	Description	Application
AND-50	Antistain Diazo Stain Remover	Removes ink and diazo stains when used in conjunction with SVL-38
SJL-53	Antistain Paste Alkaline stain Remover	Fast removal of ink and diazo stains when used in conjunction with SVL-38
SHH-65	Antistain Rapid Alkaline stain Remover	For fast removal of ink and diazo stains
SCK-081	Sericure	Stencil Waterproofing agent. Enhances water resistance of all Dirasol Emulsions. Stencils can be decoated.



Product Code	Description	Application
ANGXL	Antistain Gel Stain Remover	Removes all types of stain from synthetic & stainless steel mesh
ANS-81	Diazo Stain Remover	Removes ink and diazo stains when used in conjunction with Antistain cream or Screen cleaner UV
SWD-48	Antistain cream	Removes ink stains from all meshes in conjunction with Antistain/ Antistain Ultra
OAT-42	Screen cleaner UV	Removes ink stains in conjunction with Antistain/ Antistain Ultra
OAA-03	Screen Gel Cleaner	Reduces staining prior to screen reclaiming process





# USER GUIDE





### Guide to use Mesh Adhesives

Mesh adhesives are usually two pack. Pot life is relatively short and is used to attach the polyester mesh to the frame.

The frame should be clean and dry, preferably degreased. Many people scurf (abrade) the frame to remove old adhesive and to give a better bond strength.

#### Things that can go wrong

If the adhesive is left open, the solvents evaporate away, leaving a much thicker adhesive.

#### Replace lid after use and only use what is required

If the adhesive is left open it can gain moisture from high humid environments. This leads to weaker bond strength as the catalyst is less effective.

# Ensure adhesive has achieved the correct bond strength before cutting mesh

If the mesh tension is released too soon then the bond strength will not be strong enough and the mesh will slip.

# Ensure a good brush is used and push the adhesive into the frame leaving no bare patches or air bubbles

Adhesive is not fully worked into the mesh. With coarser meshes, it is important to make sure the adhesive fully penetrates into the mesh holes and makes good contact with the frame.

# Only catalyse enough adhesive which you can apply in the time period before it becomes too thick to use.

Pot life of catalysed adhesive is very short. Catalysed adhesive goes solid whilst being applied.

Once the mesh has been adhered to the frame and left to harden, it is ready for preparation.





# Guide to use Mesh Preparation

### SML34 Screen Prep 101

This is a gritty product and only needs to be used on brand new mesh. It is brushed into both sides of the mesh and then rinsed off. The purpose is to roughen the mesh to give better adhesion for the emulsion

### SML51 Screen Prep 102 or SMW77 Screen Prep 300

Screen Prep 102 is a detergent designed to be manually applied to the screen to remove any grease or contamination. Ideally it should be performed each time a screen is prepared for emulsion.

Screen Prep 300 is the same chemistry but lower viscosity and designed to be used in automatic machines. It can be diluted.

Once the prep has been brushed onto each side of the mesh, wait for a minute and then rinse off. Allow the screen to dry and be careful not to handle the mesh. Store the screen in dust free areas to avoid contamination.

### SMD92 Aquaprep

It is used to prepare a screen to receive capillary film. This is a very dilute tannic acid solution designed to make a film of water attach to the mesh to apply the film easily.

If you have not prepared the mesh then you can get fish eyes, greasy stains and poor adhesion of the emulsion.





# Guide to use Emulsions

There are 3 main types of emulsion One pots (yellow label) Straight Diazo (blue label) Diazo Dual cure (green label)

One Pots are ready to use straight from the pot. They are usually very fast curing and have a narrower latitude than diazo and dual cure emulsions. They are very sensitive to stray light and can fog. Fogging is where an emulsion has partially exposed in stray light and the image areas still have residual emulsion in them. (tonal range reduced)

As a general rule, the Diazo emulsions have better long term resistance but are slower to exposure. Dual cures are similar in exposure speed to Diazo emulsions but have even better resistance properties. Mixing One Pots with Diazo emulsions is not recommended.

Diazo and diazo dual cure emulsions have to be sensitised before use. Make sure you add the recommended amount of water to the diazo sensitiser bottle or if the diazo sensitiser is in powder form. Ensure the correct amount of water is added (make sure none is left in the sachet). Once the diazo syrup is fully dissolved in the water (no residue at the bottom), add this to the emulsion and stir gently by hand. Try not to stir too vigorously as this traps air in the emulsion that will cause problems in coating.





# Guide to use Emulsions

Once the diazo sensitiser is added, the pot life of the emulsion will be between 1-3 months. It is best to use it within 1 month. Higher storage temperatures will reduce the pot life. If possible, leave the sensitised emulsion for atleast a couple of hours before use to allow the emulsion to degas.

Different emulsions have different weights of diazo syrup in the bottle. They are not interchangeable. The diazo sensitiser for Dirasol 22 and Dirasol 916 are chemically same, but the amount of sensitiser for both the emulsions are different. If you use the wrong diazo sensitiser, your emulsion will not perform in the same way.

Once you have your emulsion ready it is time to coat your prepared mesh.

### Coating

Coating is a very important step. It can be done manually or with automatic machines. The emulsion is poured into the trough and allowed to settle / degas for a couple of minutes. Then the mesh is coated. You always coat the print side first and the squeegee side last. This is because you want the emulsion to end up on the print side to give the build and best quality. For example a 1+2 coating technique would be 1 coat on print side and 2 coats on the squeegee side. A 0+1 would be one coat only on the squeegee side.

If possible, dry the coated screen horizontally with the print side down. This also helps the emulsion to end up on the print side.





### If the drying cabinet or area where the screens are dried is very humid (>50%) then you are likely to get drying problems. This will lead to poor stencil resistance. Try and allow plenty of ventilation in the oven or around the screen to make sure they are properly dry before moving to the exposure step.

Excessive temperature >45 °C at this point will cause problems. It will cause the emulsion to "fuse" and will make it very difficult to develop and wash away. The same goes for excessive time. If a screen is left for long periods at elevated temperature (30-40°C) for a few hours then this can also cause the emulsion to fuse and become difficult to develop.

#### Exposing the dried emulsion.

Place the positive on the print side of the emulsion (with the emulsion of the positive contacting the dry emulsion on the mesh), then put on your exposure device. Ensure you have the correct exposure time. This should be determined for each emulsion, mesh count and coating technique in combination

For example (not real numbers)

Dirasol 916	1+2	150.34 Orange PW	100
Dirasol 916	1+2	150.34 White PW	60
Dirasol 916	1+2	90.48 Orange PW	220

If you have never performed the combination before then you should do it on an exposure calculator positive first.





### Emulsions

### Developing

Once the emulsion has been exposed, it is ready to develop. Remove the positive and take care not to expose the screen to stray daylight at this point as this could fog the emulsion.

Rinse the screen with water on both sides (use gentle water) especially on the squeegee side as the emulsion is weakest here. To begin with, this should be enough to loosen the unexposed emulsion. Keep rinsing until the image areas are clear.

Use a high pressure water spray to open the fine dots and images properly.

When wet, the emulsion is at its weakest. Where possible avoid handling the emulsion at this point as you could damage the image.

### The developed screen now needs to be dried.

Once dried, the screen is inspected and is filled out. Any pinholes or imperfections can be filled in and the border around the emulsion can be filled. You can do this with a dedicated filler (green or universal filler) or you can use the emulsion used earlier. However, if you use emulsion, this will need to be dried and reexposed to gain proper resistance. Filler will only need to be dried.

### Once dried the screen is ready for printing.

We also provide a hardener (SCK81). This is painted after the screen has been fully developed and dried. It is then put in the oven to get fully cured. If you have other screens present in this drying oven when you are hardening a screen, then you will probably harden them as well. Once a screen has been post hardened in this way, it is almost impossible to strip. Make sure your oven is empty of other screens if you are using the SCK81. Once the screen has finished printing, the ink is scraped off and the dirty screen is ready to be reclaimed.





### Things that can go wrong

### Things that can go wrong

Screen which is very weak and breaks down easily

### This could be by number of reasons

- Low exposure (increase exposure time and try again)
- High humidity when drying or incomplete drying (make sure screen is fully dried and that drying cabinet is lower than 40-50% RH)
- Screen not dried after developing (make sure screen is dry)
- Incorrect diazo addition (make sure diazo sensitizer has been properly dispersed and it is removed from the sensitiser bottle. No residues of sensitizer should be left at the bottom.)
- Wrong emulsion for ink type (if a water based ink is used with an emulsion that does not resist water based inks, it will break down quickly)
- Emulsion is overexposed (use a lower exposure time)
- Emulsion is underexposed (use a higher exposure time to make tougher dots)

### Image is blurry and has poor edge definition

- Possible that the positive was not in good contact with the screen at the time of exposure (maintain optimum vacuum pressure).
- Ensure positive was in good contact with the screen when put in the vacuum frame for exposure (maintain optimum vacuum pressure in the screen exposing machine).
- Ensure emulsion is not being over exposed, this can cause damage to the emulsion.
- Possible that the emulsion has too low a build (try a higher coating technique but be aware that exposure time will have to be recalculated).

# Guide to use Things that can go wrong

### Fish eyes and pinholes

- Poor screen preparation (use Prep 102)
- Contamination in the water (Rust or particles in the water supply can leave a residue on the screen, if the fish eye has a black dot in the middle, it is likely a contamination in the water).
- Dust whilst drying (make sure drying areas are clear of dust and that fans in the drying cabinet / oven are kept clean)





### Reclaim

Where possible, try and clean the residual ink off as soon as possible. The longer the ink remains on the screen, the higher the chances of staining.

#### Manual and Automatic.

Any chemical can be used manually. You should ensure that you are wearing the correct personal protective equipments. Chemicals used in automatic machines must have a minimum Flash Point (55°C normally but check regulations)

You can also categorise chemicals by their level of surfactant, cleaning power, odour etc. We have many different types of cleaning solvents.

We also make a water dilutable screen cleaner system. This will not clean solvent/water based products as it is only suitable for UV. The main advantage is that you can dilute the product with water and also add the stripper so you can both clean a screen and remove the stencil at the same time. This makes it very good for automatic machines and offers very good cost-in-use. It should be noted that when using automatic screen cleaning machines, the water pressure of the final high pressure wash is very important (high pressure of water gives better cleaning).





### Reclaim

Once the ink is off the screen then you have to remove the stencil. This is achieved with stripper SUH64 or SUD15. Both of these products need to be diluted before use. (For details, kindly refer our product information sheet)

Once diluted they should be brushed onto both sides of the screen (or used in an automatic machine). The screen should be left for few minutes (do NOT let the screen dry out) and then the screen should be rinsed with low pressure. Once rinsed, use a High Pressure Gun to remove the emulsion.

If a screen is underexposed then it will be much more difficult to strip. Overexposing is usually easier. Underexposing dual cure emulsions can also leave an acrylate stain. Stripper will not be able to remove the stain. If you have a stain that is removed by solvent but not by stripper and you are using a diazo dual cure emulsion, then it is likely this is an acrylate stain.

If you leave the stripper on the screen for too long and if it dries out on the screen, this can harden the emulsion and make it very difficult to strip.





### Stain Removal

Not everyone performs this step but it makes a big difference to the lifetime of the screen. It can also prevent problems caused by ghost images appearing in the next use the screen.

There are several types of stains but it is almost impossible to predict how and when they occur. These include

- Ink stain (in image area and usually seen after long runs with dark colours)
- Emulsion stain (usually due to incomplete reclaim)
- Diazo stain (yellowish stain where the emulsion was present)

A lot of these stains may not ever cause a problem. However, some will and you can't tell which

There are two main types of stain remover.

- Bleach based (hypochlorite) good for all types of stains
- **Caustic based (Sodium/potassium hydroxide)** good for all types of stains but struggles a little with diazo staining

The bleach based types (ANS81 and AND50) are mesh safe, this means you can leave them on for hours and the mesh will not be damaged. The Caustic types (SHH65, SJL53 and ANGXL) are more aggressive. If you leave these on the mesh for more than 10-15 minutes then there is a chance that the mesh will be damaged and split.





### Stain Removal

The caustic types work far more quickly than the bleach based but it takes a lot more process control. Also you have to be very careful as these can cause nasty burns to the skin/eyes/lungs. Correct procedures and personal protective equipments are essential. The bleach based products still require correct personal protective equipments as it can also cause burns but they are not as strong.

All the above chemicals are usually applied manually with a brush. It is then allowed to work for the right time and then it is rinsed away with water and then the screen is blasted with a high pressure water gun.