

THE PREPARATION OF THE SCREEN

Version 9

TIFLE

EX

marquer le monde

SOLUTIONS TECHNOLOGIQUES & INDUSTRIELLES

SÉRIGRAPHIE
& IMPRESSION NUMÉRIQUE

UPDATE: SEPTEMBER 2014

List of supplies for stencil making

OUR HOME MADE EMULSIONS :

Diazo 19 S	– ref 2512031/25120316/2514031
Diazo 149 S	– ref 2512041/25120416/2514041
Diazo 19T	– ref 2512061/25120616/2514061
UST	– ref 2572031/25720316/2574031
200S	– ref 25C2010/25C20106/25C4010
200T	- ref 25C2030/25C20306/25C4030

List of supplies for stencil making

1. DIAZOIC emulsion :

- Basic emulsion with photo-sensitizer

- Exposure time with halogen lamp : **2 to 3 min.**
- Exposure time with UV tubes : **5 to 15 min.**

Affordable ... BUT

- Average performances
- Short life
- Low definition and resolution

On the other hand ...

- Very good tolerance to exposure.
- Good pot life after opening : 1,5 to 2 months

TIFLEX range : 19S, 149S, 19T

Photosensible solutions

Three kind of emulsions

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Photopolymers solutions

2. DIAZO-PHOTOPOLYMERS EMULSIONS :

- **React to two different UV waves UV-A (400-315 nm) et UV-B (315-280 nm)**
 - Exposure time with halogen lamp : **1 to 2 min**
 - Exposure with neon UV lamps : **from 3 to 10 min**

Quality price/ratio

- Good resistance to wear
- Good definition and resolution
- Good tolerance to exposure
- Life stand after opening: 1 month

Gamme TIFLEX : UST, 200S, 200T, 300T

How to prepare the screen before exposure

1. Degreasing :

Use « **Prép Ecran** » ref 2544042

- After applying, **let stand working from 2 to 3 min,**
- then **rinse** the screen perfectly with **cold water.**



2. Drying :

In a steaming oven at **40° maxi, from 15 to 30 min.** Humidity should have disappeared.

Treatment of the white stencils before exposure

3. Coating :

a) Photosensible solution :

Coat with 3 layers of emulsion or even 4 layers if the mesh is very opened.



➔ 1 external. pull + 2 internal pulls

➔ 1 int. pull + 1 ext. pull + 1 int. pull.

... The last pull should be performed on the external side

Treatment of the white screen before exposure

- b) Capillary film** : Available in 20-30-200 and 400 μ m
- **Steps to stick the capillary film**



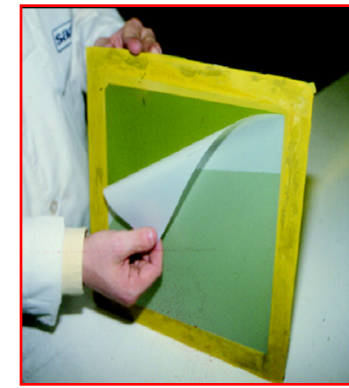
- 1 -

Stick the film on wet screen (ext side)
(degreased and rinsed).



- 2 -

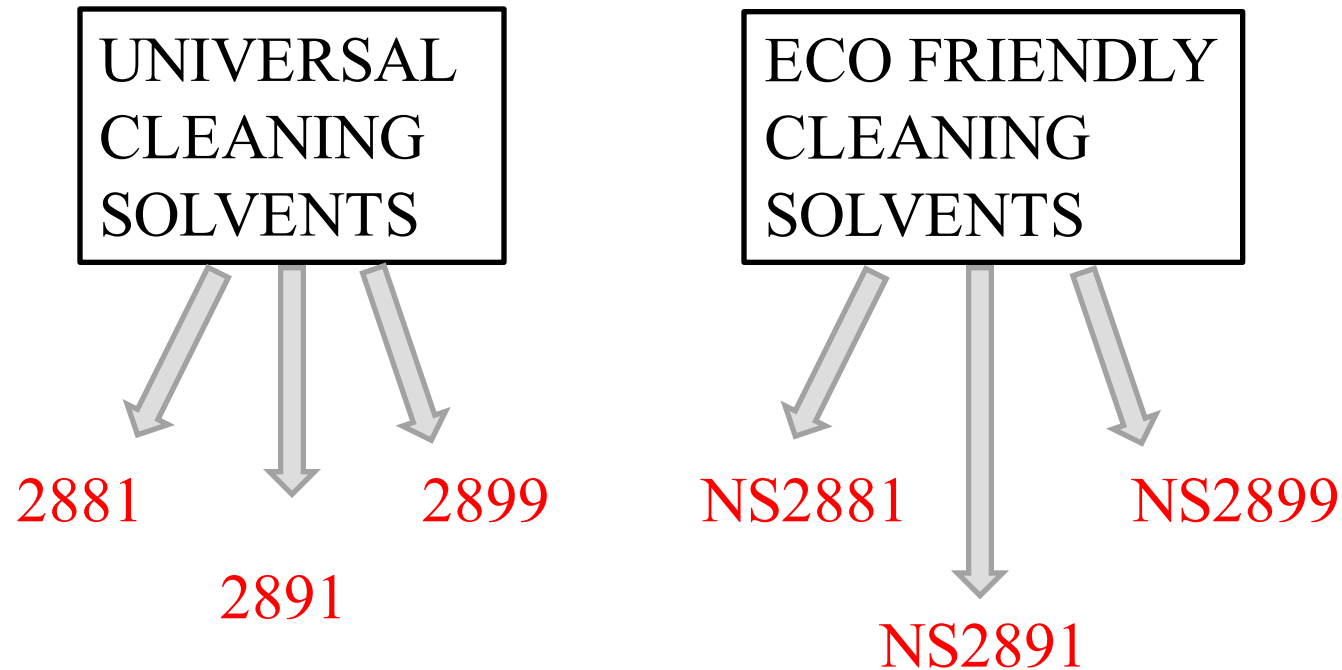
Pull the ext.surface of the capillary film to maximize adhesion



- 3 -

After complete drying, pull out the external protection sheet.

CLEANING SCREENS AFTER PRINTING



CLEANING SCREENS AFTER PRINTING

- Universal solvents are :
 - Affordable
 - Efficient
 - But **MAY CAUSE HEALTH DAMAGES**
 - Eco-friendly solvents are :
 - Price competitive
 - Efficient
 - **AND CAN IMPROVE YOUR DAILY LIFE**
- BOTH CAN BE USED FOR MANUAL AND AUTO PRINTING**



CLEANING SCREENS AFTER PRINTING

MAIN DIFFERENCES : THE FLASHPOINT

UNIVERSAL CLEANING SOLVENTS	2881	2891	2899	NS81	NS91	NS99
REF	3064000	3074000	3044000	3024020	3024010	3024030
INKS WASHED						
FLASHCOLOR						
EVEREST						
DREAMFLASH						
POLYTHANE						
FLASH POINT	32°C	-4°C	32°C	58°C	32°C	80°C
DANGEROUSITY	Flamable	Flamable	Flamable		Flamable	

Screen removing and treatment of ghost images

Once production is finished you can...

Remove designs and get out original screens...

=> **Delete the emulsion from the mesh.**

Several products are available in the TIFLEX range :

Oxylic, Oxysol, Oxygel, concentrated remover, Finisher 4886

Which one should you choose ?

Screen removing and treatment of ghost images

- **SCREEN REMOVERS :**

OXYGEL ? OXYSOL ? OXYLIC ?

3 same products under different **PHYSICAL FORMS**

OXYGEL

- **Gel ready to use**
- Packed in 5L bucket
- To be applied with a brush or a paint brush
- **ACTION time : 3 to 5 min + HIGH PRESSURE RINSING**
- Chlore free and biodegradable.

Screen removing and treatment of ghost images

OXYSOL

- **CONCENTRATED SALT TO BE DILUTED IN WATER**
- **100 g = 5 to 10 liters of removing solution** (depending on the requested efficiency)
- Available in :
 - 100 g bottle
 - 500 g bottle
 - 25 kg drum
- To be applied with a brush or a paint brush
- **ACTION TIME : 3 to 5 min + HIGH PRESSURE**
- Chlore free and biodegradable.

Screen removing and treatment of ghost images

OXYLIC

- **LIQUID** : pack in 5L bucket
- Can be applied with a spray gun but also with a paintbrush or a brush
- **ACTION TIME : 3 to 5 min + HIGH PRESSURE**
- Polluting free, flamme proof , harmful free

OXYLIC : THE EASIEST REMOVER TO USE

Screen removing and treatment of ghost images

Concentrated remover

- **Liquid to be diluted in : 1 volume of product for 20 volumes of water**

To be used as a manual screen remover or as an automatic screen remover

- **ACTION time: 3 to 5 min + HIGH PRESSURE RINSING**

FINISHER 4886

- **LIQUID READY TO USE**
- Pack in 1L bucket.
- Can be used without high pressure cleaning system
- To be used as additional screen remover to delete stains on the mesh

Screen removing and treatment of ghost images

- Treatment of « GHOST IMAGES »

Ghost images are RESIDUAL PICTURES of design locked in the mesh. It remain even after a proper screen removing. But suitable products can removed theses images

SOLVYPATE and OXYPATE :

- Apply the liquid **SOLVYPATE** on **the two sides**
- Straight after (do not wait!!!) apply a thick layer of the gel **OXYPATE** on the two sides
- Work in progress between **15 and 30 min**, then remove the excess of the surplus
- Rinse with high pressure water.

Screen removing and treatment of ghost images

SOLVYMAGE and OXYMAGE :

- Apply the liquid **SOLVYMAGE on the screen on the two sides**
- Straight after, apply a thick layer of gel **OXYMAGE on the two sides**
- Work in progress for **12 Hours** then remove the excess of the surplus
- Rinse with high pressure water

Screen cleaners and removers : the competitors

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Screen cleaners and removers : the competitors

PRODUCTS	TIFLEX	KIWO	CPS	REMCO
Degreaser	PREP ECRAN	PREGAN A 9 EXTRA	DEGREASER CONC.	VARIOPREP SERIE
		PREGAN NT 9	MESH ROUGHENER	
		MESH X CELL	MESH PREP	
		KIWO CLEAN A 910 - S 912		
Diazo dual cure emulsions	UST/200S/200T	Z133 - Z155	ULTRACOAT 200 - ULTRACOAT NEPTUNE - ULTRACAP SERIE	
Diazo emulsions	19S/149S/19T	225/1 - 227 - 228		
Fillers for solvent based inks	Filling solution XD153 - 5 L	KIWO FILLERSWR22 -	ULTRACOAT WR	VARIOFILL SERIE
Fillers for water based inks		KIWO FILLERSERIE		
		KIWO FILLER 405 COLOURLESS		
		KIWO FILLER 406 BLUE		
		PREGAN MEGACLEAN X-TRA		
Eco screen cleaner	NS 81 FP 58°C	KIWO CLEAN LM SERIE/KIWO CLEAN AQ SERIE	AQUAWASH SERIE	
	NS 91 FP 32°C			
	NS 99 FP 80°C			VARIOCLEAN S4354 FP 78°C
	NS 100 FP 100°C			VARIOCLEAN S4306 FP 102°C
Screen remover	OXYGEL	PREGASOL SERIE	STENCIL REMOVER PASTE	VARIOSTRIP 5007
	OXYSOL		STENCIL CONC	
	OXYLIC			
	CONCENTRATE SCREEN REMOVER			VARIOSTRIP M 5888
Ghost images removal	FINISHER4886	PREGAN UNI GEL	QUICKHAZE	
	SOLVPATE	PREGAN MEGACLEAN X-TRA		
	OXPATE	PREGANTIGHOST - PREGANPASTE		VARIOHAZE 8068 - VARIOHAZE 8020
	SOLVMAGE		HAZE REMOVER LIQUID - FAST ACTING SCREEN REMOVER	

Conclusions

The **carry out of screen is essential** to perform a high quality screen printing.

Each step requires **preciseness and meticulousness**.

Respect **applying times** of each product.

Think about the **cleanness of the workshop** and the cleanness of the equipments, **shelf lives of the products** and **correct ventilation of storage areas**.

Control and **maintain** regularly the **exposure systems** and **steaming ovens**.

Notes

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