

FOTECOAT 1836

Ready-to-use screen emulsion for the textile screen printing with plastisoles and aqueous inks; fast exposure time

1. DESCRIPTION

- ♦ Fast, presensitized polymer screen emulsion
- ♦ Processing under yellow light is recommended because of the high light sensitivity
- ♦ FOTECOAT 1836 WR SOLO is magenta, the stencils allow excellent see-through
- ♦ Smaller quantities can be evacuated with the waste water
- ♦ Solids content 36%
- ♦ Can be used for printing with food products

2. APPLICATION ADVANTAGES

- ♦ Can be coated on all types of meshes
- ♦ Medium resolution with good stencil edge sharpness
- ♦ Excellent print resistance
- ♦ Can be decoated with the usual products
- ♦ The chemical hardening for the production of a more resistant or permanent stencil is possible with FOTECHEM 2100, 2110 or 2130. See Technical Information
- ♦ To speed-up the wash out for thick stencils after exposure an immersion for 5-15 min. in a water bath is possible

3. MANUAL AND MACHINE COATING

- ♦ Manually the ready to use emulsion can be coated 1/1 or 1/2 wet in wet. On coarse meshes 1/1 coating is possible
- ♦ The viscosity is ideal for machine coating
- ♦ To produce a flatter stencil profile with a lower Rz-value (to improve print edge quality) additional coats can be added after an intermediate drying cycle. After each such cycle the stencil thickness increases by 1 - 2 microns and the Rz-value becomes lower
- ♦ After coating pour the emulsion from the coating trough into an empty can so that it can de-gas; this way aird bubbles can be avoided in the stencil which results in less pin-holing

4. STENCIL QUALITY

- ♦ Excellent mesh bridging. This causes an excellent stencil edge together with medium resolution at short exposure times. A perfect stencil can be achieved on dyed mesh if the correct coating and drying technique is applied. In combination with white mesh the resolution suffers slightly
- ♦ The cleaning of plastisoles should be done with white spirit and not with stronger solvents



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5. STORING

This ready-to-coat emulsion should be stored in a closed can, protected from direct light. Protect also against freezing.

Storing time for coated stencils in black plastic pouches, sealed, at storing temperature of 20°C and relative humidity of 50 - 70 %:

Condition	Service Life
Unsensitized, 18-25°C storage	2 years
Pre-coated screens in total darkness at 20°C	2-3 weeks

6. EXPOSURE TIMES

- ◆ If metal halogen lamps are used for exposure insist on a photopolymer bulb. Do not use actinic fluorescent tubes, but only super actinic tubes, a 125 W HPR lamp or a Osram Ultra-Vitalux 300 W lamp
- ◆ The exposure time depends with such lamps on the number of operating hours (ca. 10 % UV light loss for 100 hours)
- ◆ This presensitized screen emulsion has a very high light sensitivity and allows short exposure times. Therefore the exposure latitude is narrowed. It is essential to make first a test exposure to find the optimum exposure time for the desired stencil. Longer exposure times result in better mechanical resistance and easier decoating, but have a trend to losses in the resolution
- ◆ Example for exposure times with 5KW MH-lamp, with photopolymer bulb at 100 cm distance:

Mesh	Stencil Thickness Over Mesh	Time
120 T YE	20 µm	40 sec
77 T WH	25 µm	35 sec
43 T WH	35 µm	40 sec

(Coating technique always 1x print side, 2x squeegee side, wet in wet)

- ◆ If the stencil does not give the needed run lengths expose longer
- ◆ When working on white mesh the tendency is to underexpose. In such a case we recommend to use our product FOTECHEM 2154 (Liquid Light) during the wash-out. See Technical Information

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7. STENCIL REMOVAL

Rule: The better the through-hardening of the stencil system by longer exposure times, the easier will be the removal.

Recommended for an effective removal are:

- ◆ FOTECHEM 2004 liquid; FOTECHEM 2005 paste
- ◆ FOTECHEM 2042 concentrated liquid decoater (1:30) for machine decoating
- ◆ FOTECHEM 2048 is a more efficient liquid concentrate (1:30) for decoating
- ◆ FOTECHEM 2044 powder

A preliminary degreasing cycle is recommended.

- ◆ The removal is always sped-up, if the printing ink is removed immediately after printing. It helps further if firstly FOTECHEM 2003 gel (degreasing agent) is applied and washed-off. This degreaser is also available as FOTECHEM 2033 concentrate; it can be diluted with 10 parts of water
- ◆ For the decoating cycle a high pressure water gun is always recommended. Important: always rinse the chemicals first from the stencil with a soft water spray before the high pressure gun operates
- ◆ Ghost pictures: After removal, the staining of the mesh or ink and stencil residues can be removed as follows:
- ◆ Wet the mesh first with FOTECHEM 2085 (emulsifying solvent mix), then brush-on immediately FOTECHEM 2080 alkaline paste. Let stand for maximum 30 min., then rinse with a mild water spray before the ghost pictures are removed with a high pressure gun from the mesh threads. Never let the mixture FOTECHEM 2085/2080 dry in on the mesh !
- ◆ Another method is the use of FOTECHEM 2089 Gel. This product contains solvents. Can be coated with the trough. Wait maximum 5 minutes, then rinse and finish cleaning with water high pressure. See Technical Information

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